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THE RELATIONSHIP OF SELF TO AGE AND SUSCEPTIBILITY TO LEARNED HELPLESSNESS

DISSERTATION

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

BY

Janina M. Jolley, B.A., M.A.

* * * *

The Ohio State University

1982

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CHAPTER I
INTRODUCTION

The self is a rich concept. Since ancient times people's curiosity about themselves has stimulated theories about self. Antecedents of current self theories can be recognized in Aristotle's "Psyche", Augustine's "Soul", or James' more recent "Empirical Me". In fact, James' chapter on the self in "Principles of Psychology" (1890) has been identified as the stage setter for contemporary self theories (Hall and Lindzey, 1970). The breadth of this construct is illustrated in James' definition of the self as "... the sum total of all a man can call his."

With the rise in empirical psychology, research has been directed at the self. However, most theories of self are not easily tested. There are two basic reasons for this problem. First, many of these theories have been generated through intuition and "common sense." That is, basic concepts and assumptions were formulated without recognizing the need for empirical support. Thus, it has been difficult to operationalize and test many of the basic assumptions of these theories. The fact that most self theories remain untested is a clear illustration of this problem. The
second reason why many self theories remain untested is the lack of appropriate measures. Most current measures presuppose either a static or unidimensional view of self, while many personality and developmental theories would support a multidimensional and dynamic paradigm (e.g., Erickson, 1959; Horrocks, 1976; Riegel, 1975, 1979; Rogers, 1959). These theories assume that with age, and in response to critical life events, the self will usually become more unified, complex, and differentiated. They also theorize that the content of self definition may change. However, due to the lack of measures that assess the dynamic and multidimensional aspects of self, it is difficult to test these assumptions.

The present research introduces a theory of self that is unique, yet has clear antecedents in prior theories. The author's theory agrees with other theories in its statement that the self is a dynamic process that interprets, integrates, adapts, and responds to internal and external events. To accomplish its function, the self associates with internal and external objects. These objects are continually being organized and reorganized into a hierarchial structure. The self contains both content and structural
properties. These properties will vary as a function of age and ability to adapt to crises. The present theory is distinguished by the fact that its basic assumptions are easily tested, i.e., the major concepts and premises of this theory are expressed as specific hypotheses. These hypotheses will be tested by the author's measure of self. Specifically, this measure is used to assess the relationship of age, susceptibility to learned helplessness, illusion of control, and perceived control over critical life events on the structure and content of self. It is hypothesized that differences in susceptibility to learned helplessness and individuals' illusion of control over their lives will account for many of the developmental differences in self that are not a clear function of age.

The next few chapters will provide a historical and theoretical basis for the present theory and research. In addition they will focus on assumptions made by many self theories that should be operationalized and tested. Many of these assumptions will be evident in the author's theory of self. Specifically, Chapter 2 summarizes developmental theories of self. Chapter 3 will present the self from a phenomenological perspective, and Chapter 4 from a
cognitive perspective. The cognitive developmentalist perspective will be summarized in Chapter 5. Self will be viewed as a dialectical process in Chapter 6. Finally, in Chapter 7 self will be related to learned helplessness, dialectics, and illusion of control. Following the theoretical analysis, Chapter 8 will present the exact research problems to be addressed by this dissertation. This chapter will include the author's theory of self, a summary of its theoretical antecedents, and a statement of the hypotheses to be tested.
CHAPTER II
THE DEVELOPMENT OF SELF

Many factors are identified with the development of self. For example, society, self-observation, significant others, environmental, historical, and biological factors are commonly identified antecedents. In developmental theory social influences may be the most important.

Freud (1953) was one of the first psychological theorists to emphasize the relation between society and the self. In his paradigm, there are three major self-systems: The id; ego; and superego. The id, as the original system of the personality, is the matrix within which the ego and super-ego become differentiated. The id consists of everything psychological that is inherited and present at birth. It represents the inner world of subjective experience and includes primitive drives and instincts. Its objective is to seek pleasure and avoid pain by reducing externally or internally produced tensions (the Pleasure Principle). Tension reduction is accomplished through either reflex action or the "primary process." Whereas reflex action is an automatic response that results in immediate tension reduction, the primary process is more complicated.
Essentially, it attempts to discharge tension by forming an image of an object that will remove the tension (wish-fulfillment).

It is obvious that the id cannot reduce tension through images, i.e., a hungry baby cannot be satisfied by imaginary milk. Therefore, the ego and the superego must be formed. The ego is the mediator between the id and the environment. It is the executive of the personality, controlling what instincts will be satisfied and in what manner. It is important to remember that the ego is the servant of the id. It has no existence independent of the id. Its principal role is to mediate between the instinctual requirements of the organism and the conditions of the surrounding environment; its superordinate objectives are to maintain the life of the individual and to see that the species is reproduced.

A child lives within a social context and must learn to coexist with the ids and egos of other people. Consequently the child's self internalizes the norms of the society into a structure called the super-ego. Specifically, the super-ego is the internalized moral arbiter of conduct and develops in response to the rewards and punishments given by the parents. To obtain
rewards and avoid punishments, the child learns to guide his behavior along the lines of the parents. The main functions of the super-ego are: To inhibit the impulses of the id, especially those condemned by society; to persuade the ego to substitute moralistic goals for realistic ones; and to strive for perfection. The ego must balance the impulses of the ego with the restraints of the superego.

Freud makes several assumptions about the development of self. The self is described as a dynamic process that mediates among the individual's biological, social, and psychological experience. The self becomes more complex and differentiated with age as a result of conflict between its desires and the demands of its physical and social existence. Although Freud's theory has been one of the most influential, his basic premises remain untested. Especially relevant to this dissertation is the absence of research to support Freud's assumptions of: A relation between social experience and the development of self; and age differences in the complexity of self.

In spite of the lack of empirical support for his theory, ideas similar to Freud's are evident in other self theories. For example, Freud's idea of an
internalized representation of society is also an integral feature of both Cooley’s (1902) and Mead’s (1934) writings. Cooley’s "looking-glass self" postulated that people react to themselves by anticipating how others will respond to them. Cooley explains his concept as follows:

In a very large and interesting class of cases the social reference takes the form of a somewhat definite imagination of how one’s self... appears in a particular mind, and the kind of self-feeling one has is determined by the attitude toward this attributed to that other mind. A social self of this sort might be called the reflected or looking-glass self:

   EACH TO EACH A LOOKING-GLASS REFLECTS THE OTHER THAT DOTH PASS
As we see our face, figure, and dress in the glass, and are interested in them because they are ours, and pleased otherwise with them according as they do or do not answer to what we should like them to be; so in imagination we perceive in another’s mind dome thought of our apperance, manners, aims, deeds, character, friends, and so on, and are variously affected by it.

Cooley separated the self-idea into three elements: The imagination of our appearance to others;
the imagination of their judgment of that appearance; and some form of self-feeling. The second element is antecedent to much of our behavior. Cooley's message was that people are more strongly influenced by their concern over how others view them than by their independent judgments. Although this hypothesis has been supported by research on conformity (Asch, 1956), the role of self in this process has not been tested. Cooley's postulate seems to argue for a correspondance between self-development and a dependence on external factors, yet the direction and exact nature of this relation is unclear.

Mead's theory also emphasized the role of others in shaping our self-concept. He believed that a self-concept could only be formed within a social context. In contrast to Cooley's position, Mead held that people learn to anticipate the actions of others by imagining how they themselves would respond if the situation were reversed. Consequently, people learn to focus on their inner reaction which makes them aware of a sense of self. Whether Mead's thesis is correct will remain speculative until research can clarify the relation of self to social experience.

Sullivan (1953) was another theorist who focused on
the social aspect of self development. Like Freud and Erickson, he stressed the importance of early experience on self. Of primary importance to Sullivan's theory was the role of "significant others." These are people who have a great impact on the development of self during early childhood. The most significant other is "the mothering one." Children's extreme dependency on the goodwill of the mothering one results in intense anxiety whenever they sense disapproval or withdrawal of the mother's love. The self system develops out of the wish to gain approval and avoid disapproval. Children internalize the mother's values so that they can correct their own tendencies or impulses before behaving in a manner that would incur the mother's disapproval.

Sullivan's theory implies that there is a relation between self development and internalized values. This assumption has very clear research implications. For example, one might hypothesize a relation between age and the proportion of self-descriptors people use that represent internalized or intrinsic elements (e.g., personality traits, values, emotions). Similarly there might be a decrease in the number of external elements used to describe oneself (e.g., physical traits,
possessions). Inspite of its clear implications for research, Sullivan's theory, like most self theories, has not been tested.

Perhaps no theory of self development has received more attention in recent years than Erikson's theory of "psycho-social" development. His term "identity" covers much of what has been called the self by many writers. Erickson (1959, 1968) uses this term in four different connotations: Sense of individual identity; continuity of personal character; ego synthesis; and inner solidarity. Identity is formed and modified through a series of normative crises that occur at different points in the life-cycle. Resolution of one crisis is contingent on resolution of prior crises. Each crisis involves the relation of the individual to others, be it the mother in "trust versus mistrust" or mankind in "integrity vs. dispair." A consistent, integrated sense of self is the outcome of the adolescent crisis of "identity and repudiation versus identity diffusion." The process of identity formation is an "evolving configuration" established through successive ego synthesizes and resyntheses throughout childhood. Adolescence is a phase of increased conflict characterized by a seeming fluctuation in ego strength,
and yet also a high growth potential. Adolescence is over when the individual has subordinated his childhood identifications to a new kind of identification, achieved in absorbing sociability and in competitive apprenticeship with and among his age-mates. These identifications lead to a more final, unified self-definition, and to irreversible role pattern, thus commitments to life. Once this self-definition has been formed the adolescent has become an adult. Subsequent life crisis act to modify the adult identity toward greater maturity or desintegration.

Erickson's theory makes several statements about the growth of self. He assumes that the content of a child's self is different than the content of an adult self. He believes that development is the product of conflict and that crises modify the self construct. The self is viewed as more unified, and integrated following the resolution of the adolescent crisis. Like Freud, Cooley, Mead, and Sullivan, social antecedents to self development are identified by Erickson. Yet, however accurate or correct Erickson's assumptions may seem, none of them have been empirically supported.

The above theories share many factors. Each incorporates an internalization of society, emphasize
the role of a mother-figure, and subsequent social experiences in the formation and process of self definition. They regard self development as a complex and dynamic process that adjusts and grows according to the requirements of the environment. Perhaps the most important commonality is that ALL of these theories remain untested.

One of the few theories of self to be tested is Horrocks and Jackson’s (1972) "self-as-process." Self is represented as a cognitive-affective process that is largely the product of reality testing hypothesized identities. Horrocks (1976) defines self as "...an affective-cognitive process by means of which a person derives and constructs self-products that, taken together, represent his interpretation of himself. Conception of self is the product of self-process" (p.106). Self is learned rather than an innate process and is dependent on "... an environmental context, a memory storage system, continuous intergration, and differentiation of experiences, internal and external interaction, and feeling-affect" (Horrocks & Jackson, 1972, p.8). In the developmental process, the self must reconcile the "ideal self" with the "operational self". The ideal self represents the individual’s personal
value system, whereas the operational self is "...derived from reality testing hypothesized identities in accordance with situational demands" (p. 9). Identities are tested and concretized in the form of roles. Roles are one of the observable product of self-process and "...permit us to organize, identify, define, hypothesize, and test concepts of self in social reality..." (p. 122).

As mentioned earlier, Horrocks and Jackson have attempted to test their theory. Nine, white males were given a semi-structured, in-depth interview designed to uncover information regarding such things as, "family, perceived inter-relationships of family and significant others with respect to the interviewee, discipline, ideals, early memories, fantasies..." (p. 142). Although their findings tend to support their position, they cite several violations of current research methodology. Specifically, the design precludes the use of controls, defining independent and dependent variables, and the elimination of subjective bias (p. 141). In addition, their lack of power, and the unsuitability of their technique for quantification or statistical analysis limits the applications of their method for behavioral research. In defense of their
design, Horrocks and Jackson state that their study is only a preliminary step, designed to uncover important variables to self-process and, as an indication for the direction of future research. To date, this future direction has not been clearly articulated or pursued.

In conclusion, the development of self has been addressed by existing developmental theory. However, these theories have not been adequately tested. Specifically, developmental theory states that the self is a dynamic process, influenced by social, biological, environmental, and psychological events. Age differences in the self are also hypothesized. Yet, research has not adequately demonstrated any of these relationships. In fact, only one of these theories has been tested, and this was a preliminary study with data that could not be statistically analyzed. Clearly, this situation needs to be remedied.
CHAPTER III

SELF AS AN INTEGRATIVE STRUCTURE:
A PHENOMENOLOGICAL PERSPECTIVE

The phenomenologist views the self-system as a cognitive organization that determines how an individual will interpret experiences and which experiences he or she will seek out. Once we understand this cognitive organization it becomes possible to predict behavior because behavior is the consequence of a person's perceptions. This view of the self is represented by Snygg and Combs (1949), Lecky (1969), and Rogers (1959).

Snygg and Combs are Gestaltist. Their theory states that, "...all behavior, without exception, is completely determined by and pertinent to the phenomenal field of the behaving organism" (1949, p.15). To understand an individual, it is necessary to infer his phenomenal field. Although each person has their own phenomenal field, to some degree all human beings have overlapping fields. This is due to similar biological make-up and environmental experiences. The more similar these factors, the greater potential the individuals have for understanding and predicting one another's behavior.
The phenomenal field contains both a figure and a ground which may vary from moment to moment. The ground corresponds to the unconscious and is that part of the field that is vague or unclear. The figure may be regarded as the conscious, containing those aspects of the phenomenal field that are differentiated. Since the phenomenal field is fluid, the accurate prediction of behavior requires samples of behavior under a variety of conditions.

Snygg and Combs believe that awareness is the cause of behavior, i.e., the primary determinate of behavior is what people think and feel. The locus for awareness is the "phenomenal self." This "...includes all those parts of the phenomenal field which the individual experiences as part or characteristic of himself" (1949,p.58). Snygg and Combs regard the defense of the phenomenal self to be our most basic need.

As the nucleus of the phenomenal field, the phenomenal self organizes our goals and needs. These in turn influence our perceptions, which in turn influence our entire phenomenal field. In addition to determining which experiences are sought and which are avoided, these self perceptions interpret our experiences.

Snygg and Combs make several assumptions that
could be tested. In particular, they assume that the self is dependent on its context, i.e., elements of the current situation as well as, environmental experiences. In addition, the self, as a part of the phenomenal field, is fluid. That is, as a result of experience, and in relation to contextual variables, the self will change. Thus, one would expect to find changes in the self as a result of life experiences. Although their thesis may make intuitive sense, it has yet to be tested.

Snygg and Combs also define the content of self, i.e., those parts of the phenomenal field that people regard as characteristic of themselves. This is a definition that could provide the basis for a measure of self. For example, by asking people to describe themselves, they will produce elements that they regard as characteristic of themselves. However, like so many definitions of self, Snygg and Comb’s has has not been applied to this purpose.

A position similar to Snygg and Comb’s is that of Lecky (1969). The basic premise in Lecky’s theory is that each person imposes order on an otherwise chaotic world. People organize thoughts about themselves into an unified system or theory which is their personality. The one pervasive need is to preserve the unity of this
conceptual system.

The conceptual system is dynamic. Its primary goal is to simultaneously maintain internal consistency while realistically adapting to the outer world. Maladjustment occurs when neither is achieved or one is achieved at the expense of the other. The processes of evaluation and assimilation are the means for adjustment.

Self-evaluation is at the core of all forms of evaluation. Experiences that are consistent with a person's self-evaluation are easily assimilated, while those that are inconsistent are usually rejected because they produce anxiety. If an incongruent experience is not rejected the entire conceptual system must be altered. Incongruencies are the basis for development as well as maladjustment.

Lecky's theory presents two assumptions relevant to the present research. First, he suggests that external events are a potential threat to the unity of self. Second, once such a threat has been received, the self will adapt in either a developmental or a non-developmental direction. If research would test these postulates and try to determine the factors involved in developmental versus non-developmental adaptation, the role of external events in self
development would be greatly clarified.

Perhaps the most influential of the phenomenological self-theorists is Carl Rogers. His theory closely resembles the work of other phenomenologists such as Lecky, Snygg and Combs, Sullivan (cf. Rogers, 1942, 1947, 1951, 1959). A good summary of Rogers theory is provided in his book "Client-Centered Therapy" (1951).

Rogers believes that we exist in a continually changing world of experience of which we are the center. This phenomenal field defines our subjective reality because it contains all conscious and unconscious experience at a given moment. Our one basic tendency is, to actualize, maintain, and enhance our experiencing organism. In addition to physical maintenance, this organism strives to reach its maximum capacity by expanding, becoming more differentiated, autonomous, and by becoming more socialized.

Germane to Roger's theory is the concept of self. He defines it as "an organized, fluid, but consistent conceptual pattern of perceptions, characteristics and relationships of the 'I' or the 'me,' together with values attached to these concepts" (1951, p. 498). The self contains only those perceptions and values that are conscious, or can be readily accessed. Learning
and maturation result in the differentiation of the phenomenal field into the self.

Roger's is one of the few theorists to design a method for measuring self. The exact method will be covered in greater depth in the methods section of this dissertation (p. 63). Basically, Rogers applied the Q-technique to study systematically the notions that people have about themselves. This method allows the researcher to measure changes in the self by comparing how people sort a packet of statements at different points in time. The main purpose of this method is to measure the discrepancy between a person's ideal self (ideal-sort) and real self (self-sort). Although it may be useful in certain therapeutic situations, this method provides little information about the structure or content of self. Changes in self are measured along only one dimension, i.e., the degree of congruency between the self-sort and ideal-sort. More informative measures need to be developed for the researcher to gain a cogent view of self-process.

The theories in this chapter present the self as an organized and unified conceptual system. As in the developmental theories, the phenomenologist views the self as a dynamic and fluid construct that adapts and changes to the demands of the external world. However,
the phenomenologist places less emphasis on biological influences. Like most of the developmental theories, key assumptions made by the phenomenologist remain untested. Specifically, the role of external factors on the self, and the causes for developmental versus non-developmental change in response to these external events. Although Rogers does provide a measure of his theory, it is limited in scope and provides little information about changes in the content and structure of self.
Like the phenomenological position, the cognitive view presents the self as an organized conceptual system that assimilates experiential information. Whereas, the phenomenologist focuses on the subjective world, the cognitive theorist recognizes the importance of both an objective world and a subjective self which mediates experience. The theories of Hilgard (1949), Kelly (1955), Sarbin (1952), Piaget (1967), and Epstein (1980) represent the cognitive orientation.

Hilgard (1949) believed that the most common source of anxiety in humans is a threat to self or ego. Defense mechanisms are developed to defend the self against such threats. The very fact that people need to defend their egos provides evidence that there is some very important nonphysical aspect of their being that exists and must be protected. This nonphysical aspect of the individual Hilgard defines as the "inferred self."

Some aspects of the inferred self can be observed through introspection, while others must be inferred.
(as the name implies). Those aspects that can be observed include: Feelings of continuity, which contribute to a sense of identity; and the tendency to self-evaluate. The aspects that must be inferred are: Continuity of motivational patterns; genotypical patterning of motives (behavior is organized around motives, not acts, therefore different acts may represent the same motive); and the interpersonal origin and expression of important human motives.

Hilgard makes several predictions about the self. Specifically, he states that the healthy self is a flexible, adaptive, integrative structure. Conversely, an unhealthy self is characterized by rigidity and failure to adapt to new situations. While these predictions are similar to statements found in other theories (e.g., Snygg and Combs, 1949; Lecky, 1969), they have not been tested.

Another cognitive theory of self is presented by Kelly (1955, 1963). In fact, Kelly's theory of personal construct is one of the most developed cognitive theories of self. Whereas Hilgard's theory focused on motives, Kelly adopts a sort of hypothesis testing approach to self. In his theory of "personal
constructs", Kelly's fundamental postulate is that "...a person's processes are psychologically channelized by the ways in which he anticipates events." This postulate is then elaborated by eleven "corollaries." Examples of these corollaries are: The "construction corollary" that people anticipate events by analyzing and interpreting events so that they may predict those elements that are likely to occur again; the "organization corollary" that "each person characteristically evolves, for his convenience in anticipating events, a construction system embracing ordinal relationships between constructs"; and the "individuality corollary" that there are individual differences in the construction of events. Kelly assumes that people are always rational, organized, and motivated, a position that many theorists might argue against (eg. Epstein, 1980; Freud, 1953). In fact, Kelly's theory differs from many other positions because of its de-emphasis of the role emotion, unconscious motivation, and self-concept have in determining behavior. In addition, although Kelly's theory proposes a very elaborate construct of self, his theory does not define the self as an unified
Kelly has developed a personality measure that can be used to study elements of the self. His Role Construct Repertory Test is based on the hypothesis that personality is determined by how people construct the world. The major function of this test is to measure complexity of thinking by the number of constructs people use on a classification task. "Cognitively simple" people tend to classify their world according to a low number of constructs. "Cognitively Complex" use a high number of constructs, categorizing people in a variety of ways. In addition to a complexity score, the data can yield information about the type of construct used (e.g., personality trait, role, etc.). This data could be useful in making inferences about the self. However, Kelly usually refers to the self as one type of construct that may arise, rather than indicating that the constructs used are representative of the self. In addition, a standard means to quantify this information has not been established.

Epstein's (1980) theory of self-construct is more-or-less an expansion of Kelly's, providing
organization and unity to the "personal construct." In addition Epstein places greater emphasis on affect, unconscious motivation, and self concept. Embedded in Epstein's work is Kelly's postulate of anticipation and the concomitant corollaries. Like Kelly, Epstein focuses on the tendency of people to organize experience into conceptual systems.

Epstein states that the fundamental task of all humans is to construct their "...conceptual system in such a manner as to account for reality in a way that will produce the most favorable pleasure/pain ratio over the foreseeable future." The pleasure seeking principle is frequently in conflict with the need to accept reality. In addition there is often a conflict between immediate pleasure and future pleasure. This aspect of Epstein's theory is very similar to Freud's "Pleasure Principle."

Each person's self theory consists of a hierarchial arrangement of major and minor postulates. Lower-order postulates can be invalidated without a serious disruption of the self-system. However, if a higher-order postulate is invalidated this can have serious consequences because it affects all subordinate
postulates. The fact that most higher order postulates are "broad generalizations" and therefore, are removed from the immediate test of experience is an important feature to the preservation of the self-system. People are often unaware of their self-system. Epstein postulates that "To the extent that individuals are unaware of their implicit assumptions, significant experiences will appear to be controlled by an external destiny which they are powerless to affect." An individual’s self-theory is a tool designed to: a) assimilate the data of experience, b) to maximize the pleasure/pain balance over the foreseeable future, and c) to optimize self-esteem.

Epstein has conducted several studies to support his theory. The bulk of this research focused on how experience relates to self-esteem (Epstein, 1976, 1979). Findings indicated that feelings of self-worth are relatively stable over time. In addition self-esteem had widespread relationships with both cognitive and emotional variables. This is supportive of the assumption that an overall assessment of self is of central importance to an individual’s self-theory. What Epstein’s research does not attempt to measure is
the actual self-theory. Yet, he does provide several guidelines for the construction and application of such a measure: The self-theory is a hierarchial structure; higher order postulates are removed from the immediate test of experience (thus will have less correspondance to experience than lower postulates); there will be a relation between awareness of one's self-theory and perceived control over significant life experiences. In addition, one would expect the self-theory to be positively regarded by the individual if it is constructed to produce a favorable pleasure/pain ratio.

Although Kelly and Epstein both have developed methods for studying their theories, neither have constructed an actual measure of the self. However, suggestions for such a measure can be gleaned from both theories. Specifically, a self measure should be sensitive to the hierarchial, multidimensional dimensions of self. In addition it should investigate the hypothesis that individual differences in self can be accounted for by measuring the relation between self-theory and experience.
CHAPTER V
SELF FROM A COGNITIVE
DEVELOPMENTALIST PERSPECTIVE

In the previous chapter the self was discussed from a cognitive perspective, with most of the material drawn from general personality theories. The present chapter will continue this cognitive perspective. However, the emphasis will be on cognitive developmental theories of the self. Sarbin, and Piaget will represent this approach.

Sarbin(1952) has a life-span, stage theory for the development of the self-system. He defines the self as a cognitive structure which develops in overlapping stages. The first three stages must be attained before the true self can develop. The first stage is the somatic self. It occurs during the second month of infancy and is defined by the awareness of physical sensations. At this stage infants have very primitive cognitions for organizing sensations and are unable to differentiate themselves from the environment. The second stage is the receptor-effector stage, and occurs around the fourth month. Infants are focused on feelings and actions to relieve tensions, eg., eating
and bowel tensions. Infants have developed cognitions to structure these tensions and the behaviors associated with them, however they are not yet able to differentiate themselves from the environment. The third stage occurs at about six-months of age. It is called "the primitive construed self." At this stage children are able to discriminate among different people, and between objects and people. At age one children enter the fourth stage of "the introjecting-extrojecting self." This stage marks the beginning of true self. Although children at this age can not say "I", they know their name, can perceive similarities and dissimilarities between themselves and others, and can separate self from nonself. The final stage is "the social self." By 2 years children recognize, and can imitate both simple and complex acts, or roles. They use the pronouns I, me, and mine, and can put together sentences.

In the beginning, the somatic self is the core of the self-structure. Later the social self is dominant, and the different stages become increasingly differentiated. Organized roles become increasingly important in defining the self. While the early self
concept was organized around biological needs, the adult self concept is organized around roles and social influences. Thus, one would hypothesize age differences in the number of roles and social influences contained in self-constructs. Research by McGuire and Mcquire (in press) does support the social influences thesis. However, data on developmental differences in the number of roles is not available.

A Piagetian view of self-development would be similar to Sarbin's in many ways. In Piaget's (1967) theory, the self is viewed as a cognitive construct that becomes more differentiated and complex as the result of a dynamic interaction among the biological, psychological, and socio-cultural systems. The self construct develops in a sequential fashion and may be defined by four developmental stages. Analogous to Sarbin's somatic stage is Piaget's first stage, the "sensori-motor stage". Infants are unable to differentiate themselves from their environment and are incapable of forming symbols or thoughts. The primary focus of their self-reference system is in the somatic domain.

The second stage occurs between ages 2-7 and is
labeled preoperational thought. Here children acquire the ability to use symbols (representational thought), acquire language, gain concepts of time and space, and begins to develop rules of classification. The child begins to gain a concept of self through differentiation. Initially concepts of the self are somewhat transitory, however by the end of this stage, children begin to have some continuity to their self concepts.

The third stage is concrete operations (ages 7-11). Here children learn operations that are based on the logic of classes and relations. However, these operations are limited to reality, lacking the ability to manipulate abstractions and formulate hypotheses concerning hypothetical elements. Consequently, concrete-operational children begin to adopt roles that conform to societal expectations. They start to adopt, reality test, discard or incorporate various identities in to their self-systems.

The early adolescent years of 12-16 mark the fourth stage of formal operations. Here children transcend the limitations of the immediate temporal and spacial environment, hypothesizing potential situations
and possible actions. They can mentally perform operations on objects, no longer having to rely on concrete representations. Their ability to work with abstractions also increases their perspective taking abilities. However, egocentrism is often an initial outcome, i.e., now that Joe can imagine what other people think, the other people must be thinking about him. Egocentric adolescents are often preoccupied by their physical appearance because of this belief that everyone is thinking and talking about them. During the formal operational stage the self develops as a result of adolescents' abilities to attribute qualities to themselves, and test them out through various roles or identities. Adolescents construct their self-systems through hypothesizing and reality testing.

From a Piagetian position, the self has both objective and subjective components. It is transformed and develops through the dynamic interaction of subjective and objective reality. This emphasis makes Piaget's theory similar to other developmental theories of self (e.g. Freud, 1953; Erickson, 1968). The Piagetian view is differentiated by its inclusion of self as a cognitive construct. Like other developmental
theories, the assumed relation between objective events and the self remains untested.

The two theories presented in this chapter share many factors with the positions represented in previous chapters. That is, most of these theories depict the self as a dynamic, integrated structure that is transformed through its interaction with the external world. Age changes have been hypothesized as a result of both biological and sociological events. However, most of these theories are focused on the content, or the state of the self after such a change. Little is said about the actual transformation process. The following chapter will address this aspect through dialectical psychology.
CHAPTER VI

SELF: A DIALECTICAL PROCESS

As illustrated in previous chapters, most personality and developmental theories support a dynamic model of self. For example, it is broadly accepted that children develop their concept of self through an interaction with the environment, and their biological and psychological systems. From a developmental stance, this process is explained by the process of equilibration. That is, conflict between any two of these systems results in disequilibration. Through either accommodation or assimilation the child reaches a new balance between these systems, thus attaining a higher, more differentiated level of self development (Piaget, 1967; Horrocks & Jackson, 1972; Werner, 1978).

More recently, gerontologists have recognized that the self continues to change during the adult years due to imbalances in these systems. However, there is disagreement as to whether these changes represent true development (citing growth or forward movement as the pre-requisite for development). Most
changes in self during adulthood are viewed negatively, as reactions to decline, disability, and disengagement (cf. Lowenthal, 1977; Neugarten, 1977; Chown, 1968, 1977; Kimmel, 1980). However, some theorists have questioned the assumption that changes during the adult years are regressive. A more positive view of the adult years is posited by the dialectical position.

The dialectical view is comprehensively outlined in Riegel's book "Foundations of Dialectical Psychology" (1979). Riegel defines development along four dimensions: Inner-biological; individual-psychological; cultural-sociological; and outer-physical. Crises result from asynchronies in the progression between two or more of these dimensions. Rather than regarding these critical episodes in a negative manner, the dialectical orientation views them as the source of development. Growth occurs when a new synchronization has been reached among the four dimensions at a more differentiated level than before the crisis.

Riegel's position is very similar to other dynamic theories of development (e.g., Piaget, 1967). However, two major points distinguish Riegel's view
from other dynamic positions. The first point is his premise that development proceeds throughout adulthood in a manner very similar to that of childhood. This is in direct contrast to the assumption embedded in Piagetian theory that cognitive development ends at adolescence with the acquisition of formal operations. That is, Piagetian theory states that growth occurs through the reconciliation of contradiction and conflict between the biological, environmental, or cognitive self. Maturity is reached when there is an absence of conflict, presumably because the child has become so abstract that everything relates. This maturity is reached during adolescence (Piaget, 1967). Although Reigel supports this homeostatic position, he views maturity in a very different light. To him maturity is reached not only through the reconciliation of crises, but also through learning to tolerate ambiguity and contradiction. In other words, synchrony is achieved by either reaching new levels of understanding, or by achieving higher levels of tolerance. The maintenance of synchrony is a process that should continue throughout the life-cycle (Riegel, 1975a,b, 1979).
The second point that distinguishes Riegel's theory from other dynamic positions is his emphasis on the process of change, rather than the maintenance of stability. For example, while Piaget investigates how children resolve conflicting situations, contradictory evidence, or inconsistent impressions, Riegel addresses how children come to question their earlier judgments. Riegel is concerned with the genesis of conflict within our self-system. Conflict is the antecedent of growth.

While Riegel is clear about how crises relate to development, he is vague about less developmental outcomes. Carruth (1975) criticizes Riegel's theory for its inability to account for the possibility of non-developmental change. Specifically, "...Riegel's model may not illuminate the possibilities for the individual to be lost or thwarted by insufficient support or antagonism from subgroup development or cultural change" (p.129). The need for research addressing adaptation to crises is clearly called for. Through empirical studies of how crises relate to developmental and regressive changes in the self our understanding of how development relates to external events will be enhanced.
CHAPTER VII
THE RELATIONSHIP OF SELF TO LEARNED HELPLESSNESS,
DIALECTICS, AND ILLUSION OF CONTROL

Seligman's (1975) theory of learned helplessness is the most popular theory of depression today. His theory states that when people encounter uncontrollable events, they may over-generalize their feelings of uncontrollability and decide that they are helpless to affect the outcomes of other life events. Since they perceive themselves as powerless, they save their energy and hence behave in a depressed manner. However, not every uncontrollable event produces learned helplessness. Seligman accounts for this resistance in two ways. First, some events are clearly more severe than others. The more severe an event is the more likely it is to result in depression. Second, people may be immunized. That is, exposure to minor uncontrollable events followed by later control may increase resistance to over-generalizing when more severe uncontrollable events are encountered. Presumably immunization is the result of changes in the self, i.e., small uncontrollable events have somehow altered the self-construct so that it is less susceptible to learned helplessness. Recovery from
depression occurs when people realize that they do have control. This realization is accompanied by a restructuring of self-construct, i.e., the hierarchy of roles, identities, and self descriptors that comprise an individual's concept of "self" at a given point in time.

The self is an intrinsic, if not always explicit part of learned helplessness theory. If recovery from depression is marked by a restructuring of self, it seems logical that the onset of depression is similarly tied to changes in self. In fact, much of Seligman's theory is based on the products of self, i.e. motivation, fear, and drives for competence. He states that when an outcome is independent of a person's response, it "...(1) reduces the motivation to control the outcome; (2) interferes with learning that responding controls the outcome; and, if the outcome is traumatic, (3) produces fear as long as the subject is uncertain of the uncontrollability of the outcome, and then produces depression." (1975, p. 56). Each of these consequences is a modification of the self construct. For example, Snygg and Combs (1949) define the self as the organizer of our goals and needs. Since goals and
needs define the concept of motivation, then motivation is also a product of self. Therefore, changes in the self would be antecedent to any dramatic changes in motivation. Seligman’s second consequence that an uncontrollable event may result in an inability to anticipate (predict) events is a hypothesis common to both self theory (Kelly, 1963) and learned helplessness theory. To address Seligman’s third consequence about fear and depression, the source of fear is commonly identified as a threat to the ego or self (Freud, 1953; Hilgard, 1949; Lecky, 1969). Therefore, an uncontrollable event that produced anxiety would also have an effect on the self. This effect on the self has been defined by Seligman as depression.

Another way to explain the dynamics between the self and learned helplessness is from a dialectical perspective. For example, Riegel (1975a,b, 1979) might say that learned helplessness is due to an asynchrony between the individual/psychological dimension and the other developmental dimensions (inner-biological, individual-psychological, cultural-sociological). This asynchrony will disrupt our construct of self and leave us unable to synthesize the events of all dimensions.
Hence our ability to respond simultaneously to internal and environmental events will be inhibited, i.e., helplessness.

Dialectics and learned helplessness are further linked through their focus on critical life events. However, they take opposite positions on the response of self to critical life events. Dialectics stresses growth, while learned helplessness emphasizes regression. These two theories are perhaps reconciled by taking into account the controllability and expectancy of life events. Life events that are expected and/or controllable may be more conducive to growth. Conversely, uncontrollable and/or unexpected events may be more disruptive to the self system and, hence more likely to produce learned-helplessness. Furthermore, learned helplessness may be a common part of the growth process, i.e., the psychological state of disequilibrium. Thus, it is hypothesized that differences in controllability and expectancy of critical life events will account for, in part, individual differences in learned helplessness.

Although expectancy and controllability may explain some individual response differences to
otherwise similar events, the inclusion of individual differences in reactivity to uncontrollable events may provide even greater clarity, i.e., susceptibility to learned helplessness. Learned helplessness research usually focuses on the effects of learned helplessness once it has been induced. It does not address factors related to the actual process of producing learned helplessness. Specifically, current learned helplessness research assumes that all individuals are equally motivated, have equal ability, and are equally susceptible to learned helplessness. That is, current operationalizations of learned helplessness confound effort and ability with susceptibility to learned helplessness. Yet, motivation and performance research informs us that there are individual differences (Atkinson, 1948). By failing to separate the concept of learned helplessness into these three components (ability, effort, and susceptibility) we lose valuable information about individual differences in learned helplessness. Thus, while it is useful to know the effects of learned helplessness once induced (the current focus of the literature), it would seem to be of equal importance to understand why some people are
more susceptible than others.

Another important question is whether there are age differences in learned helplessness. Research shows that elderly often suffer from role-loss, financial hardship, and the loss of family and friendship ties (Butler and Lewis, 1977, Lowenthal, 1964, 1976, 1977). All of these variables are important to the construct of self. Therefore, by removing these elements, fragmentation of the self construct is likely. This lack of unity may make the elderly more susceptible to learned helplessness than adults. Similarly, young children have less unified self constructs (Erickson, 1968). Presumably they too are more susceptible to learned helplessness. In addition, children usually have not encountered as many crises, and therefore have not had as many opportunities to be immunized against learned helplessness. This should increase their susceptibility.

Now the question is, "How do crises specifically relate to self process and development?" One approach is to view the creation of self as an ongoing experiment. We are constantly generating and testing hypotheses about our "self." Everyday living and
introspection confirm or diconfirm these hypotheses. A disconfirmation will have differing effects depending on the position of that hypothesis in our self-theory. If it were a key hypothesis, disconfirmation could be very disruptive to our core theory and create tremendous upheaval. At this point we could either give up the experiment (learned helplessness), continue to try and find results that simply aren't there (distorted illusion of control), or "develop" a new (presumably more differentiated) theory that is consistent with the "research" findings. In the later case, we would take our new hypothesis in hand, and continue the dialectical process of testing, revising, and retesting as the conditions of our lives require.

The above "experiment" is simple enough. But, what are the factors that determine whether we will revise our self theory, or choose a less "developmental" alternative? As suggested above, perhaps it has to do with our perceptions of how much control we have over our life events, and how vulnerable we are to giving up, i.e., susceptibility learned helplessness. It may be hypothesized that people who feel they have very little control over their lives will not take an active
position in adapting to crises. Because they are presupposed to a passive role, they will also be more vulnerable to learned helplessness. For example, many elderly people suffer from role loss due to retirement, and the death of family and friends. Many elderly people feel that they have no control over these events and give-up trying to adapt because they see no future for themselves. Depression and poor self-concepts are often the outcome (Hiltz, 1981; Lowenthal, 1976; Parkes, 1965). This attitude of ineffectiveness will not lead to development. No effort is made to change. On the other hand, the person who feels he is in control of his life, in spite of crises, could be more likely to take an active role in adapting his self theory as a result of disconfirmation. However, the effect of control may not be so straightforward. Perhaps, people who perceive themselves as having a high degree of control over their lives will see no reason to adjust their self theories to circumstances because life adjusts to them, not they to life. This question of control may be clarified by separating it into two factors: 1) Illusion of control, i.e., the degree to which people believe they have control over
events that they actually have no control over (Langer, 1975); 2) perceived control over critical life events, i.e., do people feel they have control over the important events of their lives. Thus, it may be hypothesized that people who are accurate in their perceptions of how much control they have over their lives, and feel they have had a high degree of control over the significant events of their lives will be more open to re-evaluation. However, a person who as an accurate perception of control, but indicates a low degree of control over significant life events may have had more opportunity for re-evaluation. Further, the person who feels he has more control than he actually does, and feels he has a high degree of control over critical life events may see no reason to re-evaluate his theory. Finally, the person who has a high illusion of control and a low perception of control over critical life events is more likely to have his self-hypothesis disconfirmed, but is more likely to keep trying the same hypothesis. This would result in no development.

As in the case of learned helplessness, age differences in illusion of control are probable.
Specifically, the elderly may be more likely to have a low illusion of control because: 1) they have encountered more uncontrollable events than younger people, and hence have lowered their expectations; and 2) are more likely to suffer from depression, which is characterized by feelings of powerlessness, and hopelessness. These feelings would seem to predict a low illusion of control. Similarly, children have had less of an opportunity to exert control. This may lead to two competing hypothesis. First, due to their subordination to adults, children will believe they have less control over events than adolescents and adults, i.e., lower illusion of control. On the other hand, it may be argued that children have had fewer opportunities to learn what they can and can’t control. Therefore, their expectations will be unrealistic. As evidenced by such phenomena as animism, children often have distorted views of reality (Piaget, 1967).

In summary, when applying learned helplessness theory to the development of self, other factors should be considered, i.e., age, illusion of control, and perceived control over life events. The addition of these variables may account for individual differences
in how the self and susceptibility to learned helplessness relate. However, research has yet to address the relation between learned helplessness and the self, inspite of the clear theoretical link between the two concepts. Specifically, motivation, anxiety, crises (uncontrollable events), disequilibrium, regression, and growth are factors common to both constructs. In addition the theory of learned helplessness directly draws a relation between depression and self, stating that recovery from learned helplessness is marked by a restructuring of self. Clearly, research is needed to test and clarify the relation between learned helplessness, self, and potential intervening variables.
CHAPTER VIII
THE PROBLEM

In chapters 2-7, the concept of self was discussed from a variety of viewpoints. In chapter 2 theories on the development of self were presented to emphasize the roles of society, genetics, and experience on self. Chapter 3 discussed the self from a phenomenological perspective, stressing the subjective nature of self construct. Later, the interaction of an objective world with the subjective self was proposed in chapter 4. Chapter 5 reviewed self from a cognitive developmentalist perspective. Chapter 6 integrated self with dialectical psychology. Finally, in Chapter 7 self was related to learned helplessness, dialectics, and illusion of control.

Basic to developmental psychology are the assumptions that with development the self will become more complex, unified, and differentiated. Development should be the function of both age and critical life events. The phenomenologists and the cognitive self theorists make another important assumption that the self construct is the product of subjective experience. In addition, the cognitive theorists stress the
interaction of the objective and subjective world. If valid, the cognitive position would account for individual differences in the adaptive functions of the self to critical life events, i.e., growth and regression.

Two theories have been presented that directly address the adaptive capacity of self. Dialectical psychology emphasizes the capacity of the self to develop in response to crises. However, dialectical theories of self have been considered untestable. Like most self theories, the dialectical theory was formulated without recognizing the need for empirical support. As a result, no research has been done to test the assumption that the self develops as a result of crises. On the other hand, learned helplessness theory points to regressive reactions of the self to such crises. Unlike dialectics, learned helplessness has been extensively researched. Yet, the relationship of self to learned helplessness has not been tested. What is needed to test the relationship between adaptation to crises and self is to establish when regressive as opposed to developmental responses to crises will occur. This dissertation proposes a theory of self that accounts for both the developmental and regressive
responses of self to crises. Although the theory shares some assumptions with dialectical psychology (as well as many other theories reviewed in this dissertation), the central hypotheses of the theory are testable. Indeed, the present research tests the core assumptions of this self theory.

The present dissertation defines self as a dynamic process that interprets, integrates, adapts, and responds to internal and external events. To accomplish its function, the self associates with both internal and external objects. These include roles, relationships to people and non-human objects, emotions, attitudes, abilities, and physical traits. As an integrating process the self contains structural properties. Specifically, it organizes external and internal objects into a hierarchial structure. The self contains both content and structural properties. Content properties include: relationships to non-human objects; relationships to human objects; state-of-being objects; physical objects; and self-diminishing objects. Relationships to non-human objects consists of such objects as possessions, money, animals, hobbies, and interests. Relationships to human objects include roles, affiliations with social groups or institutions,
and feelings or attitudes directed at specific people. State-of-being objects are those objects intrinsic to the person. They include emotions, motives, and values. Physical objects represent physical characteristics, such as appearance. Self-diminishing objects are those that the individual places a negative value on. Important structural dimensions include: differentiation, unity, complexity, and organization. Differentiation is defined as the number of self objects a person associates with. Unity represents the interdependence of self objects within a self-construct. That is, the proportion of self objects within a person's self construct that are related to other self objects within the construct. Unity also takes into account the degree to which each self object is related to all the other self objects. Finally, organization represents centrality, i.e., the degree to which self objects within a self-construct are dependent on a single core.

The content and structure of self will vary as a function of both age and the ability to adapt to critical life events. Age changes in the self are not necessarily linear. For example, with increasing age the individual becomes more unified and differentiated.
However, once the individual reaches old age (approx. 65) there will be a tendency to become less unified and differentiated. This is largely due to the loss of self objects that is commonly associated with retirement and old age (cf. Jolley, 1979; Lowenthal, 1977). Thus, the selves in young and middle-aged adults should be more differentiated and unified than in other age groups. Another assumption made by this theory is that young adults will be more complex than other age groups. It is reasoned that the child’s self is relatively simple in structure, due to limits on the number and hierarchical structure of self objects placed by age and experience (cf. Piaget, 1967; Werner, 1978). The self in children (because it is less complex, unified, and differentiated) will be organized around fewer self objects. That is, the core objects in the child’s self will be fewer in number than in older people. The adolescent self, gradually becomes more complex due to the acquisition of new cognitive abilities, biological changes, new roles, and the need to prepare for future, more permanent roles (cf. Erickson, 1968; Horrocks and Jackson, 1972). The adolescent self is organized around a larger core of self objects than the child. The zenith of complexity is reached at the end of
adolescence, at the onset of young adulthood. Here people have experimented, imagined and associated with numerous roles. Experience has been sufficient to expose them to a number of potential self objects, both internal and external. They have had the opportunity to reflect on and understand their internal feelings, attitudes, and motivations, (cf. Mead, 1934). In addition, young adults have acquired responsibilities, new roles, gained possessions, reached their physical prime. Here the individual is the most diversified, the most complex. With the onset of middle-age, people have trimmed down the number of self objects. The demands of family, work, etc., require more time and energy. Thus, less energy remains to be associated with non-essential self objects. Finally, with retirement, the self objects that have demanded so much attention are often removed. The role of worker, friend, bread winner, athlete, husband, wife, are removed. The self becomes less complex.

In addition to age difference in the structure of self there are also age differences in the content of self. For example children have not fully differentiated between human and non-human objects, eg., animism (cf. Piaget, 1967). Their social roles and
responsibilities are fewer than in older age groups. Therefore, it is expected that the self construct in children will consist of a higher proportion of non-human objects than in older age groups. Similarly, the adolescent is undergoing dramatic physical and biological change. Commonly adolescents become preoccupied with their physical appearance, i.e., egocentrism. Thus, the self construct in adolescents will probably consist of a higher proportion of physical objects than other age groups. The self construct in the elderly differs from other age groups in its content. The elderly are experiencing the loss of self objects. Such loss is commonly identified as antecedent to lowered self-esteem (cf. Butler & Lewis, 1976). Thus, the self construct in the elderly will probably consist of a higher proportion of self-diminishing self objects.

In addition to age differences in content and structure there should be some relationship between the content and structure of self. For example, a self that consists of a high proportion of state-of-being descriptors will be more unified than a self that is low in state-of-being descriptors. This is because self objects that are internal (e.g., feelings, attitudes,
emotions, etc.) are less vulnerable to disconfirmation and threats than more tangible objects. Therefore, fragmentation of the self is less likely. Similarly, a lack of unity will also correspond to a self construct high in self-diminishing objects. That is, failure to relate internal elements will probably be accompanied by an inability to relate internal and external events. This is the basis for depression which is often expressed by self-diminishing behavior.

The ability to adapt to crises is another variable associated with both age and the self. In chapter 7 this aspect of the present theory was developed. Whether a person adapts to crises in a developmental versus a non-developmental direction is multiply determined. That is, several factors affect the degree to which a person is susceptible to learned helplessness, i.e., how likely is a person to give up when confronted by an uncontrollable event. First, a unified self should be one predictor of susceptibility to learned helplessness. That is, a highly unified self-construct should be less vulnerable to threats directed at its self objects than a less unified self. Therefore, susceptibility to learned helplessness should be negatively correlated with unity of self.
Second, there is illusion of control, i.e., the degree to which people believe they have control over events that they actually have no control over. Thus, it may be hypothesized that people who are accurate in their perceptions of how much control they have over their lives will be less susceptible to learned helplessness. Consequently, both illusion of control and susceptibility to learned helplessness should correlate with age. As indicated in chapter 7, the elderly and children are likely to be more susceptible to learned helplessness, and to have a lower illusion of control.

In summary, the following hypotheses of the theory were tested:

H1: The self in adolescents, young and middle-aged adults will be more unified than in children, and the elderly.

H2: The self in young adults will be more complex than in children, adolescents, middle-aged adults, and the elderly.

H3: The self in children will be more organized around a single core than in adolescents, young and middle-aged adults, and the elderly.

H4: The self will be more centered on physical
traits in adolescents than in children, young and middle-aged adults, and the elderly.

H5: The self in elderly people will be more self-diminishing than for children, adolescents, young and middle-aged adults.

H6: The self in children will be more focused on non-human objects than in adolescents, young and middle-aged adults, and the elderly.

H7: Children and the elderly will be more susceptible to learned helplessness than adolescents, young and middle-aged adults.

H8: Susceptibility to learned helplessness is negatively correlated with unity of self.

H9: Illusion of Control will be less for children and the elderly than for adolescents, young and middle-aged adults.

H10: Illusion of control will have a positive correlation with effort.

H11: Unity of the self will have a positive correlation with self-definitions that are high in state-of-being descriptors.

H12: Unity of the self will have a negative correlation with self-diminishing descriptors.
Children are defined as those people 6-12 years of age. Adolescents are 13-20 years of age. Young adults are 21-34 years old. Middle-aged adults are 35 to retirement of the individual or spouse. The elderly are those people post retirement.
CHAPTER IX

METHODS

Instruments:
1) background information
2) experiential inventory
3) Jolley Self Measure (JSM)
4) illusion of control
5) susceptibility to learned helplessness

1. BACKGROUND INFORMATION

Background information was collected on age, birthdate, occupation, address, and phone number.

2. EXPERIENTIAL INVENTORY

An adaptation of Cottle's (1968) experiential inventory was used to measure time focus, and expectancy and perceived control over critical life events. Cotter's original measure asked for a list of ten important life experiences and a corresponding temporal rating ranging from distant past to distant future. The adaptation of this measure, requested additional ratings for expectancy and control over each event.
3. JOLLEY SELF MEASURE

A major task of this dissertation was to develop a measure of self to correspond to the author's theory. One major problem with current measures is that they do not actually attempt to assess the self. Rather, they focus on one or two dimensions of the self, such as self-esteem (cf. Epstein, 1980), self-concept (Scott, Osgood, and Peterson, 1979), and role construct (Epstein, 1976, 1979; Kelly, 1963). Yet current theory does provide guidelines for the content of a self measure. Specifically, a measure of self should be sensitive to the multi-dimensional aspect of self. That is, the self contains both structural (as indicated by its hierarchical, integrated nature) and qualitative (e.g., all qualities and objects that the person identifies with) elements. In addition, because the development of self is said to be a dynamic process influenced by both age and experiential factors, a measure of self should be sensitive to these influences. Thus, a measure of self should measure the structure of self, the content of self, and be sensitive to age and experiential influences on the self.

There is little consensus among psychologists
concerning how structural properties should be assessed. Scott, Osgood, and Peterson (1979) have addressed this problem and arrived at three basic structural properties of a cognitive construct. Furthermore, they have found these properties to be applicable in their studies of role-concept. The three properties are: differentiation; integration (inter-dependence); centrality; These properties are analogous to those proposed by Zajonc (1960) at a much earlier date. Scott, et. al.'s differentiation is similar to Zajonc's complexity. Complexity measures the hierarchial structure of the construct and weights items according to the degree of abstraction within a category. Zajonc's unity corresponds to Scott's integration, and represents the interdependence of items within the construct. Centrality is measured by Zajonc's organization. This is the degree to which items concentrate around a single core. Not to be confused by Scott et.al.'s differentiation, is Zajonc's fourth dimension also labeled differentiation. This is the number of items contained in a construct. To measure the structural aspect of self, the present research has adopted Zajonc's dimensions. The reasons for selecting Zajonc over Scott et. al. were: Scott's
approach offered no advantage over Zajonc; and Zanjoc's work was the basis for Scott's.

The formulas for computing Zajonc's four dimensions of self-construct are:

\[
\begin{align*}
\text{Differentiation} &= I_{ij} \\
\text{Complexity} &= r_{nr} \\
\text{Unity} &= \text{dep}(A_i) \\
&\quad \text{for } n(n-1) \\
\text{Organization} &= \text{det}(A_i)_{\text{max}} \\
&\quad \text{unity}
\end{align*}
\]

To decide on the qualitative aspects of self to be included in the JSM, current self theories in conjunction with the author's theory were analyzed. Many attributes were given to the self that stressed both internal and external aspects. These aspects include: relations with people (Sullivan, 1953), roles (Erickson, 1968; Horrocks and Jackson, 1972), possessions (James, 1890), physical characteristics (Horrocks and Jackson, 1972; Erickson, 1968; Freud, 1953), values (Rogers, 1951), motives (Hilgard, 1949), and emotions (Epstein, 1980). Embedded in this list are aspects of the self that are intrinsic to the self such as emotions, motives, and values. Other aspects seem to involve relationships with other people, eg., roles,
significant others. Still, other aspects represent relationships with non-human objects, such as possessions. A final category represents concern for physical characteristics, such as appearance. Thus four qualitative categories were included in the present measure: state of being (intrinsic aspects of the self); relations with human objects; relations with non-human objects, and physical traits.

In addition to the above qualities, a self-evaluative element was also presented in many theories. This is especially evident by the prominence of self-esteem and self-acceptance measures in current research (e.g., Epstein, 1980; Suinn, 1961; O'Brien and Epstein, 1974, Philips, 1951; Coopersmith, 1967). In addition to the prevalence of self-esteem studies in the literature, the concept of depression (another dependent variable in this dissertation) is closely align with feelings of self worth (Seligman, 1975; Zung, 1965, 1967, 1974). Therefore, the present measure was designed to incorporate a measure of self-worth. This measure is represented as an index of self-diminishing versus self-augmenting. This index is different from current measures of self-worth, because it is dependent on the self-objects people identify as
theirs, rather than an abstract value not easily identified with specific self-objects. That is, the present index allows the researcher to infer which self objects correspond to positive or negative self-feelings.

Scores for these five dimensions were computed as follows:

State of Being = \( n_{ij} \)

Non-human Object = \( n_{ij} \)

Human Object = \( n_{ij} \)

Physical = \( n_{ij} \)

Self-diminishing vs. Augmenting

\[ \text{Augmenting} \]

\[ \text{Iij} \]

Once the content and method of analysis for the Jolley Self Measure had been established, the actual instrument had to be developed. Robert Guion (1965) described the ideal personality measure as one that: used free response rather than fixed response; had a disguised purpose instead of an obvious purpose; and could be scored objectively rather than subjectively. With these criterion in mind, the JSM was developed.
The use of a Q-sort is a method that was designed by William Stephenson (1953). Carl Rogers (1954) was among the first to adapt this technique for the measurement of the self. The Q-technique, as used by Rogers, is a method to study systematically the notions that people have about themselves. The person is typically given a packet of statements and is asked to sort them into a prearranged distribution along a continuum from those most characteristic of the person doing the sorting to those least characteristic. The items of a Q-sort are typically generated by the researcher to conform to an established theory. On this later feature the JSM is unique.

The JSM has each subject generate his/her own items to sort, i.e., an individualized Q-sort. Thus, the JSM satisfies Gurion's first ideal for a free response measure. The procedure is as follows. First, the subject is given a stack of index cards and asked to write a self description on them (see procedures for exact instructions). Only one descriptor is written on each card. After this task is completed subjects sort their cards into piles according to what items they think belong together. The subjects then rank order the cards in each pile on a continuum from most to least
characteristic of them. Finally each pile is rank ordered. The arrangement of these cards is marked on the JSM score sheet (see appendix A).

Once the cards have been sorted into piles and rank ordered, the subject is asked to indicate on each card whether they regard the particular trait as negative or positive. This will provide the self-diminishing versus self-augmenting index. The last task is to remove one card from the deck at a time and ask the subject which of the remaining cards, if any, would be affected if this one card were not present. This provides an index of dependency needed to compute the unity score.

Thus, the JSM completely satisfies two of Gurion's concerns, and at least partially satisfies his third. First the JSM is a free response measure. Second, the measure is objectively scored. In response to the third concern, the JSM is at least partially disguised. That is, the subject is not likely to suspect that their responses will be analyzed for their structure. In addition, they are not aware of how the content will be analyzed.

A possible concern with this method centers on the issue of whether self-report data is valid.
Specifically, self-report data correlates highly with "lie scales," "social desirability response set," and tendencies toward "sensitization-vs-regression." (Scott, et. al., 1979). Scott et. al. support self-report data by pointing out that such "results do not seriously challenge the prima facie interpretation that subjective well being is the primary ingredient of such test scores, for the alternative (response-set) interpretation has not led to any seriously competing predictions, and one can therefore question whether the 'lie scales' themselves have been appropriately named" (p. 198). In addition, the JSM is not measuring anything that should be significantly affected by response-set bias. With the exception of the self-diminishing versus self-augmenting category, the JSM is not directly measuring items that are intrinsically negative or positive. In addition, although the JSM does assess something deeply personal, the self, it is not dependent on deeply personal or private responses. Thus, it is not believed that the JSM will be affected in any significant way by the potential problems of a self-report measure.
4. ILLUSION OF CONTROL

Illusion of control was measured using a die and a self-rating scale. This procedure was developed by the author to tap the degree to which people believe they can influence events when they do not have any real control. On one trial the investigator tosses a die after subjects have predicted the outcome and indicated their confidence in this prediction on a seven-point Likert scale. On the other trial subjects toss the die after predicting the outcome and rating their prediction. An index of illusion of control is obtained by dividing the rating given when the subject tossed the die by the rating given when the investigator tossed the die. The order of the subject and investigator die tosses is counterbalanced to control for possible experimental bias due to the first outcome influencing the ratings given on the second toss.

5. SUSCEPTIBILITY TO LEARNED HELPLESSNESS

Although many tasks have been developed to measure
learned helplessness, none of them separate learned helplessness into the three components recommended in chapter 7. An embedded figures task was designed for this purpose (see appendix B). It should be pointed out that similar materials have been used with success (Rholes, Blackwell, Jordon, & Walters, 1980), although different procedures were implemented. Nine geometric figures were drawn on index cards and embedded into a geometric ground. On nine corresponding cards, just the geometric figure was drawn. However, on two of the card pairs the geometric figure card did not match the embedded figure card. Hence these two embedded figure problems were unsolvable. The remaining pairs matched, i.e., the problems were solvable. Subjects were first presented with an example pair and the task was explained to them. The next 3 pairs were solvable problems. The time it took to solve each problem was recorded. The mean time taken on these three problems was the basis for measuring ability. The next two problems involved were unsolvable. The mean time taken on these two tasks before subjects gave up was the basis for the effort index. In addition this was the treatment to induce learned helplessness. The next three cards were solvable. The mean time taken to solve
these problems provided an index for susceptibility to learned helplessness. The cards presented in problems 1-3, and 6-8 were counterbalanced.

Formulas for the actual computation of the three dimensions are provided below.

\[
\begin{align*}
\text{series measures} & \quad \text{adjusted to measure} \\
X_1 & \quad \text{effort}^+ & \quad 1-2=\text{ability} \\
& \quad \text{ability} \\
X_2 & \quad \text{effort}^+ & \quad 2-1=\text{effort} \\
& \quad \text{ability} \\
X_3 & \quad (\text{effort}^+ & \quad 3-1=\text{susceptibility} \\
& \quad \text{ability}) & \quad \text{to learned} \\
& & \quad \text{helplessness}
\end{align*}
\]
Subjects: Participants represented five different age groups: 6-12 (n=10); 13-20 (n=23); 21-34 (n=17); 35-retirement of self or spouse (n=16); and retirement (n=16). All subjects were middle-class whites, living in central or southern Ohio.

Procedure: All subjects were interviewed twice in their own homes. The following format and instructions were given to each subject. Clarification and simplification (especially with children) were provided when necessary.

FORMAT (time one)
1. introduction
2. consent form
3. background information
4. experiential inventory
5. JSM
6. illusion of control
7. susceptibility to learned helplessness
8. debriefing
INTRODUCTION: The study that you are participating in addresses the question of how different life experiences relate to how people describe themselves, and the way they solve certain puzzles. I appreciate your time and help in this research endeavor. Participation will involve two interview sessions, 3-5 weeks apart. The first time will take 30-45 minutes and the second time only about 20 minutes. During the first interview I will ask you for some background information, for example, your age and occupation. Next, I will ask you to list some important life experiences. This will be followed by a self-description. Finally, you will be asked to solve a few puzzles. During the second interview you will be asked for another self-description and to solve another puzzle. Your answers on these tasks will be strictly confidential. I will be the only person who will see your answers. In addition, if you wish to drop out of the study for any reason, you may do so with no obligation. Do you have any questions?

CONSENT FORM: As you will read, this form gives me
your consent to use information that comes out of our interview sessions for my research. It also guarantees you complete anonymity—no one other than me will see the actual interview material. Information represented in any research report will be based on averages based on the answers of many people. Nothing will be identifiable with you. Again, you have the freedom to withdraw from the study at anytime. Do you have any questions regarding either this form or your participation in this study?

(GIVE THEM THE CONSENT FORM TO SIGN)

BACKGROUND INFORMATION AND EXPERIENTIAL INVENTORY: Now if you would please answer the following questions about yourself. There are three pages. If you have any questions regarding any item just ask.

JSM: The next task will ask you to give me a self-description. In thinking about yourself you may often bring to mind different roles such as daughter, or student. In addition, you may think of personality
traits such as kind, or insecure, nervous, or intelligent. You might describe yourself in terms of physical characteristics, such as blond, or interests such as music or golf. I would like you to think about how you would describe yourself in terms of personality traits, physical characteristics, interests and roles. By no means do you have to use all of these kinds of descriptors. Just try to give me the most accurate description that you can. Write each descriptor on a separate index card— one descriptor per card. Use as many cards as you need. One or two words for each characteristic will be fine.

Sort: Now would you please sort your cards into piles according to what traits and roles you feel go together. If you feel that a certain card belongs in more than one pile, put it into the pile that it relates to the most.

Next I would like you to order the cards in each pile in terms of how characteristic each card is of you. Put the card that is most characteristic of you first. The
card that is least characteristic of you last.

Next, will you please order each pile according to which pile is most characteristic of you (line the piles up)

(number the cards & mark on the sheet where each pile begins)

Now I would like you to tell me whether you feel each trait is positive or negative. (start with first card, record a P or N beside the number)

Effect Removal Task: Now we are going to systematically remove each card and see if the removal of this trait from you would change or effect any of the other cards. For example, if you were no longer (first card), would this change any of the other cards (record the number for each trait changed in the #1 space on the JSM form). Now, you are (first card) again, but you are no longer (second card). Would this change any of the
other cards. Would it change (first card)? (Record the number for each trait changed on the #2 space on the JSM form. Proceed through the entire deck of cards).

Illusion of control: The next task is a sort of game. In my hand I have a die. Before I toss it I want you to guess what number will come up (1-6).

On a scale of 1 to 7, how sure are you of your guess, one being low and seven being high?........

Now I want you to toss the die. But before you do I want you to again guess what number will come up?...

Okay. And how sure are you that this will be the number (1-7)?....

Susceptibility to learned helplessness: The last task involves several puzzles called embedded figures. Here is an example of what I mean. The card on your left is a square. The card on your right has an identical square on it, but it is disguised by the use of extra lines and colors. Your job is to find the figure
represented in the card on your right in the card on your left. The embedded figure will always be the same size as in the card on the right, and will always be pointed in the same direction. You will be timed on each puzzle. A couple of them are very difficult. Do not be discouraged if you can not solve all the puzzles. Try as hard as you can, but if you really feel that you can not solve a given puzzle, just tell me and we will go on to the next one.

FORMAT (second interview)

1. JSM

2. illusion of control

JSM: Do you remember last time when you gave me a self-description. I would like you to give me another self description. Do not try to give me the same answers as last time. Just concentrate on how you would describe yourself right now. Again you may want to describe yourself in terms of roles (student,
girlfriend), personality traits (insecure, confident), physical traits, or interests. The idea is to give me the most accurate description you can. Write one descriptor per card. Use as many cards as you need. Just use one or two words for each trait.

Sort: Now would you please sort your cards into piles according to what traits and roles you feel go together. If you feel that a certain card belongs in more than one pile, put it into the pile that it relates to the most.

Next I would like you to order the cards in each pile in terms of how characteristic each card is of you. Put the card that is most characteristic of you first. The card that is least characteristic of you last.

Next, will you please order each pile according to which pile is most characteristic of you (line the piles up)

(number the cards & mark on the sheet where each pile
Now I would like you to tell me whether you feel each trait is positive or negative. (start with first card. record a P or N beside the number)

Effect Removal Task: Now we are going to systematically remove each card and see if the removal of this trait from you would change or effect any of the other cards. For example, if you were no longer (first card), would this change any of the other cards (record the number for each trait changed in the #1 space on the JSM form). Now, you are (first card) again, but you are no longer (second card). Would this change any of the other cards. Would it change (first card)? (Record the number for each trait changed on the #2 space on the JSM form. Proceed through the entire deck of cards).

Illusion of control: Now we are going to play the die-toss game again. I am going to toss this die. Before I do, I want you to guess what number it will be
and tell me how sure you are of your decision on a 1 to 7 scale. One means you are not at all sure—7 that you are very sure. What number do you think it will be? How sure are you?

Now, I want you to toss it. Before you do, what number do you think it will be and how sure are you?
CHAPTER X

RESULTS

Support and Reliabilities on the Jolley Self Measure

The JSM was administered to all subjects on two different occasions. The time interval ranged from 2 to 3 1/2 months. Table 1 illustrates that the JSM is a generally a very reliable instrument. With the exception of the physical category, all JSM dimensions demonstrated significant correlations between time 1 and time 2 measurements. Unity was not as stable as other dimensions. Further analysis showed that this instability was largely due to greater fluctuations in the adolescent group. With this group removed the correlation was highly significant ($r=.784$, $p>.001$). The instability of the adolescent group is consistent with current developmental theory (cf. Erickson, pp. 10-11).

Twenty-five items were randomly selected from JSM protocols. These items were given to 25 college students with a description of the four JSM content areas. After reading the descriptions they were asked to assign each item to a JSM category. Responses were compared to a rating standard and the percentage of correct assignments for each content area was

84
calculated. Results indicated a high consensus with the standard for each of the content areas (table 2).

**General Results**

In order to test hypotheses 1-7, and 9 analysis of variance (table 3) and planned comparisons (table 4) were performed. Hypothesis 1 stated that the self in adolescents, young and middle-aged adults will be more unified than in children and the elderly. The analysis of variance failed to demonstrate significant effects for age $F(1,77)=3.18, p=.36$. However, a comparison of the adolescent and adult mean ($X= .268$) with the child and elderly mean ($X= .117$) suggested that these groups differed. A planned comparison revealed only a moderate trend $F(1,77)=3.18, p>.10$ in support of the hypothesis. Therefore hypothesis 1 was not supported.

The data more clearly supported hypotheses 2-7. Hypothesis 2 predicted that the self in young adults would be more complex than in children, adolescents, middle-aged adults, and the elderly. Although there was no overall effect for the age variables, $F(1,77)=1.50, p=.20$), the planned comparison did reveal highly significant results in favor of the hypothesis. The
young adult group had a mean of 67.74, while the children, adolescent, middle-aged, and elderly mean was 47.76. This yielded a F of 5.45 that was significant at the .025 level. Thus, hypothesis 2 was supported by the data.

Hypothesis 3 stated that the self in children would be more organized around a single core than in adolescents, young and middle-aged adults, and the elderly. The analysis of variance was moderately significant $F(1,77)=2.04$, $p>.097$, while the planned comparison was highly significant $F(1,57)=10.46$, $p>.0001$. The mean for the children was 46.00, as compared to the mean for the adolescent, young and middle-aged adults, and elderly of 28.77. This difference is in clear support of the hypothesis.

Hypothesis 4 predicted that the self would be more centered on physical traits in adolescents than in children, young and middle-aged adults, and the elderly. The analysis of variance revealed significant effects for age $F(1,77)=3.02$, $p>.026$. A planned comparison of the adolescent mean ($X=3.326$) with the mean of the children, young and middle-aged adults and elderly ($X=1.08$) provided significant support for the
Hypothesis 5 predicted that the self in the elderly would be more self-diminishing than for children, adolescents, young and middle-aged adults. Analysis of variance demonstrated significant effects for age $F(1, 77) = 3.06$, $p > .021$. Planned comparisons supported the hypothesis, revealing significant differences $F(1, 77) = 6.52$, $p > .025$ between the means of the elderly ($X = .767$) and the children, adolescent, young and middle-aged adults ($X = .864$).

Hypothesis 6 predicted that the self in children would be more focused on non-human objects than in adolescents, young and middle-aged adults, and the elderly. Analysis of variance demonstrated highly significant effects for age on this variable $F(1, 77) = 14.41$, $p > .0001$. Planned comparisons revealed significant differences $F(1, 77) = 75.20$, $p > .0001$ between the mean for the children ($X = 7.80$) and the adolescent, young and middle-aged adults, and elderly mean ($X = 2.28$).

Hypothesis 7 states that children and the elderly would be more susceptible to learned helplessness than adolescents, young and middle-aged adults. Analysis of
variance reveals significant effects for age $F(1,77)=2.48$, $p>.05$. A planned comparison supported the hypothesis by demonstrating significant difference $F(1,77)=4.59$, $p>.05$ between the mean of the children and elderly ($X=9.64$) and the adolescent, young and middle-aged adults mean ($X=4.75$).

Finally, hypothesis 9 predicts that illusion of control will be less for children and the elderly than for adolescents, young and middle-aged adults. Analysis of variance was highly significant for the effects of age on this variable $F(1,77)=3.31$, $p>.01$). While the means between the child and elderly group ($X=.119$) and the adolescent, young and middle-aged adults ($X=.310$) would appear to support the hypothesis, a planned comparison failed to demonstrate significance $F(1,77)=2.060$, $p<.10$. Therefore the hypothesis was incorrect, although there were significant age effects. A comparison of the means for each of the five age groups suggested that illusion of control would be significantly greater for the young adults ($X=.588$) than for the other four groups ($X=.145$). A post hoc analysis using Sheffe's multiple comparison method supported this prediction $F(1,77)=11.23, p<.05$. Thus,
while the original hypothesis was not supported, age effects were found for illusion of control. Specifically, young adults have a significantly higher illusion of control than children, adolescents, middle-aged adults, and the elderly.

Pearson r's were used to test hypotheses 8, 10, 11, and 12. The correlations corresponding to hypotheses 8, 10, and 11 were highly significant, while the correlation for hypothesis 12 was marginal (table 5). Specifically, hypothesis 8's prediction that susceptibility to learned helplessness will have a negative correlation with unity of self was highly significant ($r=\cdot0.2915$, $p=.004$). This suggested that unity was more closely associated with susceptibility to learned helplessness than to age (hypothesis 1). A "significance of the difference between dependent correlations" was performed to test this thesis. The finding was significant ($T(1,79)=2.334$, $p>.05$), indicating that unity was more highly correlated with susceptibility to learned helplessness than unity was with age. Hypothesis 10 stated that illusion of control would have a positive correlation with effort. The data highly supported this prediction ($r=.3408$, $p=.001$).
Hypothesis 11 predicted that unity of self would have a positive correlation with self-definitions that are high in state-of-being descriptors. This correlation was also significant \(r=0.3072, p=0.012\). Finally, hypothesis 12 stated that unity of self would have a negative correlation with self-diminishing descriptors. Support for this hypothesis was moderate \(r=-0.1615, p=0.070\).

An additional question was how the expectedness and controllability of crises affected the self and performance on a learned helplessness task. Neither expectedness \(r=-0.00451\) or controllability \(r=-0.06654\) correlated significantly with susceptibility to learned helplessness. Similarly, correlations involving both expectedness and controllability with effort on the learned helplessness task failed to reach significance \(rs=-0.1156, 0.02111\) respectively). As far as controllability of crises affecting self, only self-diminishing correlated significantly with controllability \(r=0.29252, p<0.0077\).

In short, the results indicate that: a) the self changes with age; and b) the degree of unity of self is a reliable predictor of susceptibility to learned
helplessness.
<table>
<thead>
<tr>
<th>DIMENSION</th>
<th>r</th>
<th>p</th>
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<tr>
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<td>Self-diminishing</td>
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TABLE 2
PERCENTAGE OF AGREEMENT WITH RATING STANDARD
FOR JSM CONTENT AREAS

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<th>DIMENSION</th>
<th>% AGREEMENT</th>
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<tr>
<td>Human object</td>
<td>93</td>
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<tr>
<td>State of being</td>
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N=25
**TABLE 3**

**ANALYSIS OF VARIANCE**

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<th>P</th>
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<td>.3600</td>
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### TABLE 4

**PLANNED COMPARISONS**

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<th>G3</th>
<th>G4</th>
<th>G5</th>
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<td>3.326</td>
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<td>24.27***</td>
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<td>.853</td>
<td>.851</td>
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<td>4.59*</td>
</tr>
<tr>
<td>9</td>
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<td>.217</td>
<td>.588</td>
<td>.125</td>
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* * = p < .05  
** ** = p < .025  
*** *** = p < .001
<table>
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<td>10</td>
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</tr>
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<td>11</td>
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<td>.012</td>
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<tr>
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CHAPTER XI
SUMMARY AND DISCUSSION

The self has been a major topic in developmental and personality theory. However, most theories of self are not easily tested. There are two basic reasons for this problem. First, many of these theories have been generated through intuition and "common sense." That is, basic concepts and assumptions were formulated without recognizing the need for empirical support. Thus, it has been difficult to operationalize and test many of the basic assumptions of these theories. The fact that most self theories remain untested is a clear illustration of this problem. The second reason why many self theories remain untested is the lack of appropriate measures. Most current measures presuppose either a static or unidimensional view of self, while many personality and developmental theories would support a multidimensional and dynamic paradigm (e.g., Erickson, 1959; Horrocks, 1976; Riegel, 1975, 1979; Rogers, 1959). These theories assume that with age, and in response to critical life events, the self will usually become more unified, complex, and differentiated. They also theorize that the content of self definition may change. However, due to the lack of measures that assess the dynamic and multidimensional
aspects of self, it is difficult to test these assumptions.

The present dissertation introduces a theory of self that is unique, yet has clear antecedents in prior theories. The author's theory accepts that the self is a dynamic process that interprets, integrates, adapts, and responds to internal and external events. To accomplish its function, the self associates with internal and external objects. These include roles, relationships to people and non-human, objects, emotions, attitudes, abilities, and physical traits. As an integrating process the self contains structural properties. Specifically, it organizes external and internal objects into a hierarchial structure. The self contains both content and structural properties. Content properties include: relationships to non-human objects; relationships to human objects; state-of-being objects; physical objects; and self-diminishing objects. Structural properties include: differentiation; unity; organization; and complexity. Both structural and content properties will vary as a function of age and the ability to adapt to crises. A summary of these changes is provided through 12
hypotheses. In fact, the present theory is distinguished from other self theories because it is operationalized into specific, testable hypotheses.

To test this theory, the present dissertation introduces a highly reliable measure of self that taps both the dynamic and multi-dimensional aspect of self. The Jolley Self Measure (JSM) also has construct validity, demonstrating predicted differences in self due to age. Unity of self is also a good predictor of susceptibility to learned helplessness. This finding provides further evidence for the construct validity of the JSM. The JSM measures both content and structural properties representative of the author’s definition of self. The content areas include: relationship to non-human objects; relationship to human objects; state-of-being objects; physical objects; and self-diminishing objects. The structural dimensions include: differentiation; complexity; unity, and organization.

The JSM provided support for most of the assumptions included in the author’s definition of self. Hypothesis 1 stated that the self in adolescents, young and middle-aged adults would be more unified than
in children and the elderly. This hypothesis was not supported, although a planned comparison did demonstrate a moderate trend. Unity was more closely linked to susceptibility to learned helplessness and self-diminishing than to age. Specifically, hypothesis 8's prediction that susceptibility to learned helplessness would have a negative correlation with unity of self was highly significant. A test for the "significance of the difference between dependent correlations" was significant, indicating that while age may have a moderate effect on the unity of self, unity is more closely associated with the ability to adapt to critical life events. These findings support the phenomenological position that the ability to adapt to external events are representative of a mature self (cf. Lecky, 1969; Rogers, 1959).

Hypothesis 2 predicted that the self in young adults would be more complex than in children, adolescents, middle-aged adults, and the elderly. Although there was no overall effect for the age variables, a more sensitive test, the planned comparison revealed highly significant results in support of the hypothesis. In addition to supporting
the author's theory, this finding is in clear support of current developmental theories, i.e., the self becomes more complex with age (cf. Erickson, 1959; Horrocks, 1977; Piaget, 1967) until later adulthood, when the self becomes less complex due to the loss of self objects (cf. Hiltz, 1981; Lowenthal, 1964, 1977; Neugarten, 1977).

Hypothesis 3 stated that the self in children would be more organized around a single core than in adolescents, young and middle-aged adults, and the elderly. The data clearly supported this hypothesis. This finding is consistent with current views of childhood depicting the child's self as undifferentiated and lacking in unity (cf. Erickson, 1959; Piaget, 1967; Werner, 1978).

Hypothesis 4 predicted that the self in adolescents would contain more physical traits than in the other age groups. This hypothesis was also supported by the data. Current developmental theory describes adolescent egocentrism as an intense concern with one's appearance (cf. Horrocks, 1977; Piaget, 1967). Thus the findings of this theory are consistent with current theory.
Hypothesis 5 predicted that the self in the elderly would be more self-diminishing than for other age groups. Again the data supported this hypothesis. This finding is congruent with gerontological research and theory on alienation and depression (cf. Hiltz, 1981; Jolley, 1979; Lowenthal, 1964). Although the present research does not test this relationship, many theorists link depression to the loss of self objects (cf. Bowman, 1959; Butler & Lewis, 1977). This loss probably results in de-differentiation, which may explain the structural similarities between the children and the elderly, the children are undifferentiated while the elderly are de-differentiated. In a Wenerian sense both states would be characterized by a lack of complexity (H2), and integration (unity(H1)).

Hypothesis 7 stated that children and the elderly would be more susceptible to learned helplessness than adolescents, young and middle-aged adults. This prediction was significant. Perhaps this finding may also be attributed to the structural similarities of the elderly and children. That is, due to the lack of differentiation in both groups they are less adaptable to uncontrollable events. They have fewer self object
to facilitate adaptation, and fewer combinations of objects due to their lack of unity. Thus, greater differentiation leads to greater adaptability.

Hypothesis 9 predicts that illusion of control will be less for children and the elderly than for adolescents, young and middle-aged adults. Although planned comparison failed to demonstrate this hypothesis, age differences were indicated. Specifically, Sheffe's multiple comparison revealed that young adults have a significantly higher illusion of control than other age groups.

Hypothesis 10 stated that illusion of control would have a positive correlation with effort. The data highly supported this prediction. In conjunction with H9, it may be that the young adults try harder, and have a higher illusion of control as they enter the adult world. Later, experience may teach them to be more realistic in their expectations and desires.

Hypothesis 11 predicted that unity of self would have a positive correlation with self-definitions that were high in state-of-being descriptors. This finding was also significant, indicating that relationships are more easily established between
internal objects than external objects. This is consistent with both Erickson's and Sullivan's theories of self.

Finally, hypothesis 12 was moderately supported, i.e., unity of self would have a negative correlation with self-diminishing descriptors. However a "significance of the difference between dependent correlations" test between the correlation of unity with age and with self-diminishing descriptors failed to show a significant difference. Therefore, the proportion of self-diminishing self objects is not a better predictor of unity than age.

Collectively, the data indicate that the self changes as a function of age. The author's theory was generally accurate in predicting the direction of this change for each age group. Specifically, as a person matures the self becomes more complex. There is an age trend toward greater unity. However, variability on this dimension is more accurately predicted by susceptibility to learned helplessness. Other age trends reveal that as people reach the adolescent and adult years their selves are less organized around a single core (JSM organization score). Rather, the self
becomes more differentiated by associating with more self objects (indicated by a high differentiation score), and by developing a network of relationships among many self objects (indicated by a low organization score and/or a high unity score). In addition, the self becomes less focused on external and physical objects, associating more with human-objects (eg. roles, relationships), and state-of-being factors (eg. emotions, attitudes). However, once people reach the later years there is a tendency to become less complex. This change is accompanied by an increase in self-diminishing attitudes toward self objects. These changes in the later years may be attributed to the loss of self objects (eg. roles, relationships, money, physical traits, etc.) that commonly accompany advanced age.

The present findings provide clues to several questions. For example, what makes a person more susceptible to learned helplessness? A person's level of unity is a good predictor of susceptibility to learned helplessness. This finding suggests that unity is one factor that affects a person's ability to adapt to uncontrollable events. What is the effect of
uncontrollable events on the self? A possibility is that the number and severity of critical life events may affect the unity of self. Perhaps a person who has recently experienced a number of severe crises may experience fragmentation of the self (the antithesis of unity) because a number of self objects have been threatened, disconfirmed, or eliminated. For example, a serious automobile accident may disconfirm Joe's belief that he has control over the events of his life. This hypothesis is consistent with Seligman's theory (in fact it is the basis for his method of inducing learned helplessness) and is also a major component in Holmes (1967) theory of stress. Holmes believes that high levels of stress can seriously impair our ability to adapt. Data from this dissertation suggest that adversity affects self-diminishing, but not unity. That is, the severity of crises (as assessed through control and expectancy scores on the adapted version of Cottle's Experiential Inventory) correlated significantly only with self-diminishing. Do crises directly affect our ability to adapt? This hypothesis was indirectly tested by this dissertation. It was found that the severity of crises experienced by people
(as measured by the adapted version of Cottle's Experiential Inventory) did not significantly correlate with susceptibility to learned helplessness or effort expended on the task. Thus, it seems that severe crises did not significantly decrease the ability of this sample to cope with the experimental tasks. However, it may be that more recent crises have a greater impact on the ability to adapt, than distant crises (most crises that were reported in the Cottle were distant crises). Nevertheless, the present data do not provide any support for generalizing Seligman's thesis (that uncontrollable crises lead to helplessness) to real life.

The JSM provides many interesting directions for future research and application. In relation to crises, the JSM could provide information about how the self actually changes in response to a specific crisis. For example, surgery, widowhood, or moving. The JSM could be useful in therapy, aiding the client and psychologist in mapping changes in the self. The JSM could be useful in measuring development, both inter-individual and intra-individual. However, before the JSM is used for this later application it would be
useful to develop age norms. Although the JSM is a good predictor of age on most of its dimensions, a larger sample is necessary for standardization. Whereas most standardized tests place greater emphasis on means, the JSM would place equal importance on variance. Since children are less complex and differentiated than adolescents and adults, one would expect children to be more alike than individuals in older age groups. Therefore, variance within age groups should increase with age.

Related to the problem of standardization is the issue of age differences versus cohort effects. One should take caution when interpreting the results of any cross-sectional study when age effects are of interest. Clearly, the JSM would benefit from longitudinal or cross-sequential research to factor out cohort effects from true age effects.

In summary, the present research tests the assumptions made by the author's theory of self. Specifically, it demonstrates a relationship between the self and age. In addition, it shows that external events relate to the structure of self, i.e., unity is an accurate predictor of the ability to adapt to an
uncontrollable event (susceptibility to learned helplessness). The major contributions of this dissertation were to introduce a clearly operationalized theory that is easily tested and to provide a reliable, and valid measure of that theory. In addition, the present dissertation provides many directions for future research. Many of these suggestions relate to future development and application of the JSM. In particular, the JSM should be standardized for age norms. Research is also proposed on how critical life events affect the self, and how crises affect the ability of the self to adapt to a specific crisis.
APPENDIX A

FORMS
I consent to participating in a study entitled "ADAPTATION TO RELOCATION". Janina M. Jolley has explained the purpose of the study and procedures to be followed. Possible benefits of the study have been described as have procedures, if such procedures are applicable and available.

I acknowledge that I have had the opportunity to obtain additional information regarding the study and that any questions I have raised have been answered to my full satisfaction. Further, I understand that I am free to withdraw consent at any time and to discontinue participation in the study without prejudice to me. The information obtained from me will remain confidential and anonymous.

Finally, I acknowledge that I have read and fully understand the consent form. I have signed it freely and voluntarily and understand a copy is available upon request.

Date:.../.../... Signed:..........................
I give consent for my child .....................
to participate in a study entitled "ADAPTATION TO
RELOCATION". Janina M. Jolley has explained the purpose
of the study and procedures to be followed. Possible
benefits of the study have been described as have
procedures, if such procedures are applicable and
available.

I acknowledge that I have had the opportunity to
obtain additional information regarding the study and
that any questions I have raised have been answered to
my full satisfaction. Further, I understand that I am
free to withdraw consent at any time and to discontinue
my child's participation in the study without prejudice
to my child. The information obtained from my child
will remain confidential and anonymous.

Finally, I acknowledge that I have read and fully
understand the consent form. I have signed it freely
and voluntarily and understand a copy is available upon
request.

Date:...................... Signed:........................
**EXPERIENTIAL INVENTORY**

Please list the ten most important experiences of your life. These may be experiences that you have had, you are having, and experiences you expect to have. You only need to write a few words for each experience. You may list your experiences in any order that you wish.

<table>
<thead>
<tr>
<th></th>
<th>expectancy</th>
<th>control</th>
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</thead>
<tbody>
<tr>
<td>a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
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<td>j</td>
<td></td>
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</tbody>
</table>
Now that you have listed 10 experiences, please study the time zones below:

TIME ZONES
1. Distant Past
2. Near Past
3. Present
4. Near Future
5. Distant Future

Take each experience and decide if it has occurred, is occurring, or will occur. Then choose the number of the time zone that best represents the time of the experience and write this number on the dotted line in front of the experience. Do this for all ten experiences.

Now, for each event indicate the degree to which you expected it to occur. Use a number ranging from 1 to 7 as shown on the example below. One means you did not expect it at all. A seven means you totally expected it.

1...2...3...4...5...6...7
unexpected expected

So for example, if you found 5,000 dollars in the street, you would probably put a 1 in the column marked "expected". If you graduated from high school, you would probably put a 7 by this event since you expected to graduate from high school.

Similarly, please indicate how much control you felt you had over the event in the column marked "control". A 1 means you had no control, and a 7 means that you felt you had total control over the event.
JOLLEY SELF MEASURE
INTERACTIONS TIME ONE

NAME: ...........................................
DATE: .../.../....

1= ...........................................>
2= ...........................................>
3= ...........................................>
4= ...........................................>
5= ...........................................>
6= ...........................................>
7= ...........................................>
8= ...........................................>
9= ...........................................>
10= ..........................................>
11= ..........................................>
12= ..........................................>
13= ..........................................>
14= ..........................................>
15= ..........................................>
16= ..........................................>
17= ..........................................>
18= ..........................................>
19= ..........................................>
20= ..........................................>
SUSCEPTIBILITY TO LEARNED HELPLESSNESS

NAME:..........................................................

DATE:..............

1........
2........
3........
4........
5........
6........
7........
8........
9........

ILLUSION OF CONTROL

t1........ 1...2...3...4...5...6...7

(tlow) (high)
| 1 = ....................................... > |
| 2 = ....................................... > |
| 3 = ....................................... > |
| 4 = ....................................... > |
| 5 = ....................................... > |
| 6 = ....................................... > |
| 7 = ....................................... > |
| 8 = ....................................... > |
| 9 = ....................................... > |
| 10 = ....................................... > |
| 11 = ....................................... > |
| 12 = ....................................... > |
| 13 = ....................................... > |
| 14 = ....................................... > |
| 15 = ....................................... > |
| 16 = ....................................... > |
| 17 = ....................................... > |
| 18 = ....................................... > |
| 19 = ....................................... > |
| 20 = ....................................... > |
NAME: ...................................
DATE: ..............................

ILLUSION OF CONTROL TIME TWO

t1...... 1...2...3...4...5...6...7 (researcher)
t2...... 1...2...3...4...5...6...7 (subject)
APPENDIX B

SUSCEPTIBILITY TO LEARNED HELPLESSNESS FIGURES
Figure 1  Stimulus 1
Figure 2 Stimulus 2
Figure 3 Stimulus 3
Figure 4: Stimulus 4
Figure 5  Stimulus 5
Figure 6  Stimulus 6
Figure 7  Stimulus 7
Figure 8  Stimulus 8
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