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## An Examination of the Relationship Between Identity, Style, and Locus of Control in Later Adolescent Development

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AN EXAMINATION OF THE RELATIONSHIP BETWEEN IDENTITY STYLE AND  
LOCUS OF CONTROL IN LATER ADOLESCENT DEVELOPMENT

POLLY A. SHARP B.S., M.A.



An Abstract Presented to the Faculty of the Graduate School  
of Lindenwood College in Partial Fulfillment of the  
Requirements for the Degree of  
Master of Art

1996

## ABSTRACT

This study investigates the psychosocial crisis of later adolescence. Berzonsky's ISI2 and Levenson's I, P, and C Scales were correlated. The I, P, and C Scales measure locus of control. The I Scale measures internal locus of control. The P and C Scales describe external locus of control. The P Scale measures a belief that powerful others control event outcomes. The C Scale measures the belief that things happen due to chance or fate. The Identity Style Inventory - Revised (ISI2) measures an individual's identity style. Identity style is the characteristic pattern of behaviors most often used by an individual to problem-solve and make decisions. Identity styles delineate the orientation individuals take toward questions of identity. Three identity styles are theorized to describe four resolutions to the identity crisis: information-orientation describes identity-achieved and moratoriums, normative-orientation describes foreclosures, and diffuse-orientation describes diffusions. In addition to the three identity styles the instrument yields a commitment index. The Commitment index measures how firmly committed individuals are to the life choices they have made.

In the present study it was expected that information-orientation would be associated with an internal locus of control while normative and diffuse-orientations would be associated with external locus of control. Results of a Pearson  $r$  yielded expected relationships overall. The normative-orientation was not positively correlated with the P Scale as expected, but approached statistical significance in a negative direction. Several possible explanations are offered including inappropriate use of different instruments, identity style overlap in the Commitment index, and anomalies caused by movement from one identity status into another.

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## ABSTRACT

This study investigates the psychosocial crisis of later adolescence. Berzonsky's ISI2 and Levenson's I, P, and C Scales were correlated. The I, P, and C Scales measure locus of control. The I Scale measures internal locus of control. The P and C Scales describe external locus of control. The P Scale measures a belief that powerful others control event outcomes. The C Scale measures the belief that things happen due to chance or fate. The Identity Style Inventory - Revised (ISI2) measures an individual's identity style. Identity style is the characteristic pattern of behaviors most often used by an individual to problem-solve and make decisions. Identity styles delineate the orientation individuals take toward questions of identity. Three identity styles are theorized to describe four resolutions to the identity crisis: information-orientation describes identity-achieved and moratoriums, normative-orientation describes foreclosures, and diffuse-orientation describes diffusions. In addition to the three identity styles the instrument yields a commitment index. The Commitment index measures how firmly committed

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## CHAPTER I

### INTRODUCTION

According to Erik Erikson's (1963, 1968) psychosocial theory, the development of the individual may be attributed to the interaction between biology, mind, and social setting. Additionally, the historical period in which these elements are set is essential for understanding individual development. Erikson (1963) conceptualized eight stages of development. At each of these stages the individual must psychologically adjust to the social environment by mastering critical developmental tasks. Society's expectations change at each stage of development. The individual attempts to resolve the tension caused by society's expectations before moving onto a new stage. Erikson calls this tension the psychosocial crisis. Crisis, according to Erikson (1968), does not mean impending disaster, but rather a crucial moment during which the individual must decide how to develop. Newman and Newman (1991) expanded Erikson's original eight life stages into eleven and separated Erikson's original stage of adolescence into early and later periods. This study shall focus on the stage of later adolescence

Newman and Newman's (1991) conceptualization of later adolescence is from 18 to 22 years of age. The psychosocial crisis of this stage is the identity crisis. For Erikson (1963), identity is an

internalized self-representation providing the individual with a subjective sense of continuity and consistency across settings and roles throughout the life stages. It is an integration of, but not a reduction to, the experiences and identifications experienced by the individual and the meaning these have for the individual. Creating an identity requires an active "process of simultaneous reflection and observation" (Erikson, 1968, p. 22).

During this period, adolescents' primary concern is their appearance to others in comparison to their own self-conceptualization (Erikson, 1963). Identity development, according to Erikson (1963), is a process in constant change: "at its best it is a process of increasing differentiation" (p. 23). Identity is not an outcome, states Erikson (1963), but rather a sense of "the actually attained but forever to-be-revised sense of the reality of the Self within social reality" (p. 210).

Marcia (1966) developed a paradigm for the outcome of the adolescent identity crisis with four resolutions, called identity statuses. The four identity statuses are identity-achieved, moratorium, identity-forclosed, and identity-diffused. A characteristic pattern of behaviors will result from and be associated with the individual's identity status (Berzonsky, 1990).

There is debate in the literature of psychology on development of self-identity. Some think individuals possess a true self which

may be made known to the self-exploring individual (Waterman, 1986). Others think individuals actively create their self-identity (Berzonsky & Niemeyer, 1988). The latter position describes self-construct psychology and is the position maintained by the present study

An area examined by self-psychology is how the individual processes and integrates personally relevant feedback and information. According to Berzonsky (1988, 1990), an individual's self-relevant feedback maintenance will assume a characteristic pattern based on the identity status of the individual. These characteristic patterns are called identity styles. There are three identity styles: Information-Orientation, Normative-Orientation, and Diffuse-Orientation.

Rotter (1966) developed a psychological concept called locus of control to explain how individuals conceive of causality. Individuals may have an internal locus of control which describes those who believe that their actions exert some influence on the outcome of events. These individuals feel personal power and efficacy. External locus of control describes individuals who believe that their actions do not influence event outcomes. Subsequently, these individuals do not experience personal power and efficacy. According to Levenson (1981), external locus of control has two components: powerful

others and chance. Individuals who believe in powerful others believe in a world which is ordered and predictable but beyond their individual influence. These individuals believe it is the actions of powerful others which control outcomes. Individuals who believe in chance do not believe in an ordered and predictable world. These individuals believe that luck, fate, or chance are the determinants of outcomes.

#### Purpose

The purpose of the present study is to examine the relationship between a self-report measure of identity styles and a self-report measure of a multidimensional concept of locus of control. The Identity Style Inventory Revised (ISI2) developed by Berzonsky (1988) measures an individual's identity style and generates a score representing the individuals' commitment to the identity style. The Internal, Powerful Others, and Chance Scales (I, P, and C Scales) are a multidimensional instrument developed by Levenson (1981) to measure locus of control. Special attention will be paid to subjects within the target age group of 18-22.

Listed below are several null hypotheses which are examined in this study:

1. There is no relationship between an Information-Orientation as measured by the ISI2 and the I Scale as measured by Levenson's locus of control measure.

2. There is no relationship between an Information-Orientation as measured by the ISI2 and the P Scale as measured by Levenson's locus of control measure.

3. There is no relationship between an Information-Orientation as measured by the ISI2 and the C Scale as measured by Levenson's locus of control measure.

4. There is no relationship between a Normative-Orientation as measured by the ISI2 and the I Scale as measured by Levenson's locus of control measure.

5. There is no relationship between a Normative-Orientation as measured by the ISI2 and the P Scale as measured by Levenson's locus of control measure.

6. There is no relationship between a Normative-Orientation as measured by the ISI2 and the C Scale as measured by Levenson's locus of control measure.

7. There is no relationship between a Diffuse-Orientation as measured by the ISI2 and the I Scale as measured by Levenson's locus of control measure.

8. There is no relationship between a Diffuse-Orientation as measured by the ISI2 and the P Scale as measured by Levenson's locus of control measure.

9. There is no relationship between a Diffuse-Orientation as



measured by the ISI2 and the C Scale as measured by Levenson's locus of control measure

10. There is no relationship between Commitment as measured by the ISI2 and the I Scale as measured by Levenson's locus of control measure.

11. There is no relationship between Commitment as measured by the ISI2 and the P Scale as measured by Levenson's locus of control measure

12. There is no relationship between Commitment as measured by the ISI2 and the C Scale as measured by Levenson's locus of control measure.

## CHAPTER II

### LITERATURE REVIEW

The literature reviewed for this study indicates that characteristic patterns of behavior can be predicted by an individual's identity status. These patterns of behavior will be used to problem-solve and make decisions. Locus of control may be used to help understand where individuals place the causality for event outcomes. The placement of causality is related to how individuals make decisions and solve problems.

#### Identity-status Paradigm

Marcia's (1966, 1976) work with the later adolescent identity crisis yields an identity status paradigm based on the criteria of commitment and crisis applied to the areas of politics, religion, and occupation. Attitudes and beliefs in the areas of politics and religion are combined into one concept termed ideology. Crisis refers to a period of self-exploration during which an individual actively uses an information-oriented problem-solving approach to questions of personal identity and conflict (Berzonsky, 1989b). Commitment refers to the personal investment made toward the individual's choices.

Generally, there are four statuses within Marcia's identity status paradigm (Adams, Shea, & Fitch, 1979; Adams & Fitch, 1982; Marcia, 1966, 1976). The statuses are identity-achievement,

moratorium, foreclosure, and diffusion.

Identity commitment statuses are identity-achievement and foreclosure. In a study Berzonsky (1989a) conducted he reported high commitment scores associated with low scores on a measure of locus of control. High scores indicate an external locus of control. High commitment scores were also associated with low scores on a measure of authoritarianism. For the purposes of this study, Berzonsky operationalized authoritarianism as an inability to handle uncertain situations, the presence of rigidity in social interactions, and a low ability to adapt to new situations.

Identities involving crisis are identity-achievement and moratorium. Individuals who are identity-achieved have gone through a period of crisis and are committed to occupation and ideology (Marcia, 1966). Achievers are likely to be stable and adaptive (Marcia, 1976), display a greater need for complex information (Berzonsky, 1989a; Berzonsky, 1990), have a more internalized locus of control (Berzonsky, 1989a; Marcia, 1966), and are more open to experience (Marcia, 1976). Individuals in the status of moratorium are currently in a period of crisis (Marcia, 1966) and are likely to have vague commitments (Marcia, 1966). Moratoriums are more stable and adaptive than foreclosures or diffusions (Marcia, 1976), display a greater need for complex information (Berzonsky, 1989a; Berzonsky, 1990), have more insight (Berzonsky, 1989a; Berzonsky, 1990), are

less likely to be perceptually distorted (Berzonsky, 1989a; Berzonsky, 1990), and have an internal locus of control (Berzonsky, 1989a).

Individuals who are foreclosed are committed to occupation and ideology but have bypassed a period of crisis (Marcia, 1966). These individuals have made choices based on the wishes of parental and other significant figures of authority (Marcia, 1966). Foreclosures are likely to be rigid and nonadaptive (Marcia, 1976), score high on measures of authoritarianism (Adams, Shea & Fitch, 1979; Marcia, 1966), have a low need for complex information (Berzonsky, 1989a), are biased in their perceptions (Berzonsky, 1989a), and have a lifestyle which is not open to new experiences (Marcia, 1976).

Those who are diffuse may or may not have gone through a period of crisis and are currently uncommitted to any particular occupation or ideology (Marcia, 1976). Diffusions are generally disorganized (Marcia, 1976), have a low need for complex information (Berzonsky, 1989a), are biased in their perceptions (Berzonsky, 1989a), have an external locus of control (Berzonsky, 1989a), look toward cues within their environments upon which to base their behaviors so as maximize personal benefits (Berzonsky, 1986, unpublished data, cited in Berzonsky, 1990), and have disorganized and goalless lifestyles (Marcia, 1976).

Marcia (1976) conducted a longitudinal study in which identity

status in college was compared with identity status six years later. In this study Marcia found that moratoriums were the most unstable status in respect to status maintenance. The high identity statuses of achieved and moratorium were more unstable than the low identity statuses of foreclosure and diffusion. Among all identity statuses the rate of change is 47%. This change rate fell to 30% when moratoriums were excluded. No significant finding was reported on direction of change, although a tendency was noted for more high identity subjects to move into lower statuses than low identity subjects to move into higher statuses.

Unexpected findings were reported with high identity statuses moving into the foreclosure status. According to theory, after having experienced a crisis period, individuals should not revert to a period of foreclosure (Marcia, 1976). There is evidence to suggest, however, that achievers may not actively explore self-relevant information. Berzonsky (1992) proposes that this anomaly represents an achiever's attempt at efficiency, that is, once an identity has been committed to, how many times do individuals need to re-evaluate themselves according to information differing from their self-identity?

Marcia (1976) also reported that individuals high in identity were likely to be involved in intimate relationships and have a lifestyle characterized as purposeful and adaptable. Individuals low in identity did not have this tendency. Foreclosures tended toward

relationships with low levels of intimacy and had lifestyles characterized as being purposeful and unadaptable. Diffusions were found to be involved in low intimacy relationships and had a lifestyle characterized as aimless and disorganized.

Marcia (1976) concluded that the status change he reported indicates that identity is more a process than a typology. In particular he noted that achieving an identity in college did not preclude a continuation of identity development, whereas not achieving an identity in college correlated with not achieving identity in the six years following college. Like Marcia, other researchers (Adams, Shea, and Fitch, 1979) contend that identity status should be considered a developmental process rather than a stage by stage progression.

In a report on four studies, Adams, Shea, and Fitch (1979) found that foreclosure and moratorium subjects scored significantly higher in measures of authoritarianism than identity-achieved or moratoriums. Identity-achieved and moratoriums scored higher on a measure of self-acceptance than foreclosures and diffusions. It is theoretically consistent for individuals to develop from low identity statuses into high identity statuses as they age. The researchers reported a tendency for females to show age changes inconsistent with theory, although the differences did not reach significance.

In a longitudinal study of one year reported by Adams and Fitch (1982), the role of cohort effects in developmental identity status change were examined. College freshmen, sophomores, and seniors were compared to determine if cohort is more relevant than age in personality development during adolescence. Three theoretically consistent change conditions were found: no change in status, movement from a lower identity status to a higher identity status, and regression from higher identity status to lower identity status as part of a transitional period anticipated to culminate in greater integration and differentiation. Theoretically inconsistent change was reported in which downward movement occurred from statuses two or more steps removed from each other.

The researchers reported that between the two points of time, college students tended to move from lower identity statuses into upper identity statuses; females tended to be more foreclosed than males; and males tended to score higher on identity achievement. Adams and Fitch reported that of the subjects in this study those low in identity achievement were less likely to advance to higher identity achievement, most subjects remained stable with females tending toward greater stability than males, males tended toward downward change more than females, and overall positive change for both sexes were nearly identical. The researchers did not observe significant cohort effects in individual change.

## Identity Styles

According to Berzonsky (1988), identity is composed of three closely related items: The data from which an identity is formed is the content; structure refers to the way the data of identity is patterned; and process is how the content is systematically stored and accessed. He describes process as having at least three levels. At the most basic level are behavioral patterns and cognitive responses which people use in daily life. The next level contains social-cognitive strategies which are patterns of behaviors and cognitive responses. The most complex level is identity style which is the strategy the individual is most likely to use.

According to Erikson (1963, 1968), one of the purposes of the self is to help structure information and experiences in a meaningful way. One kind of information processed by the self is self-relevant information. Berzonsky (1988, 1989a, 1990) theorizes that how an individual processes self-relevant information is associated with the individual's identity status. Research supports this claim (Berzonsky & Neimeyer, 1988). Berzonsky uses the term "identity style" to describe how an individual processes self-relevant information. Berzonsky (1988) favors a model of identity construction, rather than identity discovery. According to Berzonsky's (1990) process model of identity development, there are three identity styles: information-



orientation, normative-orientation and diffuse-orientation. By the stage of late adolescence all three identity styles may be used by individuals although one will be favored (Berzonsky, 1990).

Berzonsky (1990) associated Marcia's status paradigm with different social-cognitive strategies of problem-solving and decision-making. Social-cognitive strategies form the processing orientation toward self-theory construction the individual prefers to use, or will use most often (Berzonsky, 1988, 1990). Individuals with an information-orientation actively search out information and process it, relatively free of perceptual distortion. Both identity-achieved and moratoriums are expected to have an information-orientation to questions of identity. Individuals with a normative-orientation rely on the expectations of significant authoritative others and social convention to form an identity to which they are firmly committed. Foreclosures are expected to have a normative-orientation. Individuals with a diffuse-orientation avoid problems until the decision or course of action most beneficial to them becomes apparent. This orientation is expected of diffusions.

#### Self-construct Psychology

Self-construct psychology is that branch of psychology maintaining that individuals construct their self (Berzonsky & Neimeyer, 1988). According to constructivism, identity is created by individuals to explain who they are and their place in the world.

Identity also provides structure for individuals' behavior. According to self-construct psychology, individuals' realities are composed of personal theoretical constructs actively created and imposed on reality by each individual. To be most beneficial to the individual this construction, or self-theory must be flexible and adaptable (Berzonsky, 1988). Personal theoretical constructs are the cognitive schemas from which individuals draw upon and alter to fit their experiences into meaningful patterns.

The self-construct metaphor may be compared to the discovery metaphor which maintains there is a true self which the individual discovers but has no conscious role in organizing (Waterman, 1986). Once discovered, potentialities of the individual must be actualized through personal effort (Waterman, 1986). Self-discovery does not preclude personal responsibility (Waterman, 1986). According to Waterman, self-discovery is more complex, difficult and requires greater responsibility than does self-construction. Self-development does not end with discovery. Actualization of potentialities still needs to occur. In particular, Waterman stresses commitment, dedication, discipline, sense of purpose and integrity as integral to the process of self-discovery.

Constructivism in identity development implies that there are individually created realities from which each person operates. Another way to look at the process model of identity development,

according to Berzonsky (1988), is self-as-theorist. According to this metaphor, an individual may be thought of as a scientist, constructing an identity which is both helpful and believable. A self-theory is composed of the individual's personal theoretical constructs, and as such, is idiosyncratic (Berzonsky, 1988). According to Berzonsky (1988), a self-theory is made of several 'selves' i.e. an individual is sometimes a friend, sometimes a coworker, sometimes a parent, etc. Berzonsky (1988) terms these different selves "self schemas" and the area covered by each self schema is a "content domain". Each self schema may employ a different identity style, therefore, development across the self schemas may be uneven.

As in any theory, hypotheses are made by the self-as-theorist and checked out. These hypotheses are either supported or not. Anomaly exists when an hypothesis is not supported and the self-as-theorist experiences a state of dissonance (Berzonsky, 1988).

Berzonsky draws on Lakato's (cited in Berzonsky, 1988) discussion of scientific programs to create a model of the self. In this model, the self is composed of three layers. At the deepest layer lies what Berzonsky refers to as the layer of hard core assumptions and propositions and herein lies the hypotheses most highly defended; the next layer is a protective belt of hypotheses which may be adapted as needed; and the outer layer contains the rules by which

problems are solved and decisions made.

According to Berzonsky's (1988) model, the self-as-theorist may be either progressive in its scientific research programming, or degenerative. When the self-as-theorist is progressive, the middle layer of hypotheses is able to adapt to anomalous information in innovative ways, leaving the innermost layer of hardcore assumptions intact. To accommodate this, the middle layer generates different and new hypotheses which the self-as-theorist investigates. When the self-as-theorist is degenerative, anomalies are handled by "ad hoc defensive maneuvers" (Berzonsky, 1988, p. 245) which create more problems than they solve. When this occurs, the innermost layer of hard core assumptions may need to be abandoned.

The resolution of an identity crisis will result in a revision of an individual's hard core assumptions (Berzonsky, 1988) with an improved protective belt of hypotheses more capable of adapting to anomalous information. The protective belt of hypotheses are designed to prevent the necessity of abandoning the layer of hard core assumptions in the future. Individuals with normative and diffuse-orientations may seek to prevent revising their hard core assumptions, thereby forgoing a period of crisis (Berzonsky, 1992).

The self-as-theorist must be able to monitor information about generated hypotheses to be progressive. Eventually, monitored information will need to be assimilated into the self-identity. When

assimilation is automatic, that is, when no thought is involved in what is assimilated or how, self-theory driven distortions of reality occur (Berzonsky, 1988; Berzonsky & Neimeyer, 1988). Firmly committed individuals, such as foreclosures, are likely to utilize biased self-constructs to support their commitment (Berzonsky, 1988; Berzonsky & Neimeyer, 1988). It is possible that an individual's firm commitment will result in biased perceptions of reality, that is, the individual may disregard everything which causes any disturbance of the self-theory (Berzonsky, 1990; Berzonsky & Neimeyer, 1988; Folkman & Lazarus, 1985). Foreclosed individuals are opinionated self-theorists who strive to defend their beliefs through an over-reliance on assimilation which creates distortion and a biased attentional focus (Berzonsky, 1989b).

Diffuse individuals are likely to operate uniquely in each situation based on a disconnected set of self-constructs. Diffusions put off making decisions until able to identify cues in a situation alerting them to behave in a manner calculated to maximize their personal gain (Berzonsky, 1989b). Diffusions over-reliance on these accommodative maneuvers prevents awareness of long-range concerns (Berzonsky, 1989b).

In contrast, information-oriented individuals are likely to operate from a complex and related set of self-constructs

(Berzonsky, 1989b; Berzonsky & Neimeyer, 1988). Information-oriented individuals may experience a lifespan cycle of alternating moratorium-achieved statuses (Berzonsky, 1989b).

### Coping Strategies

Folkman and Lazarus (1985) found evidence of a process at work during stressful events. According to these researchers, a stressful event should be regarded as one in which individuals will experience diverse and sometimes contradictory reactions. The researchers assert that coping is a complex process during which individuals will experience significant individual differences despite a prescribed range of emotions at any stage of the event.

In research designed to uncover aspects of stress and coping, Folkman and Lazarus (1985) described two processes in cognitive appraisal: primary and secondary appraisal. In primary appraisal an individual decides whether an event is beneficial, stressful, or insignificant to the self. Stressful events may be perceived as threatening and having the potential for harm; challenging and providing a mastery experience; or having caused harm or loss of something of value to the individual already, such as a friendship. During secondary appraisal the individual assesses what can be done during the stressful event.

According to Lazarus and Folkman (1985) emotions are produced from an individual's appraisal of the environment. Emotions,

then, can inform researchers of the individual's current appraisal efforts. According to the researchers, coping refers to strategies employed by the individual to correct a "troubled person-environment relationship" (Lazarus & Folkman, 1985, p. 152). Coping has two major functions, regulating troublesome emotions (emotion-focused coping) and positively altering the troublesome person-environment fit (problem-focused coping). The researchers found that problem-focused coping was used most in events considered changeable, whereas emotion-focused coping was used in events considered unchangeable.

Folkman and Lazarus (1985) found that as a stressful event unfolded, the individual's perception of the event changes and emotions were altered in kind. In situations of ambiguity, both positive and negative emotions were experienced by the individual until such a time as the meaning of the event to the individual became clear. Folkman and Lazarus reported strong evidence supporting the idea that there are large intraindividual differences in emotion during stressful events which are largely explainable by cognitive appraisal and coping.

Adams, Shea, and Fitch (1979) set out to test whether certain personality constructs could be predicted by Marcia's paradigm statuses. The research provided evidence that the personality

constructs of self-acceptance, locus of control, rigidity, and authoritarianism could be reasonably predicted by Marcia's paradigm.

Grotevant and Adams (1984) investigated the relationship between Marcia's identity statuses and coping styles. The researchers took four scales from Peck's Individual Styles of Coping measure (cited in Grotevant & Adams, 1984) including the Confrontation/Avoidance scale which measures whether an individual is more likely to deal with problems rather than avoid them; the Engaging scale which purports to measure whether an individual will be self-directed or other-directed in attempts at problem solving; the Independence versus Obedience scale which measures whether an individual is more likely to think and act independently or depend on, or obey, others; and the Total Coping scale which is a full scale summary score. Supporting their hypothesis, the researchers reported that the self-reported behavior of achievers is correlated with a problem-solving approach that confronts problems and is self-directed (Grotevant & Adams, 1984). Diffusions and foreclosures reported an other-directed approach toward problem-solving. Diffusions also reported avoidance of the problem. The results for moratoriums was somewhat less clear, with some predicted correlations supported. Berzonsky (1990) suggests that individuals in the different identity statuses will characteristically use these approaches in the process of problem-solving and decision-making.



As noted elsewhere in this literature review, identity achievers may not actively explore self-relevant information after having committed to an identity. Berzonsky (1992) investigated whether lack of actively investigating information related to self-relevant problems correlates with the individual's reported level of commitment. To measure this correlation Berzonsky (1992) developed a self report measure of identity style (ISI) which investigates commitment independent of crisis.

Berzonsky's (1992) expectations of the study's outcomes were that information-oriented individuals would see self-relevant problems as solvable and would employ problem-focused coping strategies to manage them, thereby actively revising their self-theories according to the new information. Individuals with a normative-orientation would look toward significant authoritative others for guidance when questions of self-relevance appear. These individuals would attempt a strategy limiting information sources to those anticipated to support their self-theory. Individuals with a normative-orientation might also procrastinate and avoid self-relevant problems. Individuals with a diffuse-orientation would delay and avoid solving self-relevant problems, relying on emotion-focused coping and thereby avoiding a need to revise their self-theories.

Berzonsky's ISI yields scores of identity styles (information,

normative, and diffuse), and a commitment index. For the study reported here, Berzonsky (1992) used a revised instrument with improved psychometric qualities. A coping strategy measure was used which breaks coping into problem-focused coping (tackling the problem head on, generating possible solutions and acting on them), wishful thinking (that the problem would go away), distancing and detachment (attempts to forget about the problem), tension-reduction (activities such as jogging, meditation), and seeking social support (finding someone to talk over the problem with who might be of some help). Emotion-focused coping consists of wishful thinking, distancing and detachment, and tension reduction. The goal of emotion-focused coping is to manage the emotional response of the stressors, not to manage the stressor itself. Seeking social support might be considered a problem-focused strategy when the purpose of the individual is to seek alternative ways of dealing with the stressor. Seeking social support might be considered an emotion-focused strategy when the purpose of the individual is to seek sympathy or reassurance.

A separate measure used in this study examines anxiety associated with stressors. Debilitative anxiety reactions refer to pressures which hamper an individual's performance. Facilitative anxiety reactions refer to pressures which help the individual's performance. Berzonsky (1992) reported in this study that

information-orientation was positively correlated with problem-focused strategies, seeking social support, and the use of facilitative anxiety. Information-orientation was negatively correlated with debilitating anxiety, wishful thinking, and emotional distancing. Individuals with a normative-orientation were found to use distancing and wishful thinking and report debilitating anxiety reactions. Individuals with a diffuse-orientation avoided problems using emotion-focused coping strategies such as distancing, wishful thinking, and tension reduction.

Berzonsky (1992) reported individuals with an information-orientation were better able to handle anomalous information through the use of a progressive self-theory. Also in this study, Berzonsky reported no significant sex differences although more males subjects reported a diffuse or normative-orientation.

In a study designed to investigate whether problem-solving approaches can be grouped into overall coping styles which are related to reports of subjective health, Olf, Brosschot and Godaert (1993) reported that coping styles could be differentiated into two groups of defensive strategies (cognitive defense and defensive hostility) and two groups of coping styles (instrumental mastery-oriented coping and emotion-focused coping). In the researchers' view, coping refers to a positive outcome expectancy, or what

Lazarus and Folkman (1985) refer to as appraisal. Developing a positive outcome expectancy is related to an individual's belief that they can control relevant aspects of their lives. These individuals are more likely to attempt to do so.

Coping differs from defense which Olf et al. (1993) define as "mental strategies that serve the purpose of warding off negative emotional states by distorting aspects of reality" (p. 82). Defense serves to change the threat perceived in a situation, not the situation itself. Cognitive defense is a strategy of internalization while defensive hostility is a strategy of externalizing

According to the researchers, cognitive defense strategies include intellectualization and denial which serve to disance the problem from the individual, or to distort the importance the problem has to the individual. Thus, the individual's appraisal of the situation is distorted. Also included in cognitive defense is self-encouragement, putting the problem into perspective, and positive reframing of the problem.

According to the researchers, defensive hostility includes anger, hostility, and acting out. These individuals might project unacceptable unconscious motives onto others, try to find acceptable substitutes for personal inadequacies, or act aggressively.

The researchers state that instrumental mastery-oriented coping includes active, goal oriented coping including a sense of

personal control. Behaviors employed will include weighing the alternative solutions, direct intervention, and framing the problem as a challenge.

The researchers state that emotion-focused coping is designed to reduce the negative emotions associated with a situation and includes seeking social support, expressing emotions, and distracting strategies such as smoking. In situations in which controllability is low, emotion-focused coping may be the more adaptive alternative (Olf, Brosschot and Godaert, 1993).

Olf et al. (1993) expected to find positive outcome expectancy correlated with internal locus of control. Furthermore, the researchers expected to find subjects with internal locus of control to report greater subjective health. Subjects using defensive coping styles (cognitive defense and defensive hostility) were expected to be negatively related to reports of subjective health. The researchers reported that subjective health was positively correlated with instrumental mastery-oriented coping; cognitive defense was negatively related to depression and health complaints; and defensive hostility and emotion-focused coping were unrelated to reports of subjective health, with the exception of a correlation between defensive hostility and depression. The researchers suggested that individuals measuring low on instrumental mastery-oriented coping

were likely to experience low subjective health when confronted with multiple life stressors.

In a study conducted to determine variables significant in problem-solving appraisal, Larson, PierseI, Imao, and Allen (1990) reported that perceived problem-solving self-efficacy was correlated with positive coping strategies. Positive coping strategies included problem-focused behaviors, cognitive reappraisal (attempts to manage the stressor), and the use of social resources. Perceived problem-solving self-efficacy was also related to problem-solving appraisal. That is, individuals must think themselves capable of solving a problem in order to appraise a problem in a positive manner.

Larson et al. (1990) also hoped to identify contributors among behavioral, affective, and cognitive characteristics to problem-solving appraisal. Results of the relationship between locus of control, depression, anxiety, and self-concept to problem-solving appraisal were mixed. Although the researchers reported numerous previous studies establishing a relationship between these characteristics and problem-solving appraisal, their study found support only for locus of control and problem-solving appraisal. Additionally, it only found support for locus of control with one of two samples.

Van Zuuren and Wolfs (1991) reported on the relationship between self-monitoring behavior and locus of control. Threatening

Information may be coped with in one of two ways according to van Zuuren and Wolfs. The first way is termed cognitive avoidance, or a turning away from threatening information. The second way is termed vigilance, or a turning toward threatening information. There are two types of information seeking: Seeking information about a threatening event is called monitoring, ignoring or distracting oneself when faced by a threatening event is called blunting. Coping also has two varieties, emotion-focused coping (effort spent at controlling the negative emotions associated with an event) and problem-focused coping (effort spent at changing the problem that is causing the negative emotions).

Van Zuuren and Wolfs postulated that monitoring would be associated with internal locus of control and problem-focused coping, and blunting would be associated with external locus of control and emotion-focused coping. Van Zuuren and Wolfs reported that no important age and sex associations were found and that monitoring and blunting turned out to be independent of each other, not a bipolar characteristic. As predicted, monitoring, problem-focused coping, and internal locus of control were associated.

Anomalous to the predictions were reported findings that monitoring was also positively related to wishful thinking, an aspect of emotion-focused coping. Van Zuuren and Wolfs indicated that this correlation occurred mainly on items about positive thinking, not on

items about active forgetting. The researchers suggested that positive thinking facilitates problem-focused coping.

Predicted correlations with blunting were not so clear. Blunting is associated with wishful thinking/escape, but not with external locus of control. Van Zuuren and Wolf's suggested that there were situational factors important in an individual's use of monitoring or blunting apart from the individual's preferred information seeking method. The researchers suggested that monitoring is affected by the degree of threat and unpredictability of a situation. Also, they suggested that imaginability and uncontrollability of an event might influence the use of an information seeking method.

#### Locus of Control

According to Rotter's (1966) social learning theory, the outcome of events is perceived by different individuals to be caused by different sources. Reinforcements or rewards associated with events or behaviors set up the expectation that repeating the behaviors will cause the rewards to occur again. The more often the rewards occur with the behaviors, the stronger the expectation that the behavior caused the rewards. Individuals may come to believe that their actions have caused a certain outcome while others may believe that their actions do not influence the outcome of events. Among



those in the latter group, the individuals might believe that the rewards might or would have occurred without their efforts, due to chance, fate, or the belief in powerful others. The former describes individuals with internal locus of control, the latter describes individuals with external locus of control.

According to Rotter (1966), individuals learn to believe that their actions cause certain outcomes based on their personal history of reinforcement. This generalized expectation that they can affect change is of crucial importance in understanding individual differences in the learning process. In turn, these individual differences effect how choices are made. For example, individuals who believe their actions will result in a desired outcome will put forth more effort than those without this belief. Furthermore, the belief in chance, fate, or powerful others predominating in a culture influences an individual's generalized expectation.

Rotter (1966) summarized a series of studies investigating the relationship between learning under conditions of chance or skill and individuals' generalized expectancy. It was found that learning under skill conditions raises individuals' generalized expectations of future success and that chance conditions led to "gambler's fallacy". Gambler's fallacy refers to an unexpected shift in generalized expectations, specifically, an expectation of failure after success and success after failure.

Rotter (1966) summarized a series of studies examining the effect varying reinforcement schedules have on generalized expectations. Rotter concluded that there were three conditions under which individuals believe that changes were not due to chance. when individuals perceive that an outcome occurs more than 50% of the time, when there is a pattern in the reinforcements, and when an unusually long series of one outcome occurs over another. In comparison, when individuals do not believe their actions cause an outcome, "it may be said that he learned less . . . he may indeed have learned the wrong things and developed a pattern of behavior . . . referred to as 'superstitious'" (Rotter, 1966, p. 8).

Rotter (1966) modified an existing measure of generalized expectancy. The revised measure, called the I-E scale, measures an individual's beliefs about how reinforcement is controlled, rather than an individual's preference for either internal or external control. Rotter suggested that individuals with extreme scores at either end are likely to be poorly adjusted for this culture. For example, individuals reporting extremely high internal locus of control are likely to internalize failure while individuals reporting extremely high external locus of control are likely to passively wait for things to happen to them.

Rotter (1966) summarized a series of studies designed to

validate the I-E Scale. He reported few differences based on intelligence or sex although one sample comparison of college students indicated a significant number of females reported more external locus of control. Rotter did note significant differences for some samples of race with African-American inmates reporting more external scores than caucasian inmates but African-American college students reporting external scores when compared with only one of two samples of caucasian college students. Some studies failed to find differences based on social economic status while others did. Specifically, high social economic status individuals reported higher internal scores and low social economic status African-Americans reported significantly lower internal scores than middle class African-Americans or lower and middle class caucasians. No differences between Democrats and Republicans were found.

Other studies summarized by Rotter (1966) included one in which patients in a tuberculosis hospital with high internal scores knew more about their condition, questioned medical staff, and were less satisfied with the information coming from medical staff than were patients with low internal scores. Another study found that inmates reporting high internal scores knew more about how a reformatory was run than inmates reporting low internal scores. A series of studies found that African-Americans with high internal scores were more likely to report a willingness to engage in social

rights activities; students with high internal scores were better able to persuade other students to change their views on campus-relevant topics; and Swedish workers with high internal scores were more likely to belong to and be active in labor unions and be more politically aware.

Rotter (1966) reports on studies which were designed to examine whether individuals reporting high internal scores would also believe in their ability to control themselves. It was found that nonsmokers reported significantly more internal scores than smokers. Rotter concluded that individuals reporting high internal scores paid more attention to their environment, especially to information which would guide future behavior. Furthermore, these individuals would take steps to improve their environment.

Rotter (1966) theorized that individuals with high internal scores would be more motivated to achieve than those with low internal scores, with two limitations. The first limitation was an exception for male college students who were externals as a defense against failure ("if I fail it is not my fault") but who were highly competitive at one time. Rotter predicted that these individuals would continue to be competitive in structured competitive settings, attributing failure in these settings to external sources. The second limitation was an awareness that the studies reported on occurred in

academic settings where there may be forces at work on achievement behavior which are not related to locus of control.

In a series of studies designed to investigate the relationship between achievement and locus of control, Rotter (1966) concluded that individuals with high internal scores value skill and achievement more than those with low internal scores. Also, internals would be more concerned with their own ability, especially their failures.

Rotter (1966) theorized that individuals with high internal scores would be more resistant to attempts to manipulate them because manipulation would lead to feelings of control loss. Individuals with low internal scores would be less resistant to manipulation. An exception to this might occur if individuals with high internal scores felt it was in their best interest to conform to social expectations in a given situation. Rotter reported a series of studies designed to investigate this claim and found that individuals with high internal scores resisted pressures to bet money against their wishes, with internals more likely to bet against the larger group. In this study, individuals with low internal scores were more likely to bet money when they were persuaded to do so against their wishes. Additionally, Rotter reported that internals tended to behave in a manner opposite that in which they were conditioned to behave under conditions of subtle suggestion. When conditioning was overt one study indicated that internals did not resist. This lack of

resistance was due, according to Rotter, to the conscious choice made by the individual to allow conditioning to occur or not. Rotter concluded that individuals with reported high internal scores resisted attempts at manipulation if the manipulation was perceived as subtle and not advantageous. On the other hand, when these individuals perceived a conscious choice in the situation they were free to conform or not.

Ashkanasy and Gallois (1987) reported on a study designed to examine the relationship between locus of control and attribution theory in academic achievement among undergraduate students in Australia. The researchers noted that some studies suggest that locus of control is more a self-esteem defense than it is a generalized expectation. That is, individuals with high internal scores will disregard failures. Attribution theory maintains that individuals will attribute locus of control to a source based on an event's outcome of success or failure. This behavior maintains self-esteem in individuals reporting high internal scores by attributing success to internal sources and failures to external sources. According to Ashkanasy and Gallois, this is a self-serving bias.

Ashkanasy and Gallois's study looked at locus of control, controllability, and stability. The researchers theorized that effort has an internal locus of control and is under the control of the

individual while ability is internal to an individual and a stable characteristic, but not under the individual's control. It was theorized that individuals would attribute failure in themselves to effort and luck which are unstable, and other uncontrollable factors. Similarly, individuals would attribute success to internal variables such as ability. Furthermore, attributions of others' success and failure would indicate the same pattern if locus of control is a generalized expectation. Attributions of the success and failure of others would indicate the failures of others to be more internal than their own failures if locus of control is a self-serving bias.

Ashkanasy and Gallois reported that locus of control as a generalized expectation was supported by their findings. Individuals with high internal scores attributed both success and failure to ability (internal) and effort (controllable) in both themselves and others. Internals and externals tended to attribute their own success internally, while attributing failure to a lack of effort. Externals tended to view luck as equally important as ability and effort, while internals tended to view effort and ability as the most important variables. Personal control was especially important in failure outcomes. Both internals and externals viewed lack of effort as the most important reason for failure. According to Ashkanasy and Gallois, this belief gives individuals the ability to change future situations.

Nunn (1994) reported on a study comparing age and gender to college students' locus of control. Nunn found that older students tended toward positive self-concepts, had internal locus of control, were less anxious in learning situations, desired formal learning methods, wanted to learn in a variety of ways, and perceived themselves as more abstract thinkers. Younger students tended to have less positive self-concepts, had external locus of control, were more anxious about learning, were less achievement oriented, desired informal learning methods, perceived themselves as impulsive, and were more concrete thinkers. Interestingly, both the youngest and oldest in this sample had low expectations of their performance in learning environments. Nunn reported that females tended to be more external, anxious and have higher achievement orientations than males.

#### I, P, and C Scales

Levenson's (1981) concept of locus of control builds on Rotter's. According to Levenson, locus of control may be thought of as internal and external, with two conditions of externality. One condition of external locus of control is a belief that things are basically random and unpredictable. Individuals believing this would not act to make any changes since the changes could not be counted on to make a difference. The second condition of external locus of



control is a belief that things are basically orderly and predictable and that powerful others are in control. Individuals believing this would believe their actions might make a difference. Based on this theory, Levenson developed an instrument, the I, P, and C Scales. The I Scale indicates the belief that causality lies within the self (Internal locus of control). The P Scale indicates the belief that causality lies within powerful others. The C Scale indicates the belief that the world is unordered and events occur because of chance or fate

Although the I,P, and C Scales were originally intended to modify Rotter's I-E Scale, the final instrument differs from Rotter's instrument in several important ways (Levenson, 1981). The I,P, and C Scales are more statistically independent from one another than are Rotter's I-E scale. The I,P, and C Scales were developed to measure whether individuals feel they have control over events, not whether they believe this is the case for everyone. Contaminating factors in Rotter's instrument have been eliminated from the I,P, and C Scales and the effects of social desirability have been screened out.

Rotter (1975) considers the concept of locus of control to represent a continuum of beliefs and behaviors, rather than a typology. Thus, it is the sample itself which will determine whether an individual has an external or internal locus of control on the I,P, and C Scales (Levenson, 1981). For example, in any given sample the top scores may be considered internal and the lower scores

considered external. What is considered external on one sample might describe the top scores on another sample and thus be considered internal. In studies by Levenson (1981), the P and C Scales correlated significantly. It is expected that these two scales be related since the basic underlying measurement is a belief that control originates outside of the self.

A number of studies have been conducted to support the multidimensional concept of locus of control. Levenson (1981) summarized investigations using the I,P, and C Scales in comparison to gender, socioeconomic status, and ethnicity. The original investigation designed to validate the I,P, and C Scales indicated that gender is an important variable with males having significantly higher scores on the P Scale. No differences were found between the genders on the I and C Scales. However, other studies indicated no significant gender differences. Levenson believes that gender influences an individual's locus of control development.

According to Levenson, socioeconomic status and ethnicity influence locus of control. Levenson found that individuals from low-income backgrounds and African-Americans were more likely to believe that powerful others controlled events. There were no differences between the I and C Scales between socioeconomic statuses. African Americans also scored significantly higher on the C

Scale. A study comparing inmates of different ethnicities indicated that white inmates scored higher on the I Scale than either hispanic or African-American inmates. Hispanic and African-American inmates scored higher on the P and C Scales than whites. Another study found that there were no significant differences between the I, P, and C Scales for African-American and white students. Levenson concluded that gender, socioeconomic status, and gender might exert differences on perceptions of locus of control, but that these differences were not consistent.

A series of studies summarized by Levenson (1981) designed to investigate childrearing practices and locus of control found that the I, P, and C Scales supported the idea that homes with authoritarian childrearing practices were likely to produce children who scored high on the P Scale. Homes in which consequences were inconsistently applied were likely to produce children who scored high on the C Scale. A study on the effects of birth order and family size indicated that children from small families and first-borns were likely to score high on the I Scale and earlier-born children coming from large families were likely to score high on the P Scale.

Levenson (1981) reported on other studies examining locus of control across the life span. Viewed developmentally, locus of control tends to increase as an individual ages and matures. Middle-aged and old-age individuals retain this internal locus of control. One study

found that individuals in their fifties were most likely to perceive that powerful others were in control, while the oldest individuals did not share this belief. The same study indicated that individuals in their thirties and forties perceived that events occurred by chance or fate less than either younger or older individuals, although the oldest individuals in the sample continued to score high on the I Scale. Retaining perceptions of personal power into very old age was supported by another study in which high scores on the I Scale were significantly and positively related to satisfaction with life. Scores on the P and C Scales were unrelated.

Another study Levenson (1981) reported on found that the belief in personal power among elders contributes to the stress experienced in living in a nursing home. Consistent with studies of other institutionalized populations, elders who had made the choice to move into nursing homes adjusted better than elders who were relocated against their will. Adjustment was related to individuals' perception of being controlled and elders who did not feel controlled were more active and healthy than those who believed they were being controlled by powerful others or chance.

Levenson (1981) reported on studies designed to investigate the validity of Rotter's contention that individuals who score at extreme ends of the I-E Scales are less mentally healthy. The I, P, and

C Scales supported the idea that individuals who believe events are random are less mentally healthy. Comparing the Eysenck's Personality Inventory and the I,P, and C Scales, individuals who scored high on the Neuroticism Scale of the Eysenck Personality Inventory scored high on the I and C Scales of Levenson's measure, with no significant relationship on the P Scale. Another investigation indicated that a belief in the random nature of events was likely to be associated with poor mental health.

Levenson (1981) summarized studies investigating locus of control and seriously ill medical patients. These studies indicated that decreasing patients' beliefs that events occurred through the actions of powerful others increased patients' adjustment and survival rate. Teaching an internal locus of control alone was insufficient to make this difference.

According to Levenson (1981), investigations into locus of control and cognitive complexity found that adult males who believed in chance or fate were less informed on environmental issues; under evaluative conditions individuals with high internal locus of control did better on creative problem-solving than individuals who believed in chance or powerful others; individuals' belief in powerful others was related to irrationality; individuals who believed happiness comes from passivity were more likely to believe in chance control; individuals who believed in powerful others were more likely to

experience blame; and external locus of control was related to dogmatism.

According to Levenson (1981) school achievement is influenced by locus of control. Levenson reported on studies in which relationships between internal locus of control, study habits, and school achievement were positively related, with a negative relationship to chance control. A study designed to investigate the relationship between defensive externality and locus of control found that individuals who scored high on the I Scale were the most successful academically. Defensive externals who scored high on the P Scale were more academically successful than the congruent externals who scored high on the C Scale. Defensive externality refers to the strategy of using an external locus of control to escape blame when the expected outcome of an event is negative. In academic achievement, this defensive maneuver is a rationalization for academic failures by blaming outside sources (powerful others) and is likely to occur among individuals who are very competitive academically. Defensive externality differs from congruent externals who expect to do poorly in academics due to chance or fate.

Levenson (1981) summarized investigations into the relationship between locus of control and political activism. Investigations which examined this relationship using the Rotter I-E Scale reported a seemingly anomalous finding. Individuals who scored

high external on Rotter's I-E Scale were theoretically supposed to be alienated and unwilling to be politically active. What occurred in some studies, however, was a lack of correlation between political activism and locus of control as measured by Rotter's instrument. Using the I, P, and C Scales researchers concluded that individuals scoring high on the P Scale were likely to be politically active due to system blame, that is, individuals who feel they have been victimized by discrimination supported by powerful others are likely to protest blocked opportunity. It was theorized that individuals who are politically active are drawn to activism due to a perceived system of control in the hands of powerful others. These individuals must also have had experiences in which their efforts led to success to develop the expectation that their efforts against the unjust system will lead to positive change.

Levenson (1981) reported that in studies designed to investigate the personality variables of altruism and cynicism, researchers found that high scores on the P Scale were correlated with expectations that the powerful others in question were untrustworthy while the subjects themselves were altruistic. Further, males who felt powerless because of chance or fate were more likely to report a desire to manipulate others. Females were more likely to report a desire to manipulate others when they felt

powerless due to a lack of personal power.

After she examined the numerous studies listed above, Levenson (1981) concluded that externality is not always a negative psychological construct. For some segments of society a belief in causality from powerful others is appropriate. A belief in personal culpability could be adverse in that individuals might blame themselves rather than discriminatory social systems. However, these same individuals are likely to try to change a system which is controlled by powerful others to allow themselves more personal power. Belief in powerful others is detrimental, however, when examining recovery from medical conditions. Individuals in this situation have more complete recoveries when they perceive an internal locus of control. Levenson concluded that accurate expectations are the most effective, that is, assigning responsibility to systems which discriminate and prevent opportunity, and personal responsibility in the area of health



## CHAPTER III

### METHODOLOGY

#### Subjects

The 44 subjects participating in this study were all students, 18 years of age or older, at Lindenwood College in undergraduate psychology classes. Lindenwood is a small liberal arts college located in the midwest with both undergraduate and graduate programs. The college is located in a suburban setting.

All subjects were solicited by their classroom instructors to voluntarily participate in this study. The majority of the subjects were females between 18-22 (N = 31), with the remainder of the subjects being female over the age of 22 (N = 4), males between the ages of 18-22 (N = 7), and males over the age of 22 (N = 2). The overwhelming majority of the subjects were caucasian with one African-American, one Native-American and one subject from Iran. The religious affiliations of the subjects represented a variety of christian religions including three Methodists, six non-denominational Christians, three Presbyterians, sixteen Catholics, five Lutherans, four Baptists, one Christian Scientist, and one United Church of Christ member. Other religious affiliations included one Muslim, one agnostic, and three with no reported religious affiliation.

## Design

The purpose of the present study was to examine the relationship between a self-report measure of identity styles and a self-report measure of a multidimensional concept of locus of control. The Identity Style Inventory Revised (ISI2) developed by Berzonsky (1988) measures an individual's identity style and generates a score representing the individuals' commitment to the identity style. The Internal, Powerful Others, and Chance Scales (I, P, and C Scales) are a multidimensional instrument developed by Levenson (1988) to measure locus of control. Special attention was paid to subjects within the target age group of 18-22.

Listed below are the null hypotheses which were examined in this study:

1. There is no relationship between an Information-Orientation as measured by the ISI2 and the I Scale as measured by Levenson's locus of control measure
2. There is no relationship between an Information-Orientation as measured by the ISI2 and the P Scale as measured by Levenson's locus of control measure
3. There is no relationship between an Information-Orientation as measured by the ISI2 and the C Scale as measured by Levenson's locus of control measure.
4. There is no relationship between a Normative-Orientation as

measured by the ISI2 and the I Scale as measured by Levenson's locus of control measure.

5. There is no relationship between a Normative-Orientation as measured by the ISI2 and the P Scale as measured by Levenson's locus of control measure

6. There is no relationship between a Normative-Orientation as measured by the ISI2 and the C Scale as measured by Levenson's locus of control measure.

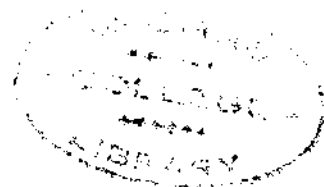
7. There is no relationship between a Diffuse-Orientation as measured by the ISI2 and the I Scale as measured by Levenson's locus of control measure

8. There is no relationship between a Diffuse-Orientation as measured by the ISI2 and the P Scale as measured by Levenson's locus of control measure.

9. There is no relationship between a Diffuse-Orientation as measured by the ISI2 and the C Scale as measured by Levenson's locus of control measure.

10. There is no relationship between Commitment as measured by the ISI2 and the I Scale as measured by Levenson's locus of control measure.

11. There is no relationship between Commitment as measured by the ISI2 and the P Scale as measured by Levenson's locus of control



measure.

12 There is no relationship between Commitment as measured by the ISI2 and the C Scale as measured by Levenson's locus of control measure

The independent variables of this design were the nonrandom sample, the assessment instruments used, the circumstances underwhich the measures were administered, and the manner in which the data was analyzed. The dependent variables were the results of each assessment instrument and the correlations between the measures

Correlational analyses were conducted to determine the relationship between self-reported scores of identity style and commitment with self-reported scores of locus of control. The Pearson Product - Moment correlation coefficient (Pearson r) was calculated for the respected groups in identity style scores and locus of control. Accountable variance was explored using r<sup>2</sup>

### Materials

Data was collected using two self report measures, the ISI2 (Berznonsky, 1988) and the I, P, and C Scales (Levenson, 1981) The Identity Style Inventory (ISI2) was developed by Michael D. Berznonsky to measure an individual's self reported identity style independent of the confounding variables of commitment and self exploration (for

discussion of the problem of identity achievement and the active exploration of self-relevant information, see literature review). The ISI2 is a revision of the original ISI which was revised to improve its psychometrics. The ISI2 was used in this study with the permission of Dr. Berzonsky.

The ISI2 is composed of 39 questions comprising four scales: information orientation (N = 10), normative orientation (N = 9), diffuse orientation (N = 10), and commitment (N = 10). Each item is reported on a Likert Scale of 1 (not at all like me) through five (very much like me). There are 10 items for each scale with the exception of the normative scale which has nine items. The limits of the ISI2, according to Berzonsky (1992) include a need for further revision of the items composing the ISI2, alternative methods of defining the constructs the ISI2 purports to measure, and general enrichment to the concept of identity to include such interdependent dimensions as process, structure, function, context, and content. The ISI2 and Berzonsky's reported reliability data are presented in Appendix A.

The second measure used in the current study is the I, P, and C Scales developed by Levenson (1981). The I, P, and C Scales and reliability data are presented in Appendix B. This instrument purports to measure an individual's self-reported locus of control. Internal locus of control is measured by the I Scale. External locus of control

is conceptualized as having two dimensions. The P Scale measures an individual's belief that events are caused by powerful others. The C Scale measures an individual's belief that events occur due to chance or fate. Thus, these scales report locus of control as a multidimensional construct. The I, P, and C Scales contain items from Rotter's I-E Scale along with items designed to measure an individual's belief in contingency occurring from internal control, control by powerful others, or chance control. Each scale of the I, P, and C Scales contain eight items measured with a 7-point Likert scale. High scores on a scale indicate a belief in the concept measured by that scale, with low scores indicating a lack of belief in the concept. Levenson (1981) proposes that statistical analyses using the I, P, and C Scales should be multivariate analyses with conservative probability levels. Analyses of this kind, contends Levenson, are the most likely to tap into the multidimensional construct of locus of control preserving the idea of a locus of control continuum rather than a typology.

#### Procedure

This researcher contacted classroom instructors by phone and follow-up letter. The original instructor (and head of the psychology department) was contacted by the researcher's academic advisor who initially described the research. Most of the subjects completed two self-report questionnaires on their own time at a location on

Lindenwood Campus. The sessions were supervised by the researcher. Approximate time to complete the two questionnaires was 30 minutes. Seven of the participants completed the questionnaires at home, returning the instruments to their classroom instructor. All of the participants received extra credit for participating in the study. All of the participants were given the option of leaving their mailing address of approximately 4 - 6 months in the future with the researcher. A brief description of the study's findings will be sent to each participant requesting this information.

Each pair of tests was given a number at random and was attached to a personal data sheet. Personal data was requested on age, ethnic identity, religious affiliation, and gender. Information on ethnic identity and religious affiliation are not used in the current study because of the low sample size. Gender is noted, although not examined statistically as a variable. Each test score is tagged as coming from a male or female, either 18-22, or over 22. These test scores are used to conduct the statistical analysis reported on in the next section.

## CHAPTER IV

## RESULTS

Pearson correlations were calculated to explore the relationships between the scales of the ISI2; the I,P, and C Scales; and demographic information. The outcomes of the correlation are shown in Table 1 (see appendix C)

Twelve correlations were found to be statistically significant at  $p < .05$ . Information-orientation was positively correlated to the I Scale  $r(44) = .49$  and Commitment  $r(44) = .43$ . These findings indicate that 24% and 19% of the variance in Information-orientation was accounted for by the variance in the I Scale and Commitment index, respectively. Normative-orientation was found to be related positively to commitment  $r(44) = .34$  indicating that 12% of the variance in Normative-orientation was explained by variance in the Commitment index.

Diffuse-orientation was negatively correlated with the I Scale  $r(44) = -.31$ , positively correlated with the P Scale  $r(44) = .39$ , positively correlated with the C Scale  $r(44) = .56$ , and negatively correlated with Commitment  $r(44) = -.64$ . These values indicate that the I Scale accounted for 10% of the variance in Diffuse-orientation with the P Scale accounting for 15% of its variance, the C Scale accounting for 31% of its variance, and the Commitment index accounting for 41% of its variance



Commitment was positively correlated with the I Scale  $r(44) = .31$  and negatively correlated with the C Scale  $r(44) = -.38$ . These results indicate that 10% of the variance in Commitment was attributable to the variance in the I Scale, and 15% of the variance in Commitment was attributable to the variance in the C Scale. The relationship between Commitment and the P Scale was not statistically significant.

The C Scale correlated positively with the P Scale  $r(44) = .61$ . This indicates that 37% of the variance in the C Scale was explained by the variance in the P Scale.

Information-orientation correlated negatively with Diffuse-orientation  $r(44) = -.30$  and Normative-orientation correlated negatively with Diffuse-orientation  $r(44) = -.34$ . Therefore, the variance in Diffuse-orientation was found to be attributable to the variance in Information-orientation (9%), and the variance in Normative-orientation (12%).

## CHAPTER V

## DISCUSSION

Consistent with information in the literature review of this study, what follows are some outcomes expected from this research: Information-orientation would correlate positively with the I Scale and negatively with the P and C Scales (Berzonsky, 1988, 1990, 1992; Grotevant & Adams, 1984; Larson, et al. 1990; Olf, et al. 1993) and positively with Commitment (Berzonsky, 1989a; Marcia, 1966) Normative-orientation would correlate positively with the P Scale (Berzonsky, 1992; Grotevant & Adams, 1984; Levenson, 1981), and Commitment (Marcia, 1966). Diffuse-orientation would correlate negatively with the I Scale (Berzonsky, 1988, 1990, 1992), positively with the P and C Scales (Grotevant & Adams, 1984; Levenson, 1981), and negatively with Commitment (Marcia, 1966). Commitment would positively correlate with the P Scale (Berzonsky, 1992) and negatively with the C Scale (Berzonsky, 1989a) The P and C Scales would positively correlate with each other (Levenson, 1981).

The correlational analysis yielded several findings which are consistent with the literature reviewed for this study. Information-orientation was found to have a very strong positive relationship with an internal locus of control. Individuals reporting an active problem-solving approach to questions of identity are likely to report a belief that they are able to influence their environment. These individuals

have been found to have low scores on a locus of control measure in which high scores indicate externality (Berzonsky, 1989a) and are theorized to have an internal locus of control (Marcia, 1966). Marcia's (1966) assertion that internal locus of control is associated with identity-achieved and moratorium statuses is supported.

Surprisingly, no significant negative correlations were found between information-orientation and the P and C Scales. Berzonsky's (1989a) finding of a negative relationship with external locus of control is not replicated in the present study. However, Berzonsky (1989a) used the I-E Scale (Rotter, 1966) in his investigation. Attempts to draw a comparison between these two measures may be inappropriate.

According to Marcia's (1966) status paradigm, identity-achieved and moratoriums are theorized to operate from an information-orientation. These statuses describe individuals who have gone through or are currently going through an active period of self-exploration from which their identities have been or will be formed. The difference between these two statuses lies in their achievement of identity. For identity-achievers, questions of identity have been answered and a commitment to those answers has been made. For moratoriums, the self-exploration continues and no commitment is made to questions of identity. From the analysis performed in this study, information-orientation was significantly

and positively related to the Commitment index of the ISI2.

Normative-orientation was found to have a strong positive relationship with the Commitment index of the ISI2. This is consistent with Marica's (1966) and Berzonsky's (1989a, 1990) contention that individuals operating from a normative-orientation have resolved issues of self-relevance by foregoing a crisis period of active self-exploration. These individuals have firmly committed identities based on the wishes of parental and other important authoritative figures. The commitment made to these choices must be strong enough to withstand the need for self-examination. As an individual's commitment decreases the need for self-exploration increases.

Diffuse-orientation was negatively correlated with the I Scale. That is, individuals reporting a self-serving, fragmented approach to resolving questions of identity are likely to report a belief that they do not exert an influence on event outcomes. According to Marica (1976), diffusions are generally disorganized in their approach toward life. Berzonsky (1989a) has found these same individuals have an external locus of control, preferring to look toward cues in their environment upon which to base their behaviors so as to maximize personal benefits (Berzonsky, 1986, unpublished data, cited in Berzonsky, 1990). The correlation in the present study lends

additional weight to this contention

Diffuse-orientation had a strong positive correlation with the P Scale and a very strong positive correlation with the C Scale supporting previous findings (Berzonsky, 1989b, 1992; Grotevant & Adams, 1984). The P and C Scales both measure external locus of control. Individuals have been found to attempt changes only when they have determined that they are capable of exerting influence (Levenson, 1981). In a series of studies by Levenson (1981), individuals who report a belief in powerful others are more likely to take action to attempt change. These individuals believe that the outcomes of events may be influenced, just not by themselves. Their efforts are focused on getting powerful others to make changes on their behalf.

This viewpoint is in contrast to that of the individual who believes the world is basically unordered and random and controlled by chance or fate. These individuals do not attempt change as there is a belief that no relationship exists between their efforts and change (Levenson, 1981). This viewpoint is characteristic of individuals operating from a diffuse-orientation who have a tendency to avoid problems or await cues from their environment upon which to base their self-serving actions (Berzonsky, 1990).

Diffuse-orientation had a strong negative correlation to the Commitment Index. Individuals operating from this identity style may

or may not have undergone a period of personal crisis and certainly have not made a firm commitment to questions of identity (Berzonsky, 1989a; Marcia, 1966)

The index of Commitment was positively correlated to the I Scale and negatively correlated to the C Scale. This lends support to the findings by Berzonsky (1989a) that individuals with higher scores on commitment were associated with lower scores on external locus of control.

There was nothing anomalous in the finding that the C and P Scales had a strong positive relationship. Levenson (1981) had theorized and found that to be true in her investigations

Two correlations were expected but not found. It was expected that normative-orientation would correlate positively with a belief in powerful others. The normative-orientation is composed of individuals with firmly committed identities based on the wishes of powerful others (Marcia, 1966) and report an other-directed approach toward problem-solving (Grotevant & Adams, 1984). As such, it is empirically tempting to develop the expectation that the individual operating from a normative-orientation will have an external locus of control with a belief in powerful others. What has been found by other researchers is consistent with this viewpoint (Berzonsky, 1990; Levenson, 1981; Marcia, 1966; Rotter, 1966).

The second correlation which was expected but not found was a positive correlation between Commitment and the P Scale. This would be consistent with the expectation that if individuals operating from a normative-orientation have firmly committed identities and look toward powerful others when resolving identity issues, then there should be a positive correlation between Commitment and a belief in powerful others. What was found in the current study was a negative correlation of the P Scale with Commitment  $r(44) = -.29, p = .058$  which approaches statistical significance. That is, as individuals report a low belief in powerful others they also report a more firm commitment to questions of identity.

There may be several confounding variables here acting alone or in combination. It may be that the Commitment index containing both identity-achieved and foreclosures is not an adequate measure to compare to the P Scale. It may be that the Commitment index is an adequate measure but that there were an abundance of identity-achieved subjects in this sample. It is possible that these findings are consistent with the crossover reported by Berzonsky (1992) of identity-achieved subjects moving into foreclosure. That is, these individuals may have reported operating from a normative-orientation as they have resolved issues of identity and further self-reflection on these issues is not efficient. However, these same subjects may not have looked toward significant figures of authority when in identity

crisis. Finally, it is possible that these findings describe subjects moving from a foreclosed status into either identity-achieved or moratorium.

This study has several limitations which circumscribe its applicability to different samples. The small sample used in this research was nonrandom and limited to volunteers. These three conditions limit any conclusions which may be drawn from the data. The sample was drawn exclusively from a small midwestern college with a relatively homogeneous student population. The sample could not be considered to be representative of the population. The small sample size did not allow meaningful analysis of the instruments with demographic variables. Any generalizations made from this investigation to other populations would be suspect.

The students volunteering for this research all received extra credit which may have motivated a certain kind of student to volunteer thereby skewing the results. Also, it is possible that by taking the two instruments at the same time these volunteer subjects were able to deduce which answers the researcher was expecting. This possibility, however, was minimized by the researcher having very little interaction with the subjects either before or after the testing situation. Although able to see into the room where the student volunteers were answering the questionnaires, the researcher



was actually seated outside the testing room.

Measurement error may have been an outcome of using the ISI2. Berzonsky (1992) states that the psychological concepts operationalized in the ISI2 need ongoing revision to clarify underlying constructs. Furthermore, according to Berzonsky (1992), a self-reported measure of identity style should be only one aspect of a true measure of identity style. The important consideration is not so much how individuals believe themselves to be behaving but their actual behavior and thoughts (Berzonsky, 1992).

The generalizability of this study could be strengthened by increasing the sample size and randomizing it. Studies investigating the construct validity of the ISI2 are indicated. Correlating real life thoughts and behaviors to the ISI2 would increase its usefulness.

## Appendix A

IDENTITY STYLE INVENTORY (ISI2)  
(Revised Version)

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1988

Scoring Instructions:

Information-Orientation = (2 + 5 + 6 + 16 + 18 + 25 + 30 + 33 + 35 + 37)

Normative-Orientation = (4 + 10 + 19 + 21 + 23 + 26 + 28 + 32 + 34)

Diffuse-Orientation = (3 + 8 + 13 + 17 + 24 + 27 + 29 + 31 + 36 + 38)

Commitment = (1 + 7 + 9\* + 11\* + 12 + 14\* + 15 + 20\* + 22 + 39)

\*For scoring purposes these items are reversed (9, 11, 14 & 20). I'd appreciate information about any investigations in which the measure is used.

PERSONAL SIMILARITIES

INSTRUCTIONS

You will find a number of statements about beliefs, attitudes, and/or ways of dealing with issues. Read each carefully, then use it to describe yourself. On the answer sheet, bubble in the number which indicates the extent to which you think the statement represents you. There are no right or wrong answers. For instance, if the statement is very much like you, mark a 5, if it is not like you at all, mark a 1. Use the 1 to 5 point scale to indicate the degree to which you think each statement is uncharacteristic (1) or characteristic (5) of yourself.

1. Regarding religious beliefs, I know basically what I believe and don't believe. (COMM)

(NOT AT ALL LIKE ME)    1    2    3    4    5    (VERY MUCH LIKE ME)

2. I've spent a great deal of time thinking seriously about what I should do with my life. (INFO)

(NOT AT ALL LIKE ME)    1    2    3    4    5    (VERY MUCH LIKE ME)

3. I'm not really sure what I'm doing in school; I guess things will work themselves out. (DIFF)

(NOT AT ALL LIKE ME)    1    2    3    4    5    (VERY MUCH LIKE ME)

4. I've more-or-less always operated according to the values with which I was brought up. (NORM)

(NOT AT ALL LIKE ME)    1    2    3    4    5    (VERY MUCH LIKE ME)

5. I've spent a good deal of time reading and talking to others about religious ideas. (INFO)

(NOT AT ALL LIKE ME)    1    2    3    4    5    (VERY MUCH LIKE ME)

6. When I discuss an issue with someone, I try to assume their point of view and see the problem from their perspective. (INFO)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

7. I know what I want to do with my future. (COMM)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

8. It doesn't pay to worry about values in advance; I decide things as they happen. (DIFF)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

9. I'm not really sure what I believe about religion. (COMM/REV)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

10. I've always had purpose in my life; I was brought up to know what to strive for. (NORM)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

11. I'm not sure which values I really hold. (COMM/REV)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

12. I have some consistent political views; I have a definite stand on where the government and country should be headed. (COMM)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

13. Many times by not concerning myself with personal problems, they work themselves out. (DIFF)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

14. I'm not sure what I want to do in the future. (COMM/REV)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

15. I'm really into my major; it's the academic area that is right for me. (COMM)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

16. I've spent a lot of time reading and trying to make some sense out of political issues. (INFO)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

17. I'm not really thinking about my future now; it's still a long way off. (DIFF)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

18. I've spent a lot of time and talked to a lot of people trying to develop a set of values that make sense to me (INFO)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

19. Regarding religion, I've always known what I believe and don't believe; I never really had any serious doubts. (NORM)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

20. I'm not sure what I should major in (or change to). (COMM/REV)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

21. I've known since high school that I was going to college and what I was going to major in (NORM)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

22. I have a definite set of values that I use in order to make personal decisions. (COMM)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

23. I think it's better to have a firm set of beliefs than to be openminded. (NORM)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

24. When I have to make a decision, I try to wait as long as possible in order to see what will happen. (DIFF)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

25. When I have a personal problem, I try to analyze the situation in order to understand it. (INFO)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

26. I find it's best to rely on the advice of a professional (e.g., clergy, doctor, lawyer) when I have problems. (NORM)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

27. It's best for me not to take life too seriously; I just try to enjoy it. (DIFF)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

28. I think it's better to have fixed values, than to consider alternative value systems. (NORM)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

29. I try not to think about or deal with problems as long as I can. (DIFF)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

30. I find that personal problems often turn out to be interesting challenges. (INFO)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

31. I try to avoid personal situations that will require me to think a lot and deal with them on my own. (DIFF)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

32. Once I know the correct way to handle a problem, I prefer to stick with it. (NORM)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

33. When I have to make a decision, I like to spend a lot of time thinking about my options. (INFO)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

34. I prefer to deal with situations where I can rely on social norms and standards. (NORM)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

35. I like to have the responsibility for handling problems in my life that require me to think on my own. (INFO)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

36. Sometimes I refuse to believe a problem will happen, and things manage to work themselves out. (DIFF)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

37. When making important decisions I like to have as much information as possible. (INFO)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

38. When I know a situation is going to cause me stress, I try to avoid it. (DIFF)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

39. To live a complete life, I think people need to get emotionally involved and commit themselves to specific values and ideals. (COMM)

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

ISI2 RELIABILITY DATA (MARCH, 1989)TEST-RETEST TWO-MONTH INTERVAL (N = 75)

INFO = .75  
 NORM = .74  
 DIFF = .71  
 COMM = .77

ALPHA COEFFICIENTS

INFO	(N = 381) = .67	M = 32.93	SD = 5.09
NORM	(N = 390) = .66	M = 28.03	SD = 4.90
DIFF	(N = 384) = .78	M = 24.70	SD = 6.06
COMM	(N = 391) = .78	M = 36.11	SD = 7.09

CORRELATIONS BETWEEN ISI1 AND ISI2

INFO 1 X INFO 2 (N = 171) = .75  
 NORM 1 X NORM 2 (N = 169) = .72  
 DIFF 1 X DIFF 2 (N = 171) = .70  
 COMM 1 X COMM 2 (N = 171) = .96

SHORT FORM OF ISI2 STYLE MEASURES

SINFO = (25 + 30 + 33 + 35 + 37)	ALPHA (N = 381) = .66
SNORM = (4 + 10 + 19 + 23 + 28 + 34)	ALPHA (N = 390) = .66
SDIFF = (3 + 24 + 29 + 31 + 36 + 38)	ALPHA (N = 384) = .77

CORRELATIONS BETWEEN ISI2 AND SHORT ISI2

INFO X SINFO (N = 381) = .84  
 NORM X SNORM (N = 390) = .92  
 DIFF X SDIFF (N = 384) = .92



## Appendix B

## I, P, and C Scales

## Directions:

On the next page is a series of attitude statements. Each represents a commonly held opinion. There are no right or wrong answers. You will probably agree with some items and disagree with others. We are interested in the extent to which you agree or disagree with such matters of opinion.

Read each statement carefully. Then indicate the extent to which you agree or disagree by circling the number following each statement. The numbers and their meanings are indicated below:

If you agree strongly: circle +3  
If you agree somewhat: circle +2  
If you agree slightly: circle +1

If you disagree slightly: circle -1  
If you disagree somewhat: circle -2  
If you disagree strongly: circle -3

First impressions are usually best. Read each statement, decide if you agree or disagree and the strength of your opinion, and then circle the appropriate number.

## GIVE YOUR OPINION ON EVERY STATEMENT

If you find that the numbers to be used in answering do not adequately reflect your own opinion, use the one that is *closest* to the way you feel. Thank you.

## The I. P. and C Scales

	Strongly disagree	Disagree somewhat	Slightly disagree	Slightly agree	Agree somewhat	Strongly agree
1. Whether or not I get to be a leader depends mostly on my ability.	-3	-2	-1	+1	+2	+3
2. To a great extent my life is controlled by accidental happenings.	-3	-2	-1	+1	+2	+3
3. I feel like what happens in my life is mostly determined by powerful people.	-3	-2	-1	+1	+2	+3
4. Whether or not I get into a car accident depends mostly on how good a driver I am.	-3	-2	-1	+1	+2	+3
5. When I make plans, I am almost certain to make them work.	-3	-2	-1	+1	+2	+3
6. Often there is no chance of protecting my personal interests from bad luck happenings.	-3	-2	-1	+1	+2	+3
7. When I get what I want, it's usually because I'm lucky.	-3	-2	-1	+1	+2	+3
8. Although I might have good ability, I will not be given leadership responsibility without appealing to those in positions of power.	-3	-2	-1	+1	+2	+3
9. How many friends I have depends on how nice a person I am.	-3	-2	-1	+1	+2	+3
10. I have often found that what is going to happen will happen.	-3	-2	-1	+1	+2	+3

	Strongly disagree	Disagree somewhat	Slightly disagree	Slightly agree	Agree somewhat	Strongly agree
11. My life is chiefly controlled by powerful others.	-3	-2	-1	+1	+2	+3
12. Whether or not I get into a car accident is mostly a matter of luck.	-3	-2	-1	+1	+2	+3
13. People like myself have very little chance of protecting our personal interests when they conflict with those of strong pressure groups.	-3	-2	-1	+1	+2	+3
14. It's not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune.	-3	-2	-1	+1	+2	+3
15. Getting what I want requires pleasing those people above me	-3	-2	-1	+1	+2	+3
16. Whether or not I get to be a leader depends on whether I'm lucky enough to be in the right place at the right time.	-3	-2	-1	+1	+2	+3
17. If important people were to decide they didn't like me, I probably wouldn't make any friends.	-3	-2	-1	+1	+2	+3
18. I can pretty much determine what will happen in my life.	-3	-2	-1	+1	+2	+3
19. I am usually able to protect my personal interests	-3	-2	-1	+1	+2	+3
20. Whether or not I get into a						

car accident depends mostly  
on the other driver.

-3      -2      -1      +1      +2      +3

---

Strongly Disagree Slightly Slightly Agree Strongly  
disagree somewhat disagree agree somewhat agree

---

21. When I get what I want, it's  
usually because I worked hard  
for it.

-3      -2      -1      +1      +2      +3

22. In order to have my plans work,  
I make sure that they fit in with the  
desires of people who have power  
over me

-3      -2      -1      +1      +2      +3

23. My life is determined by my  
own actions.

-3      -2      -1      +1      +2      +3

24. It's chiefly a matter of fate  
whether or not I have a few  
friends or many friends.

-3      -2      -1      +1      +2      +3

### Scoring and Interpretation for the I, P, and C Scales

There are three separate scales used to measure one's locus of control: Internal Scale, Powerful Others Scale, and Chance Scale. There are eight items on each of the three scales, which are presented to the subject as one unified attitude scale of 24 items. The specific content areas mentioned in the items are counterbalanced so as to appear equally often for all three dimensions.

To score each scale add up the points of the circled answers for the items appropriate for that scale (These items are listed below.) Add to this sum +24. The possible range on each scale is from 0 to 48. Each subject receives three scores indicative of his or her locus of control on the three dimensions of I, P, and C. Empirically, a person could score high or low on all three dimensions.

Scale	Items	Interpretation
Internal Scale	(1, 4, 5, 9, 18, 19, 21, 23)	High score indicates that the subject expects to have control over his or her own life.
		Low score indicates that the subject does not expect to have control over his or her own life.
Powerful Others Scale	(3, 8, 11, 13, 15, 17, 20, 22)	High score indicates that the subject expects powerful others to have control over his or her life.
		Low score indicates that the subject expects powerful others do not have control over his or her life.
Chance Scale	(2, 6, 7, 10,	High score indicates that

Scale	Items	Interpretation
Chance Scale con't	12, 14, 16, 24)	subject expects chance forces (luck) to have control over his or her life.  Low score indicates that the subject expects chance forces do not control his or her life.

## Appendix C

Table 1

Pearson Correlation Exploring the Relationships Between the ISI2; the I, P, and C Scales; and Demographic Information

(N = 44) Variable	1	2	3	4	5	6	7	8	9	10	11
1. Chance	--	-.16	-.38*	.56***	-.22	-.09	-.15	-.18	.61***	-.07	-.16
2. Age		--	.23	-.14	-.07	-.04	.16	-.09	.13	.02	.10
3. Commitment			--	-.64***	.02	.43**	.31*	.34*	-.29	.11	.21
4. Diffuse				--	-.14	-.30*	-.31*	-.34*	.39**	-.12	-.30
5. Gender					--	.16	.17	.12	-.27	-.00	-.11
6. Information						--	.49***	.17	.12	.11	-.00
7. Internal							--	.19	.14	-.04	-.00
8. Normative								--	.02	.16	-.08
9. Powerful									--	-.04	.09
10. Race										--	.30
11. Religion											--

\*p<.05 \*\*p<.01 \*\*\*p<.001

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