CAREER MATURITY AND FAMILIAL INDEPENDENCE
AMONG COLLEGE FRESHMEN

by

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ABSTRACT

One life stage which merits a great deal of attention from both family and individual theorists is that of late adolescence, when the adolescent begins to leave the home. Family theorists have written extensively about the familial developmental stage in which adolescents begin to leave the home and the effects of poor adjustment to this normal developmental event. Career theorists have also addressed the late adolescent's developmental process. Career development has been addressed as one aspect of general personality development and has empirically been found to be positively related to measures of psychosocial stages of general development and measures of adjustment. Although both independence from the family and career maturity have been described as aspects of general development and both have been related to adjustment, the research has not explored a relationship between them. Therefore, the purpose of the present investigation is to explore the relationship of family development and career development. Based upon the reviewed literature, it was hypothesized that greater career maturity is related to (i.e., significantly and positively correlated with) greater independence from the family of the late adolescent. The Career Development Inventory (CDI) was used to measure career maturity and the Psychological Separation Inventory (PSI) was used to measure independence from parents. The results of t tests indicated that there were gender differences in that females scored higher than males on the CDI subscale "Career Orientation Total," and males scored higher than females on the PSI subscales "Emotional Independence" and "Mother Emotional Independence." Data were, therefore, analyzed separately by

gender. The results of multiple regression analyses did not support the hypothesis that independence from parents is positively and significantly correlated with career maturity. For the samples of men and women reported here, neither "Career Development Attitudes" nor "Career Orientation Total" scores are predicted by scores on subtests of the Psychological Separation Inventory. Results are discussed in relation to previous research, theoretical applications, and measurement considerations.

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LIST OF ABBREVIATIONS

CDI:	Career Development Inventory
COT:	Career Orientation Total (scale)
CDA:	Career Development Attitudes (scale)
CP:	Career Planning (scale)
CE:	Career Exploration (scale)
CDK:	Career Development Knowledge and Skills (scale)
DM:	Decision-Making (scale)
WW:	World of Work Information (scale)
PSI:	Psychological Separation Inventory
EI:	Emotional Independence
MEI:	Mother Emotional Independence
FEI:	Father Emotional Independence
CI:	Conflictual Independence
MCI:	Mother Conflictual Independence
FCI:	Father Conflictual Independence
AI:	Attitudinal Independence
MAI:	Mother Attitudinal Independence
FAI:	Father Attitudinal Independence
FI:	Functional Independence
MAI:	Mother Attitudinal Independence
FAI:	Father Attitudinal Independence
WPT:	Wonderlic Personnel Test

CHAPTER I

INTRODUCTION

Developmental perspectives have been incorporated by both family and individual psychology theorists (Erickson, 1950; Ginzberg, Ginsburg, Axelrad, & Herma, 1951; Haley, 1973; Minuchin & Fishman, 1981; Super, 1953). Although some attempts have been made to theoretically link individual development with the family developmental stage (Farley, 1979; Hill & Mattessich, 1979; Hill & Rodgers, 1964; Rhodes, 1977), little research has established an empirical link between developmental tasks related to the family system and individual developmental tasks.

One life stage which merits much attention from both family and individual theorists is that of late adolescence, when the adolescent begins to leave the home. Family theorists have written extensively about the familial developmental stage in which adolescents begin to leave the home and the effects of poor adjustment to this normal developmental event (Haley, 1973; Minuchin, 1974; Rhodes, 1977). It has been noted that when problems occur with separating from the family the adolescent may present behavior problems or develop psychological disturbances, may develop academic problems, and may exhibit poor adjustment to college (Elson, 1964; Haley, 1973; Hoffman, 1984; Teyber, 1983b).

Career theorists have also addressed the late adolescent's developmental process (Ginzberg et al., 1951; Super, 1953). Career development has been addressed as one aspect of general personality development (Beilin, 1955; Bohn, 1966; Zaccaria, 1965), and has been found empirically to be positively related to measures of psychosocial

stages of general development (Munley, 1975). Related to personality development is the concept of adjustment; low scores on career maturity measures have been found to be related to low scores on adjustment measures (Crites & Semler, 1967; Karayanni, 1981; Small, 1953).

Although both independence from the family and career maturity have been described as aspects of general development (Bohn, 1966; Farley, 1979; Hill & Rodgers, 1964; Super, 1953; Zaccaria, 1965), and both have been related to adjustment (Crites & Semler, 1967; Hoffman, 1984; Karayanni, 1981; Teyber, 1983b), researchers have not explored a relationship between them. If a relationship exists between career maturity and independence from family, then this may be an important factor to consider in career counseling (Bratcher, 1982).

Osipow (1983) stated:

It is striking that so little theorizing has been done to relate explicitly the role of the family to occupational behavior, particularly when extensive data exist showing how the family background influences the kind of initial choice made and the manner in which it is implemented. (p. 307)

The purpose of this investigation is to explore the relationship between the degree of career maturity and independence from the family of origin of the late adolescent. A review of the literature concerning theoretical and empirical studies of separation from the family is presented. The relevant theory and research regarding the concept of career maturity is also reviewed.

CHAPTER II

REVIEW OF THE LITERATURE

Independence and Separation

Individual psychology theorists with an intrapsychic focus have devoted much research to the period of adolescence, as have family theorists with an interpersonal focus. Both individual and family theorists have incorporated developmental perspectives into their views of the separation process of the adolescent from the family. Family theorists have addressed both the separation process's effect upon the adolescent and its effect upon the family, often interfacing the two perspectives with developmental concepts.

The developmental approach to family therapy as discussed by Hill and Rodgers (1964) explained the achievement of independence of the individual and the impact of this developmental achievement upon the family, the family task of responding to the individual's changes, and the transition of roles which must occur for the individual to separate from the family. Life-span developmental psychology and family development is also discussed and interfaced by Hill and Mattessich (1979). They explained that while life-span development refers to the differentiation of personality structure in the individual, family development incorporates the process by which those individual changes stimulate changes in the family structure. These changes in the family structure in turn affect the individual's development. The adolescent's separation process has been described with several terms such as individuation, separation, emancipation, and independence. In order to provide consistency in this investigation, the broader term

"independence" is used for the most part to describe the process by which the adolescent becomes more independent from the family of origin.

Structural family therapists have also incorporated some developmental aspects into their theories. Minuchin has said, "Not to be aware of the family's developmental process and its effect on family structure is a serious pitfall" (1974, p. 105). Minuchin and Fishman (1981) stressed that families are not static and must be viewed over time. They described the family development process as one which involves periods of homeostatis and periods of disequilibrium which may arise from within the individual or from within the family system. They described a developmental model which includes four stages organized around the growth of children. The four stages are: (1) couple formation, (2) families with young children, (3) families with school-age or adolescent children (when separation begins), and (4) families with grown children (pp. 23-27). Minuchin and Fishman did not differentiate the adolescent stage from the stage when children first begin school, although they described different tasks. When the child begins school, the task of the family involves learning to relate to a new system and developing new rules. The task of the adolescent's family involves relating to the increased autonomy, control, and competence of the adolescent. Structural family therapy addresses the change in the developmental stage of the family as a time when disequilibrium occurs. Problems occur, according to this model, only when families fail to adapt to new situations and rigidly continue practicing old interaction patterns.

Haley (1973) incorporated a developmental view of the family life cycle in his analysis of Milton Erickson's strategies in Uncommon Therapy. One chapter is devoted to the description of the family life cycle, and chapters thereafter are organized around problems families encounter at crisis points. The stage important to this investigation is that of "weaning parents from their children" (p. 265). Haley described the adverse consequences if the family does not adjust to the period when children begin to separate from the family. He stated that the marriage may be thrown into a turmoil, sometimes to such severity that there is a separation or a divorce, and the adolescent may begin to present behavior problems or develop severe psychological disturbances. Haley, like Minuchin, stressed that these problems result from the family being stuck at a developmental family life cycle point.

Rhodes (1977) also suggested a developmental model of the family life cycle. Her model is grounded in general systems theory. She posited seven stages, which arbitrarily begin with the coupling process. Rhodes wrote that the stages are "sequential and cyclical, and involve multigenerational processes" (p. 303). The first stage discussed is "intimacy versus idealization or disillusionment" (p 303). This stage involves the courtship process. The task is to develop intimacy by encountering each other as real people rather than distorted, idealized images. The second stage is "replenishment versus turning inward" (p. 305), which begins with the birth of the first child and ends when the last child enters school. The task of this stage involves being able to replenish each other and oneself as well as being able to succor and respond to the needs of the children. The third stage is

"individuation of family members versus pseudomutual organization" (p. 305). The pseudomutual family preserves harmony at the cost of the individuality of the members and confuses closeness with fusion. This stage involves shifting energy from family concerns to individual interests in response to increasing independence and freedom of family members. The fourth stage is "companionship versus isolation" (p. 307), when there are teenage children in the family. During this period the family members look increasingly outside the family for companionship. The family must cope with the separation-individuation issues of the teenagers, so that members are free to develop identities outside the family yet feel part of the family. The fifth stage is "regrouping versus binding or expulsion" (p. 307), when children are leaving the home. The task is to allow for the departure of the children as a natural outgrowth of their growth and maturity. This is a particularly difficult stage because sudden changes are made in the system. The family must be able to support the development of independence and the coupling process within those who leave home. The sixth stage is "rediscovery versus despair" (p. 309), the first post-parental stage. The couple must renegotiate their relationship without the parental role, as well as renegotiate parent-child interactions to adult-adult ones. The final stage is "mutual aid versus uselessness" (p. 310). The task for this stage is to develop a mutual aid system which would combat generational disconnectedness and feelings of uselessness. In sum, Rhodes' model provides an interface between individual and family development.

Stierlin (1974; 1981) presented several transactional modes which describe the pushes and pulls of the family throughout the individuation process. When these transactional modes are too intense, out of phase, or inappropriately mixed with other modes, the individuation of the child or adolescent will be hindered. Stierlin discussed three modes, the binding mode, the expelling mode, and the delegating mode. The binding mode is used when parents interact with the children in ways to keep the children tied to them. This can result in undifferentiation, or the inability of the individuals to voice their opinions, needs, or feelings. In an undifferentiated family the adolescent's normal developmental separation becomes especially difficult. The expelling mode involves rejection of the children by the parents and can cause premature independence. The delegating mode involves the parents' encouraging the child to separate in order to fulfill an unconscious mission of the parents. The child is not encouraged to separate from the parents beyond the requirements of the mission.

Individuation has also been defined by the psychoanalytic perspective (Blos, 1979; Mahler, 1963) as a developmental process by which the individual develops ego boundaries between him/herself and others and thereby becomes less reactive to object loss. While Mahler examined individuation in the infant, Blos (1941) proposed that a similar process occurs in adolescence. Although Blos's main focus was the adolescent's intrapsychic developmental response, he also considered the family's role in this process. His statement, "Any change introduced into the family group upsets the acquired equilibrium and makes new demands upon the adaptive capacity of its individual members"

(p. 236), appears almost systemically oriented in its focus upon the reactive group. Blos stated that "estrangement" (p. 238) from the family is one aspect of the development of a mature adjustment to the family.

Farley (1979) has attempted to combine the concepts of psychoanalytic theory and systems theory more completely. Farley offered a "Donut Theory" (p. 62) of the individuation-tolerance range of the family. She conceptualized the family as a system of relationships which must attempt to cope with anxiety inherent in the developmental changes within the individual as well as in the family unit. Within the donut model, the inner ring of the donut represents the family's defensive system against fusion. The outer ring of the donut represents the family's defenses against individuation. The range between the two allows the family to be close yet separate. A scale from 1 to 0 is used to conceptualize the distance between fusion (1) and individuation (0). Expulsion from the family is outside the donut and the scale. The amount of distance between the rings defines the amount of experiential range the family will tolerate. The greater the experiential range, the greater the potential for ego development. The amount of distance tolerated is determined by the individual's development in terms of object relations. This conceptualization provides a model to assess the family's structure as well as the individual's developmental stage regarding independence from the family.

The literature reviewed above addresses the interface between individual and family developmental stages, particularly that stage in which the adolescent begins to become independent from the family. A

population which is often in the midst of this developmental stage is that of college students, specifically college freshmen. Chickering (1969) addressed the development of college students with seven "vectors" of development. He posited that some college students develop along the following vectors: (1) Achieve Competence, including intellectual, interpersonal, and physical competencies; (2) Manage Emotions, including aggressive and sexual emotions; (3) Become Autonomous, through achieving emotional and instrumental independence, and recognition of interdependence; (4) Establish a Solid Identity; (5) Achieve Freeing Interpersonal Relationships; (6) Clarify Purpose through the pursuit of vocational and recreational interests; and (7) Develop Integrity through the development of a set of personally valid beliefs. Chickering particularly stresses the role of the process of separation from parents in the vector "Becoming Autonomous." The process of achieving emotional and instrumental independence begins with disengagement from parents. As the young adult begins to see parents more realistically, emotional needs are transferred to peers and non-parental adults. As emotional independence continues to develop, the individual becomes free of pressing needs for affection, approval, and reassurance. Likewise, instrumental independence is achieved as the individual learns to perform activities and cope with problems with less help from parents. Finally, Chickering includes "the recognition and acceptance of interdependence" within the vector of becoming autonomous (p. 13). He points out that the individual must recognize that parents cannot be dispensed of without much pain and that "loving and being loved are necessarily complementary" (p. 13). Chickering's work

provided a theoretical base from which to study the development of college students. Empirical studies of the development of independence from the family in college students are now reviewed.

Research on Independence in College Students

Research has addressed several effects and correlates of the development of independence in the late adolescent and his or her separation from the family. Of particular interest to the present investigation, indicators of a lack of independence have been found to be related to poor emotional adjustment and poor adjustment to college.

Teyber (1983b) explored the effect of the primacy of the marital dyad upon adolescent adjustment. His sample included 102 Caucasian, single college freshmen with at least one and no more than three siblings. These individuals' parents had been alive until after the individual reached the age of 12, and had never been divorced. Teyber used two measures of adjustment: Constantinople's measure of personality development and the Eysenck Personality Inventory. Interviews were used to establish the family relationship patterns. The results indicated that males most often reported the mother-father dyad as primary, while females most often reported the mother-child dyad as primary. Those two types of dyads were the most frequently reported overall. The students were divided into two groups: those who perceived the marital relationship as primary (Marital Relationship Primary: MRP) and those who perceived another dyad as primary (Marital Relationship Not Primary: MRNP). It was found that although MRP females were better adjusted than MRNP females, the effect did not hold for males. These results may indicate that the separation process for

females is more related to the family structure than for males and that the primacy of the marital dyad may be more important for females' separation than for males'. Teyber interpreted these results in terms of sex roles: as compared to males, females have greater need for appropriate parental role models because their identities are tied to relationships; males have less need for parental role models because their identities are tied to their careers. An alternative interpretation is that, although both males and females need role models, males more readily than females may find role models outside the family.

White, Speisman, and Costos (1983) obtained similar results in a cross-sectional longitudinal study of young adult development and relationships. They used White's Family Relationship Interview, Marcia's Ego Identity Status Interview, Orlofsky's Intimacy Interview, and Selman's Perspective Taking Interview to measure the relationship between family relationship stage and ego development. They defined "family relationship stage" (p. 66) in terms of the degree of individuation achieved, the ability to take others' perspective, and "mutuality" or "peer-like" (p. 68) interactions. They found that women achieved higher family relationship stages than men and that psychosocial development was related to family relationship stage for women but not for men. It was also found that the acquisition of adult role status was related to the family relationship stage for women but not for men. This result was hypothesized to be due to the use of a measure of the ability to take another's perspective as part of the

measure of individuation; since women are more likely than men to take another's perspective, they achieved higher scores on individuation.

Teyber (1983a) found in yet another study of 18-year-old freshmen males that males whose families did not perceive the marital dyad as primary (MRNP) were more likely to have difficulty emancipating from their family of origin. The major difficulty with this study is that Teyber defined emancipation in terms of academic success in college; i.e., a student who is having difficulty leaving the family is likely to fail in college. The literature review did not provide data in support of that assumption, nor was it tested in the study. However, the premise is of interest to the present investigation because success or failure in college is a career-related event which may well relate to family process.

Another study explored the effect of separation upon the adolescent male's development of independence from his parents. Sullivan and Sullivan (1980) studied two groups of adolescent boys and their parents: one group who moved away from home to go to college and one who commuted to college from home. They found that separation facilitated the development of independence. Individuals who attended college away from home exhibited greater affection, satisfaction, communication, and independence regarding their parents than those who commuted to school.

Hoffman (1984) developed the Psychological Separation Inventory (PSI) to measure four aspects of psychological separation of the college student from the parents. The aspects are functional independence (the ability to manage one's own practical affairs autonomously), attitudinal independence (the image of oneself as unique from parents; having one's

own values, beliefs, and attitudes), emotional independence (the freedom from an excessive need for approval, togetherness, and emotional support from parents), and, finally, conflictual independence (freedom from excessive anxiety, guilt, resentment, inhibition, and anger with parents) (p. 171). Hoffman found that greater emotional independence is related to better academic adjustment and that greater conflictual independence is related to better adjustment in love. He also found some gender differences in that conflictual independence was found to be related to better general adjustment for female students but not for male students. Gender differences were also found to be specific to gender of parent. For males, greater conflictual independence from the father was found to be related to better academic adjustment. For females, greater emotional independence from the father was found to be related to better adjustment in love.

These studies focused on the effect of the family structure and of the family stage upon the adolescent's adjustment and/or separation from the family. Other studies have addressed how the family may react when the adolescent leaves the family.

Elson (1964) reported, on the basis of clinical case studies at a university counseling center, that depression was a symptom of difficulties in individuation. She hypothesized that college students' depression was related to mourning for the actual or fantasized loss of parents brought about by efforts to achieve individuality. Two groups of students were studied, one whose families exhibited so-called neurotic family changes (i.e., parents' divorce) and one who did not report neurotic family changes. Elson found that both groups reported

lowered academic performance and either withdrawal from social activities or frantic oversocializing. However, she observed that, although both groups exhibited depression, the group whose families made neurotic changes felt more rage and guilt in reaction to the sudden interruption of dependency upon their parents. Examples of neurotic changes included the divorce or separation of parents and the parents' resorting to a peer relationship to the adolescent. The depression of those whose families did not make neurotic changes contained more grief than rage or guilt. Since families who made neurotic changes produced adolescents who experienced more guilt and rage, Elson concluded that the family's reaction to the separation process affects the adolescent's response.

Hoffman and Weiss (1987) found that students who scored lower on the Conflictual Independence subscale of the PSI reported more psychological symptoms, not only more of their own symptoms, but also more symptoms for both parents. They also found that when men scored low on the Mother Emotional Independence subscale, their presenting problems were significantly correlated with their mothers' and fathers' symptoms. When women scored low on the Father Emotional Independence subscale, their presenting problems were significantly correlated with their mothers' and fathers' symptoms. They concluded that when students are dependent upon the other-sex parent, their psychological symptoms are related to parents' symptoms, or at least the students' perceptions of their parents' symptoms.

The investigations of empirical interests to the theoretical concepts of independence from family among college students have been

reviewed. The next concept of interest is that of career maturity; relevant theoretical literature is presented.

Career Maturity

Career maturity is a concept that naturally followed the introduction of the concept of vocational development by Ginzberg and by Super. Ginzberg et al. (1951) first introduced the idea that vocational choices are made over time rather than at a single point in time. They developed a stage conceptualization, in which individuals present increasingly more mature reasons for their vocational choices. The first stage involves a Fantasy period, in which the child reports the choice of an occupation based purely on the pleasure it will yield or how much fun it would be. This stage continues roughly from the age of 6 to the age of 12 years. The next stage is the Tentative stage during which the individual realizes s/he will be different in the future than s/he is now and becomes more realistic in the alternatives considered. This stage occurs roughly between the ages of 12 and 19. The third stage is the Realistic stage, between the ages of 19 and 24. During this time the individual begins to function as an adult. The end of education forces a decision, and realistic goals are set in the decision-making process. The Ginzberg theory was an important contribution, but it is Super's work in this area which is of more central importance to the present investigation.

Super (1953) contributed a developmental theory of vocational choice which has been expanded and extended to a variety of populations and problems over the last three decades. Of greatest importance to the present investigation is Super's belief that career development is one

aspect of general personality development. According to Super, conceptualizing vocational behavior in developmental terms permits us to measure the extent of this development or to establish the point on the developmental continuum of a particular individual. The construct of vocational maturity, then, is analogous to the construct of an intelligence quotient. (It should be noted that "vocational" and "career" are used interchangeably in the present investigation, since controversy over the use of these terms probably stems more from political forces than from conceptual changes in meaning.)

Super (1953) defined vocational maturity as denoting "the degree of development, the place reached on the continuum of vocational development from exploration to decline" (p. 153). His stage theory is the basis of an understanding of vocational maturity. Super's stages are similar to but more numerous than Ginzberg's stages and extend throughout the life span. Super's stages are based on Buehler's (1933, cited in Super, 1942) five life stages: Growth, Exploration, Establishment, Maintenance, and Decline. Super's (1957) theory emphasizes the Exploration and Establishment stages, since the greatest societal pressure for career decision is upon individuals at those stages, but he explained all career behavior across the life span in terms of a vocational developmental continuum. During the Exploration stage (typically ages 15 to 25) the individual considers many options and alternatives. In the Establishment stage (typically ages 25 to 65) the individual makes a choice and begins settling into the career and advancing within it. The Exploration stage and its associated typical ages is of particular interest to the present investigation.

Super, Starishevsky, Matlin, and Jordaan (1963) specified particular vocational tasks which must be accomplished within the developmental stages. The first task is that of "Crystallization." This task involves considering one's interests, attempting to match possible occupations to those interests, and narrowing options to a few areas. The next task of "Specification" involves specifying a certain occupational area that matches the self-concept. "Implementation" follows, and involves completing necessary education and obtaining employment in the area one has specified. The following two tasks involve "Stabilization," or settling into a career, and "Consolidation," a period of advancement within a career. The final task is that of "Retirement," when the individual must adjust to not working (p. 81).

Super outlined two types of vocational maturity, Vocational Maturity I, that of the individual's achieved stage relative to his or her chronological age, and Vocational Maturity II, that of the ability to accomplish tasks within the stage relative to others' ability to deal with those tasks. Vocational Maturity I is most analogous to the IQ and is of less interest to the present investigation than is Vocational Maturity II, which emphasizes the specific developmental tasks and their accomplishment. Super (1957) specified five dimensions relevant to assessing Vocational Maturity II: (1) orientation to vocational choice, (2) information and planning about preferred occupations, (3) consistency of vocational choice, (4) crystallization of traits, and (5) wisdom of vocational preference. The first dimension is an attitudinal dimension involving an awareness of a need to make a choice and a consideration of contingency factors. The second dimension involves

both the knowledge that information about the occupational area is desirable and the actual behavior of collecting that information. The third dimension involves consistency of the specification of similar occupations (e.g., expressing an interest in becoming a physicist or a chemist is more consistent than expressing an interest in becoming a physicist or a nurse) and consistency of preferences over time. The fourth dimension is one which involves the stabilization of traits which differentiate the individual from her/his peers, such as interests, attitudes, and values. The final dimension is one which involves the goodness of fit between abilities and preferences, interests and preferences, and socioeconomic accessibility of the preferred occupation.

As mentioned before, Super believes vocational development is one facet of general development. Underlying his theory of vocational development is self-concept development (Super, 1953; Super et al., 1963).

Super et al. (1963) stated:

In expressing a vocational preference . . . a person puts into occupational terminology his idea of the kind of person he is; that in entering an occupation, he seeks to implement a concept of himself; that in getting established in an occupation, he achieves self actualization. (p. 1)

Super explained the development of the self-concept and its implementation through the occupation as follows. "Self-concept formation" (p. 11) involves the development of a sense of identity as a person distinct from others. This takes place through five processes. "Exploration" (p. 11) is a continuing process by which infants, adolescents, or the elderly attempt to know themselves. "Self-differentiation" occurs as the individual asks "What am I like?" and

"How am I different than others?" (p. 12). This becomes very important for adolescents as they attempt to differentiate themselves from the family of origin. "Identification" (p. 12) occurs simultaneously, as the individual identifies with role models in terms of appropriateness of characteristics and occupations. "Role playing" (p. 12) is the way people "try out" what they have learned through identification with a role model. Finally, the formation of the self concept is completed through "Reality testing" (p. 13), which occurs during life experiences such as play, school courses, and extracurricular activities. Through these experiences people test the fit between their developed self-concepts and occupational implementation.

The "translation of self concepts into occupational terms" (p. 13) occurs through three processes, according to Super. First, through the identification with an adult, one may try an occupational role which may then be reality-tested. Second, experience with the role may facilitate the discovery of a "congenial" occupational translation of that role. Third, the awareness of one's traits that fit with those important to a particular occupation may lead one to explore that occupation. Super believes that one finally implements the self-concept as he or she moves from school into the work world.

The self-concept aspect of Super's developmental theory is important to the present investigation in that it provides a bridge to the theoretical and empirical literature pertaining to the separation of adolescents from their families. Super claimed that vocational development occurs as a result of the development of the self-concept, partly through the process of the differentiation from and

identification with parents. It is the present author's contention that Super's position is very closely related to the concepts of independence from parents which have been reviewed here. One's ability to separate psychologically from one's parents is positively associated with one's ability to achieve vocational maturity through the development of the self-concept.

Research on Career Maturity

Career maturity has been measured by several instruments developed in response to Super's initial work (Crites, 1973; Gribbons & Lohnes, 1968; Super, Thompson, Lindeman, Jordaan, & Myers, 1979). These instruments are described elsewhere. Research using these measures has been extensive and has addressed the relationship between career maturity, self-concept, and personality development as well as other issues. An overview of several pertinent investigations in these areas is followed by a review of research more specific in its relationship to the present investigation.

Several investigations have tested Super's (1953) proposition that the self-concept is implemented through one's vocation. Osipow (1983) concluded from his review of these studies that Super's self-concept theory is supported by the data. Another aspect of the self-concept theory is that of the relationship between the development of the self-concept and career maturity. The following investigations explored the relationship between self-concept and career maturity.

Lawrence and Brown (1976) studied the relationship of self-concept (among other variables such as race and gender) to career maturity. The subjects of the study were 266 twelfth graders of both genders and of

two races (black and white). Self-concept was found to be a significant predictor of career maturity for the total group, but appeared to be a more valid predictor for black females and white males than for white females and black males.

Putnam and Hansen (1972) have also investigated the relationship between vocational maturity and self-concept. These investigators tested the hypothesis that the self-concept will predict vocational maturity among eleventh grade girls. They also tested the hypothesis that adding the feminine role concept of self would better predict vocational maturity than a non-sex role-based measure of self-concept alone. The feminine role concept is the image the individual has of the appropriate female role for herself. Measures used included the Feminine Role Rating Inventory, the Tennessee Self-concept Scale, and Crites' Vocational Development Inventory (later called the Career Maturity Inventory or CMI). Results indicated that the feminine role concept of self and self-concept predict level of vocational maturity, but feminine role concepts of "ideal" woman and perceptions of man's ideal woman do not predict level of vocational maturity.

Jones, Hansen, and Putnam's (1976) and Pound's (1978) studies also found a significant relationship between career maturity and self-concept in high school students.

These investigations support the hypothesis that career development is related to the self-concept. Another concept of interest to the present investigation is that of career development as one dimension of general personality development. The following literature addresses this issue.

Beilin (1955) first reviewed how principles of general development may be used in an integration of vocational development as one aspect of general development. This concept is pursued further in Zaccaria's (1965) review of the related concepts of developmental tasks, vocational tasks, and psychosocial crises. Zaccaria listed fundamental similarities of those concepts and integrates them in an effort to address short-range, intermediate-range, long-range, and ultimate goals of guidance counseling.

The hypothesized relationship between career maturity and psychosexual stages was tested empirically in Munley's (1975) study of male college students. He tested the hypothesis that students who score high on career maturity would also score high on measures of psychosocial stages. He found that students who scored high and in the middle range of career maturity scored higher on identity measures than those who scored low on career maturity. No difference was found on identity measures between the high and middle ranges of career maturity scores. Finally, he found that the vocational classification of "Undecided" predicted low scores in psychosocial development.

The relationship between career maturity and personality development was also explored empirically by Bohn (1966). He used the Interest Maturity scale of the Strong Vocational Interest Blank to measure vocational maturity and the Adjective Check List as a measure of personality needs. From these results he concluded that interest maturity, an aspect of vocational maturity, is related to personality variables. He found that vocationally mature persons are more goal-directed, more realistic, and more independent than less vocationally

mature persons. Bartlett (1971) concluded from his review that vocational maturity is an aspect of personality development; he recommended that more studies should address this association.

Some investigations have addressed the relationship between specific aspects of personality development and career maturity. One aspect which has been addressed is general adjustment. Small (1953) hypothesized that well-adjusted adolescent males would have more realistic vocational choices (one aspect of career maturity) than maladjusted males. The results of this study supported the hypothesis. Crites and Semler (1967), in a longitudinal study of fifth graders followed up as twelfth graders, found that adjustment was correlated with vocational maturity and academic achievement. Although the measure of adjustment could be considered to be faulty (i.e., the Rating Scale for Pupil Adjustment was completed by the home room teacher and the guidance counselor), this study links general developmental tasks to specific vocational ones, and thus is of interest to the present investigation. Karayanni (1981) used the Minnesota counseling Inventory (MCI) and the Career Maturity Inventory-Attitude Scale (CMI-AS) in a study of the relationship between adjustment and career maturity. A significant difference (to the .001 level) was found between career maturity scores of well-adjusted and maladjusted high school students.

Gender differences have been studied in the career maturity research with conflicting results. Crites (1965) found no gender differences in his standardization study of the Vocational Development Inventory's (VDI, now CMI) attitude scale at the level of individual items. Thompson, Lindeman, Super, Jordaan, and Myers (1981) reported

gender differences favoring females on the cognitive scales of the Career Development Inventory (CDI), which they explain as consistent with gender differences in academic achievement. They did not find gender differences on the attitude scales of the CDI. Using the total score of the attitude scale of the VDI (CMI), Smith and Herr (1972) found that females scored higher than males. Rathburn (cited in Fitzgerald & Crites, 1980) found that gender differences in vocational maturity favoring females were absent in the seventh grade but emerged in the eighth grade and remained thereafter. Herr and Enderlein (1976) also found that females exhibited greater career maturity in the ninth grade and thereafter throughout high school. Although there is some question as to whether females score higher on the attitudinal dimension of career maturity of the CDI (Thompson et al., 1981), there appears to be a consensus that females score higher than males on the cognitive dimension of the CDE and on the total scores of other related instruments (Smith & Herr, 1972; Westbrook, 1983).

Despite some of these findings suggesting greater maturity on the part of females when the cognitive dimension of career maturity is assessed, studies have found that females often choose occupations which underutilize their abilities (Fitzgerald & Crites, 1980). Betz and Hackett (1981) found this underutilization of abilities to be related to self-efficacy expectations of women. In their study of undergraduates, they found that males had equal self-efficacy levels for either traditional or non-traditional fields, but females had higher self-efficacy levels for traditional fields than for non-traditional fields.

The review of family and vocational theory has established that independence from the family and career maturity are both developmental processes which occur in late adolescence. Since the specific interrelationship between these areas is of interest to the present investigation, relevant literature addressing this relationship is reviewed.

Careers and Parental Relationships

Although research has not addressed the relationship between career maturity and parental relationships directly, the influences of parental relationships have been studied in relation to vocational choice and commitment. Roe (1957) presented one of the earliest theories of parental influence upon career choice. She posited that those who choose service occupations were raised in warm, protective families and those who choose scientific occupations came from cold families. This aspect of Roe's theory has gained limited support from empirical research (Osipow, 1983).

In Osipow's (1983) discussion of Super et al.'s (1963) self-concept theory, the parents' influence upon the development of the self-concept is addressed. The point is made that the child identifies with the parents at the same time differentiation takes place and that role playing is stimulated by the process of identification. Role playing further facilitates career development, according to Super et al. (1963). In a related empirical study of the effect of identification with parents upon interest patterns, Crites (1962) found that for males identification with fathers, but not mothers, is related to interest patterns on the Strong Vocational Interest Blank.

Research has also addressed career commitment, a factor related to career maturity, in relation to parent-child relationships. Tangri (1972) found that "Role Innovators," that group of women with the greatest career commitment, experienced an autonomous relationship with both parents. Oliver (1975) found that career-oriented women (who show greater career commitment than women in general) identified with their fathers more than with their mothers yet perceived their fathers as less accepting, while homemakers identified with their mothers more than with their fathers. It has also been found that parents' expectations significantly affect behavioral intention (statements of what one intends to do in the future) and that behavioral intention is correlated with choosing a college major (Greenstein, Miller & Weldon, 1979).

Bratcher (1982) used family systems theory to outline how the family can influence career development and selection. The first family characteristic he addressed is the extent to which the individual can separate from the family. The ease with which the individual separates can affect the distance the individual will move from home, the place s/he may choose to work, and the general career decision-making process. The second family characteristic of interest to Bratcher is the extent to which an individual can resist the system's tendency to impose its rules on the individual and, as a result, on his or her career choice. Another characteristic is the family rules and their strength, which may dictate the content of the career choice. Although Bratcher presented the theoretical basis for the hypothesized effect of the family, he presented very little empirical data, and none to support the hypothesized effect of the degree of achieved separation from the family.

Statement of the Problem

The purpose of the present investigation was to explore the relationship of family development and career development through a test of one of Bratcher's (1982) concepts concerning the family's effect upon career development. The concept of interest was the effect of separation from the family upon an attitudinal dimension of career development.

Both career maturity and independence from the family have been related to general ego adjustment, adjustment to college, and academic performance (Crites & Semler, 1967; Hoffman, 1984; Teyber, 1983a, 1983b). Career maturity has also been related to the development of the self-concept, which involves to some extent the individual's differentiation of attitudes and values from those of the parents (Osipow, 1983; Putnam & Hansen, 1972). Both career maturity and independence from family have been described as aspects of general development (Beilin, 1955; Bohn, 1966; Erickson, 1950; Zaccaria, 1965). Bratcher (1982) has postulated that the extent to which the individual is able to separate from the family is related to the career decision-making process. If both career development and independence from family are developmental processes which occur together, they should be related in a way which is measurable and testable in quantitative fashion.

Hypothesis

Based upon the reviewed literature, it was hypothesized that greater career maturity is related to (i.e., significantly and positively correlated with) greater independence from the family of the late adolescent. Additional relationships among variables of interest

were pursued in an exploratory fashion, but the major test of the relationship between family process and career process was found in this hypothesis, which is stated in testable form in Chapter III.

Control for Confounding Factor

The major potential confounding factor in this study was gender difference. The research which has found gender differences in family, individual, and career development is conflicting, and comparisons are made difficult by the use of different measures. In review, White et al. (1983) found that family relationship stage was related to psychosocial development for females but not males. Teyber (1983b) found that for females but not males the marital alliance as the primary alliance was important for adjustment. However, Garner (1986) found no relationship between the presence or absence of the primary marital relationship and separation as measured by the PSI. Hoffman (1984) found that conflictual independence was important for general adjustment for females but not males. In addition, Lopez, Campbell, and Watkins (1986) found that males are more psychologically separated from their parents than females, and that there is a negative correlation between separation and adjustment to college for females. Allen (1986) replicated Lopez et al.'s (1986) findings that males were more psychologically separated than females, but had a different outcome regarding adjustment to college. She found a positive relationship between adjustment to college for both males and females.

Gender differences in the area of career maturity have favored females (Smith & Herr, 1972; Rathburn, cited in Fitzgerald & Crites, 1980). Although such differences found with the CPI measure of career

maturity may be due only to differences on the cognitive scales rather than the attitudinal scales of this instrument (Super & Thompson, 1979; Thompson et al., 1981; Westbrook, 1983), most research supports a gender difference in career maturity favoring females (Westbrook, 1983). In contrast to the differences found on objective instruments which favor females, some behavioral data suggest lesser vocational maturity among females than males (Fitzgerald & Crites, 1980). Since gender differences have been found in both career maturity and independence from parents, but since the direction of these differences is not reliable, the confounding factor of gender differences was controlled by analyzing the data separately by gender where sample differences in scale scores by gender were found. Further, since the nature of the potential gender differences appeared to be related to cognitive factors, the confounding factor of intelligence differences was controlled by assessing the level of general intelligence.

Overview of Investigation

Subjects were college freshmen, late adolescents (age 17-19) who were expected on the basis of theory to be in the process of separating from their families. The degree of separation achieved was measured by the Conflictual Independence and Emotional Independence scales of the Psychological Separation Inventory (Hoffman, 1984). Career maturity was assessed with the attitudinal scales and the total scale score of the Career Development Inventory (Thompson et al., 1981). Chapter III presents the method which was used in conducting the investigation.

CHAPTER III

METHOD

Subjects

Subjects were undergraduate students drawn from introductory psychology classes at a large southwestern university. They received course credit for their participation. Students selected were unmarried freshmen younger than 20 years of age. Class year, marital status, and age were the only characteristics which limited participation in the investigation. Demographic information such as gender, race, family size, marital status of parents, and living situation (living with parents or not, on or off campus) was collected to describe the sample and to permit exploratory and secondary analyses.

Instruments

Wonderlic Personnel Test

The Wonderlic Personnel Test (WPT) (Wonderlic, 1961) was used as an instrument to control for the possible effects of the level of intelligence upon the scores on measures of direct interest to the investigation. The WPT is a paper and pencil test consisting of 50 items covering areas such as general information, similarities and differences, reasoning, and mathematical calculations.

The test is almost self-administered; the instructions are on the first page for the completion of the multiple-choice items. The instructions were read aloud by the examiner to the participants in this study. The test is a 12-minute, timed test and is scored by subtracting the number of questions missed from the number of questions answered

correctly. Although a traditional IQ score may be derived from the raw score, only the participants' relative standings on the WPT was of interest to the present investigation, not their IQ scores.

Reliability. Wonderlic (1961) reported that when results of the 12-minute WPT were compared to the results of the same form of the 12-minute WPT taken immediately afterwards, test-retest correlation coefficients ranged from .82 to .94. When a split-half reliability procedure was used, internal reliability correlation coefficients were found to range from .88 to .94.

Validity. Dodrill (1981) found that the WPT correlated highly (.93) with Full Scale IQ scores of the Wechsler Adult Intelligence Scale (WAIS) in a validation study using normal adult subjects. He found that the average error was approximately one IQ point when the data were analyzed by groups. When individuals were the object of analysis, the Wonderlic score yielded IQs within 10 points of the WAIS Full Scale IQ 90% of the time.

Psychological Separation Inventory (PSI)

Scales of the Psychological Separation Inventory (PSI) (Hoffman, 1984) were used to measure the degree of psychological independence the late adolescent has achieved from parents. The PSI consists of four scales designed to measure four aspects of psychological separation. They are: (1) Functional Independence, which measures the ability to manage one's practical affairs autonomously; (2) Attitudinal Independence, which measures the ability to perceive one's values and attitudes as unique from parents; (3) Emotional Independence, which measures the freedom from an excessive need for approval, togetherness,

and emotional support from parents; and (4) Conflictual Independence, which measures the freedom from excessive anxiety, guilt, resentment, inhibition, and anger with parents.

This PSI was constructed by a sorting procedure of a pool of 284 items into categories. Items which did not receive two-thirds rater reliability were eliminated. The remaining 254 items were administered to 150 undergraduate subjects. A 5-point Likert scale was used for the rating of each item, with the higher score reflecting a higher degree of psychological separation. The 200 items that correlated most highly with their respective scales were retained. Finally, a factor analysis was performed as an empirical check of the four factors. After items with less than a .35 factor loading were eliminated from the pool, 138 items remained. For each of the four scales there was a score for both the mother and the father.

Reliability. Cronbach's coefficient alpha was used to estimate internal consistency, which ranged between .84 and .92. Interscale correlations indicated that the mother scores were correlated with the father scores with a range of .71 to .91, both for males and females. Test-retest reliability was assessed for 26 male and 28 female undergraduates, who were retested 2 to 3 weeks after initial testing. Correlation coefficients ranged from .49 to .94 for males and from .70 to .96 for females (median of .83 for both). The Functional Independence scale for mothers showed the greatest variation for both males and females. Reliability coefficients were at least .74 for all other scales (Hoffman, 1984).

Validity. Construct validity was tested by correlating the scales of the PSI with the Adjective Check List (ACL) Personal Adjustment scale and two questions asking if the individual was experiencing problems in love or work (i.e., academic performance). It was hypothesized that the greater one's psychological separation score, the greater one's personal adjustment and the fewer problems one would report in either love or work. It was found that for both men and women greater emotional independence from both parents was associated with greater academic adjustment as measured by the academic problems question. For males the correlations between emotional independence scores and the academic problems questions were $-.33$ and $-.32$ for mother and father, respectively. For females the correlations between emotional independence scores and the academic problems question were $-.30$ and $-.25$ for mother and father, respectively. Greater conflictual independence from mother and father was associated with greater adjustment in the area of love relationships for both males and females (males: $r = -.25$ and $-.37$, females: $r = -.38$ and $-.32$ for mother and father, respectively). Greater conflictual independence from both mother and father was significantly correlated with greater personal adjustment on the ACL Personal Adjustment scale for females ($r = .41$ and $.37$ for mother and father scores, respectively).

The reverse of the predicted direction was found in the correlation between the Attitudinal Independence scale and the ACL Personal Adjustment scale. A significant negative correlation was found between attitudinal independence from parents and personal adjustment for both males and females (males = $-.26$ and $-.25$, females = $-.24$ and $-.28$ for

mothers and fathers, respectively). This indicates that a similarity between one's attitudes and one's parents' attitudes is associated with greater personal adjustment.

The above statistics indicate the PSI's conflictual and emotional independence scales have adequate reliability and validity. Since the Functional Independence scale has inadequate reliability,, and the Attitudinal Independence scale was found to be negatively correlated with adjustment, these scales were not used in this study to test the major hypothesis. Thus, the major hypothesis was tested by using six independence scores per participant, one each for the mother and father scores of the Emotional Independence and Conflictual Independence scales, respectively, and two composite scores of both mother and father Emotional Independence and Conflictual Independence.

Career Development Inventory (CDI)

There are various objective measures of career maturity, including Crites' (1963) CMI; Gribbons and Lohnes' (1968) Readiness for Vocational Planning (RVP) questionnaire; Super et al.'s (1979) Career Development Inventory (CDI); and Westbrook's (1983) Cognitive Vocational Maturity Test (CVMT). The CMI has an attitude scale (50 true-false items) and a competence test (100 multiple choice items). Gribbons and Lohnes' RVP was developed from a longitudinal study and consists of 47 open-ended questions which measure eight variables related to career planning. Westbrook's CVMT was designed to measure variables associated with the competence test of Crites' CMI. The CDI (Super et al., 1979) was used in the present investigation because it is derived directly from Super's

(1953) self-concept theory and has a 30-year history of development behind it.

Super and his colleagues' Career Pattern Study beginning in 1951 was the foundation for the CDI (Thompson et al., 1981). That study demonstrated that vocational decision-making skills develop over time, and, therefore, that there was a need for a practical measure to assess the level of development or maturity. In 1980 the final standardization of the CDI was completed (Thompson et al., 1981). Eight scales are included in the CDI School form and the CDI College and University form. Two scales are defined as attitude scales: the Career Planning (CP) scale, consisting of 20 items, which measures the degree of students' involvement in their own career planning; and the Career Exploration (CE) scale, also consisting of 20 items, which measures attitudes concerning sources of career planning information. Three other scales are defined as cognitive scales: the 20-item Decision-Making (DM) scale, which is a measure of career decision-making skill; the 20-item World-of-Work Information (WW) scale; and the 40-item Knowledge of Preferred Occupation (PO) scale, which measures students' knowledge of those occupations they prefer. Finally, there are three combined scales: the Career Development Attitudes (CDA) scale, which combines CP and CE scores; the Career Development Knowledge and Skills scale (CDK), which combines DM and WW scores; and the Career Orientation Total (COT) scale which combines the CP, CE, DM, and WW scores. The COT comprises all scales of Part I of the measure; the PO scale comprises Part II of the measure (see Figure 1). Part I items are multiple choice questions with four choices; items of the CDA scale are of a Likert variety which

describe the range of intensity of attitudes; and items of the CDK scale have four objective answers from which to choose.

The undergraduate standardization sample ($N = 1,345$) for the College and University form of the CDI was obtained from eleven universities and contains groups which differ in region, size of institution, major field, year, and gender (Consulting Psychologists Press, 1982).

Reliability. Cronbach's alpha coefficient was used to assess the internal consistency of the CDI. All scales except the DM, WW, and PO were assessed individually by sex and year (of college) with alpha coefficients ranging from .64 to .92. Since the cognitive DM, WW, and PO scales of the College and University form of the CDI have high means and small standard deviations in the standardization sample, all years were combined in the computation of the alpha coefficients. The CDA has an alpha coefficient of .86, and the COT has an alpha coefficient of .90. The CDK scale is less reliable, with an alpha coefficient of .75. Given the high reliabilities of the CDA and COT, these career maturity scores were used to test the major hypothesis of the present investigation.

Validity. Content validity, or face validity, was assessed by Super and his colleagues, who began work in this area in 1951 with the Career Pattern Study. Construct validity was based upon subgroup differences and the factor structure of the CDI. Year-in-college differences were expected since career maturity is developmental; scores should increase from the freshman to the senior year. This trend was found with all scales except the CE scale. The supplement to the user's

manual (Consulting Psychologists Press, 1982) states that this exception is consistent with Super's (1953) theory since freshmen, who are just beginning their college careers, would be expected to be more interested in career exploration activities than would seniors, who are beginning to implement plans.

Gender differences were expected to be minimal, with greater likelihood of gender differences on the COT than the CDA since the COT contains scores from two of the cognitive scales, which, in turn, are correlated positively with academic achievement (i.e., females typically exhibit higher academic achievement, thus score higher than males on the cognitive scales of the CDI). In fact, Thompson et al. (1981) found that while scores on the COT scale (which includes two of the cognitive scales) showed a consistent gender difference favoring females, scores on the CDA showed small gender differences that were variable over the years in college (i.e., for freshmen there was a .6 difference favoring males, while for seniors there was a 3.9 difference favoring females).

It was found in the standardization study that students in Life Sciences (nearly three-fourths in pre-medicine) scored the highest on the CDI while students in Arts, Education, Language and Communication, and Philosophy and Religion scored the lowest on the scales of the CDI. The authors of the supplement to the user's manual (Consulting Psychologists Press, 1982) concluded: "Students in occupationally oriented programs tend to have given more thought to careers and to be more inclined to use resources for career exploration" (p. 11) and that the trends supported theoretically based expectations and construct validity.

A factor analysis of the CDI yielded two factors, an attitudinal factor and a cognitive factor. The CP and CE scales had high loadings (.80 to .87) on the attitudinal factor and the DM, WW, and PO scales had high loadings on the cognitive factor (.56 to .86).

The results of the reliability and validity analysis support the decision of the present investigator to use two scores (an attitude measure [CDA] and a global estimate of career maturity [COT]) in the test of the major hypothesis. Although using one score for attitudinal factors and one for cognitive factors would have been conceptually elegant, the lower reliability of the CDK and the loading of the PO scale on the cognitive factor suggest that the measure of knowledge and skills is less psychometrically pure than that of the attitudinal factors. All scale scores were examined in the secondary or exploratory analysis of the data.

Procedure

Students were given a consent form (see Appendix I), the Wonderlic Personnel Test, the CDI, and the PSI and a demographic questionnaire (see Appendix II) to complete in groups. Although no order effect was expected, groups of students were given the CDI and the instrument which contained both the PSI and the demographic questionnaire in counter-balanced order. All students received the Wonderlic Personnel Test first. Students were debriefed following completion of the questionnaire (see Appendix III), and were given the opportunity to request a summary of the results of the study by leaving their names and addresses with the examiner.

Data Analysis

Data were analyzed separately by gender since gender differences on career maturity scores and psychological separation scores have been found in a variety of investigations, and were found in the present investigation's sample. Because there was more than one independent variable (the six PSI scales of interest), multiple regression analysis was used to test the hypothesis of this study. This investigation was designed to be of an exploratory nature, with no prior empirical evidence available to suggest whether a specific aspect of career maturity (such as that measured by the CDA attitudinal scale) or a more global career maturity measure (such as the COT score) was a more useful dependent measure. Therefore, separate regression analyses were performed with each of the career maturity scores which had been selected on the basis of sufficient reliability (CDA and COT) as the dependent measure.

Multiple regression analyses for males and females were conducted to test the hypothesis that career maturity is related to (positively correlated with) psychological separation from parents. Specifically, the six scales of the PSI (the MEI, FEI, EI, MCI, FCI, and CI) were entered into the regression equation as predictors of COT scores and were also entered as predictors of CDA scores. A significant and positive correlation would be found between the six PSI subscales and the CDA or the COT subscales had the hypothesis been supported by the data. In addition, Pearson product-moment correlation coefficients were obtained to aid in the description of the relationship between scores on career maturity measures (CDA and COT) and measures of independence from

parents (Emotional Independence and Conflictual Independence, from each parent separately). Other statistical tests of variables of interest were conducted in exploratory fashion.

Career Planning:	CP		
		CDA*	
Career Exploration:	CE		
			COT* (Part I)
Decision-Making:	DM		
		CDK*	
World-of-Work Information:	WW		
Knowledge of Preferred Occupation:		PO	(Part II)

*CDA: Career Development Attitudes
 COT: Career Orientation Total
 CDK: Career Development Knowledge and Skills

FIGURE 1. CDI SUBSCALES

CHAPTER IV

RESULTS

Subject Characteristics

Subjects ($N = 115$; 53 males, 62 females) were unmarried freshmen younger than 20 years of age (17 years, $N = 13$; 18 years, $N = 76$; 19 years, $N = 26$). Pearson product-moment correlations, t tests, and analyses of variance (ANOVAs) were conducted to test for differences in groups based upon demographic characteristics such as age, gender, and ethnicity (see Appendix D for a summary of demographic data). The results of the analyses indicated that there was no systematic variation in scores due to age. Two statistically significant results were obtained from the ANOVAs which related ethnicity status to Psychological Separation Inventory scores. It was found that males of different ethnic groups scored differently on the Mother Conflictual Independence subscale [$F(4,48) = 3.76$; $p < .01$]. However, when multiple comparisons were made to discover the location of the difference, no significant difference between particular groups was found (see Appendix D). It was also found that females scored differently on the Father Conflictual Independence subscale based on ethnic status [$F(4,57) = 6.61$, $p < .01$]. However, it was found that the significance of this result was solely based on a significant difference between black females and white females [$F'_{ob}(4,56) = 17.8$, $p < .01$], groups with an n of 3 and 45, respectively. Due to the small number of black females, this finding may not indicate a reliable trend in the population. Significant gender differences were found and were explored further; these results are presented in another section.

Confounding Variables

Gender Differences

Two-tailed t tests were conducted to test for gender differences on the various scales used. There were no significant gender differences on the Psychological Separation Inventory (PSI) subscales of interest except on the Emotional Independence (EI) and the Mother Emotional Independence (MEI) subscales. On the EI ($p = .03$) and the MEI ($p = .02$), males scored significantly higher than females (see Table 1).

There was also a significant gender difference on one subscale of interest of the Career Development Inventory (CDI) (see Table 2). Females scored significantly ($p = .001$) higher than males on the Career Orientation Total (COT) subscale. There was not a significant gender difference favoring females on the Career Development Attitudes (CDA) scale. In short, females scored higher than males on the subscale with high cognitive loadings and did not score higher than males on the attitudinal measure.

In sum, males scored significantly higher than females on the MEI subscale of the Psychological Separation Inventory and females scored significantly higher than males on the COT subscale of the Career Development Inventory. Since gender differences were found on some scales, all data were analyzed separately by gender.

IQ and the CDI and PSI

Intelligence is a variable that was recognized to have a potentially confounding effect on the hypothesized relationships. Specifically, it was suggested that any significant positive correlations found between the CDI and the PSI could be due to that

amount of variance accounted for by intelligence. If the results had indicated a positive correlation between the subscales of the PSI and the subscales of the CDI, and also positive correlations between those subscales and intelligence scores, it would have been necessary to covary out the effect of intelligence from those subscales. Therefore, the Wonderlic Personnel Test was used as a manipulation check of the effect of intelligence upon construct purity for both the CDI and the PSI.

Pearson product-moment correlations were obtained between CDI and PSI subscales and the Wonderlic Personnel Test (WPT) score for males and females separately. Mean scores on the WPT were 22.49 (SD = 6.29) and 21.31 (SD = 4.74) for males and females, respectively. It was found that for women, these intelligence test scores correlated positively and significantly ($p < .05$) with all subscales of interest except the CDA subscale of the CDI and the FEI subscale of the PSI (see Table 3). However, for men, no subscale of interest correlated significantly with intelligence test scores. In sum, women's intelligence test scores were correlated positively with the cognitive measure of career maturity of interest to the major hypothesis and with all but one of the independence measures; males' intelligence test scores did not correlate significantly with any subscale of interest. However, since a positive correlation between the subscales of the PSI and the subscales of the CDI was not found, it was not necessary to partial out the variance accounted for by intelligence from women's scores. Therefore, while this gender difference is interesting, its impact upon the analysis of

the data was confined to providing further support to the decision to analyze separately by gender.

Test of the Hypothesis

The results of multiple regression analyses did not support the hypothesis that independence from parents is positively and significantly correlated with career maturity. Means and standard deviations of the scale scores of interest to the hypothesis are presented in Tables 1 and 2.

The first set (for males and females) of multiple regression analyses was conducted with the CDA as the dependent variable to be predicted by six PSI subscale scores (see Appendix E). Those analyses revealed that there was no relationship between the PSI subscales and the CDA subtest scores for women or men. The proportion of variance (R^2) of the women's CDA scores explained by psychological separation scores was .10, and the test of the R^2 [$F(4,57) = 1.67, p > .05$] was non-significant. The proportion of variance (R^2) of the men's CDA scores explained by all psychological separation scores was .05, and the test of the R^2 [$F(4,48) = .71, p > .05$] was non-significant. For the samples of men and women reported here, Career Development Attitudes are not predicted by scores on subtests of the Psychological Separation Inventory.

The second set of multiple regression analyses was conducted with the COT as the dependent variable (see Appendix E). These analyses also revealed no relationship between the PSI subscales and the COT scores for males or females. The proportion of variance (R^2) of the women's COT scores explained by psychological separation scores was .02, and the

test of the R^2 [$F(4,57) = .37, p > .05$] was non-significant. The proportion of variance (R^2) of the men's COT scores explained by all psychological separation scores was .09, and the test of the R^2 [$F(4,48) = 1.29, p > .05$] was non-significant. Again, for the samples of men and women reported here, a global measure of career maturity (the COT score) is not predicted by scores on the Psychological Separation Inventory.

Means and standard deviations of other subscales (not tested by the hypothesis) and the results of additional Pearson product-moment correlational analyses are presented in Appendix F. No significant correlations were obtained from these analyses of the major subscales of interest. Therefore, results from analyses indicate that scores on the subscales of interest of the Psychological Separation Inventory are unrelated, with very few exceptions, to the subscales of interest of the Career Development Inventory.

Additional Analyses

In order to better understand the major results and discern other possible factors involved in the constructs of independence from parents and career maturity, exploratory post hoc analyses were conducted. PSI scales were examined post hoc in relation to the CDI, and subscales of interest from the PSI and CDI were examined in relation to the demographic and family questions. Due to the post hoc nature of these tests, a more stringent ($p = .01$) significance level was used. PSI subscales which were not proposed as a test of the major hypothesis, due to inadequate reliability, were examined post hoc in relation to the CDI (see Appendix F for correlations, means, and standard deviations). No significant correlations were found from these analyses. In sum, none

of the PSI subscales were significantly correlated with the subscales of the CDI.

The results of the post hoc t tests indicated additional significant gender differences on other subscales of the CDI and the PSI (see Table 4). Gender differences were obtained on the Decision Making (DM) subscale and the Career Development Knowledge (CDK) subscales of the CDI. On the DM subscale, females scored significantly higher ($p < .01$) than males. On the CDK subscale, females again scored significantly higher than males ($p < .01$). Gender differences were also obtained on the Mother Attitudinal Independence (MAI) and the Mother Functional Independence (MFI) subscales of the PSI. Males scored significantly higher ($p < .01$) than females on both the MAI and the MFI subscales. In sum, females scored significantly higher than males on the Decision Making subscale and the Career Development Knowledge subscale of the CDI, and males scored higher on the Mother Attitudinal Independence and the Mother Functional Independence subscales of the PSI.

Subscales of the PSI and CDI were also examined in relation to demographic and family questions (see Appendix B for specific questions). Pearson product-moment correlations (and ANOVAs, as appropriate) were obtained to test for relationships between the subscales of interest and the demographic and family questions for males and females.

For males, three questions were significantly correlated with subscales of the PSI and two questions were significantly correlated with subscales of the CDI (see Table 5). From the PSI, the CI and FCI

subscales were significantly correlated ($r = -.36$ and $r = -.37$) with "Father's Work," which indicates that those whose fathers were progressively more professional scored higher on these measures of Conflictual Independence. Within Emotional Independence, males who received more support and guidance from their mothers in the career decision process scored lower on the MEI subscales ($r = -.38$), and those who received more support and guidance from their fathers scored lower on the FEI and EI subscales ($r = -.39$ and $r = -.32$).

Males who believed they were coping with the career decision-making process well scored higher on the CDA and COT subscales of the CDI ($r = .38$ and $r = .43$), as did those who had more confidence in their ability to make the "right" career decision ($r = .40$ and $r = .52$).

For females, four questions were significantly correlated with subscales of the PSI and four questions were significantly correlated with subscales of the CDI (see Table 6). From the PSI, the CI and FCI subscales were significantly correlated ($r = -.36$ and $r = -.33$) with "Mother's Work," which indicates that those women whose mothers were progressively more professional scored higher on these measures of Conflictual Independence. Within Emotional Independence, females who received more support and guidance from their mothers in the career decision process scored lower on the MEI subscale ($r = -.50$), and those who received more support and guidance from their fathers scored lower on the FEI ($r = -.53$) and the EI ($r = -.31$) subscales. Women who were more confident regarding their ability to make the "right" career decision scored lower on the EI subscale ($r = -.29$).

Females who perceived their fathers as having been more committed to their careers scored higher on both the CDA and the COT subscales ($r = .31$ and $r = .41$). Those females who received more support and guidance from their mothers in the career decision process scored higher on the COT subscale of the CDI ($r = .29$). The percentage of fathers' employment was also correlated with COT scores ($r = -.33$), which indicates that permanence of the fathers' employment was associated with increased career maturity of the daughters.

In summary, additional post hoc analyses revealed relationships between independence from parents and familial factors in that, for males and females, relationships were found between "Mother's Support and Guidance," "Father's Support and Guidance," and the MEI, FEI, and EI subscales. For males, a relationship was found between the question "Father's Work" and the CI and FCI subscales. For females, a relationship was found between "Mother's Work" and the CI and FCI subscales, and high scores on the EI and less confidence concerning the ability to make the "right" career decision.

Post hoc analyses also revealed relationships between familial factors and career maturity for women, and self-efficacy questions and career maturity for men. Women's scores on the COT were positively related to percentage of father's employment and the degree of support and guidance they received from their mothers. Women's scores on the CDA and the COT were positively related to their perceptions of their fathers' commitment to their careers. Men's CDA and COT scores were positively related to self-efficacy questions regarding their abilities

to cope with the process of choosing a career, and to choose the "right" career.

TABLE 1
PSI SCORES

	Males		Females		<u>p</u>
	M	SD	M	SD	
EI	83.77	23.98	73.90	24.28	.03
Mother	41.09	12.41	35.24	13.51	.02
Father	42.68	13.21	38.66	16.67	.16
CI	142.77	29.79	143.50	29.87	.89
Mother	70.17	14.79	73.37	17.03	.29
Father	72.60	18.35	70.13	18.13	.47

Note: Higher scores on the PSI indicate greater separation and independence from parents. PSI = Psychological Separation Inventory, EI = Emotional Independence, and CI = Conflictual Independence.

TABLE 2
CDI SCORES

	Males		Females		<u>p</u>
	M	SD	M	SD	
CDA	96.13	19.79	104.23	24.31	.055
COT	81.53	22.41	95.13	20.48	.001

Note: Higher scores on the CDI indicate more career maturity. CDI = Career Development Inventory, CDA = Career Development Attitudes, and COT = Career Orientation Total.

TABLE 3
INTELLIGENCE (WPT SCORES): PEARSON PRODUCT-MOMENT
CORRELATION COEFFICIENTS

	Males (<u>N</u> = 53)		Females (<u>N</u> = 62)	
	<u>r</u>	<u>p</u>	<u>r</u>	<u>p</u>
CDI				
CDA	-.15	.14	-.02	.44
COT	.12	.20	.32	.01
PSI				
EI	.09	.27	.27	.01
MEI	.11	.22	.26	.02
FEI	.05	.35	.19	.07
CI	-.16	.13	.32	.01
MCI	.15	.14	.22	.04
FCI	.14	.16	.32	.01

Note: CDI = Career Development Inventory, CDA = Career Development Attitudes, COT = Career Orientation Total, PSI = Psychological Separation Inventory, EI = Emotional Independence, MEI = Mother Emotional Independence, FEI = Father Emotional Independence, CI = Conflictual Independence, MCI = Mother Conflictual Independence, FCI = Father Conflictual Independence.

TABLE 4
GENDER DIFFERENCES ON OTHER SUBSCALES: T-TEST RESULTS

	<u>t</u>	df
CDI		
Career Planning	1.15	113
Career Exploration	2.40*	113
Decision Making	2.75	113
World of Work	1.92	113
Preferred Occupation	1.21	110
Career Development Knowledge	2.64*	113
Intelligence Score	-1.12	96
PSI		
MFI	2.57*	113
FFI	2.21	113
MAI	3.29*	113
FAI	1.22	113

Note: * indicates significance at the .01 level. CDI = Career Development Inventory, MFI = Mother Functional Independence, FFI = Father Functional Independence, MAI = Mother Attitudinal Independence, FAI = Father Attitudinal Independence.

TABLE 5
 MALES' CORRELATIONS BETWEEN SUBSCALES OF INTEREST AND
 DEMOGRAPHIC-FAMILY QUESTIONS

	CI	FCI	MEI	FEI	EI	CDA	COT
Father's Work	-.36	-.37					
Mother's S&G			-.38				
Father's S&G				-.39	-.32		
Coping with CD						.38	.43
Confidence in Career Decision						.40	.52

Note: All correlations reported are significant at $p < .01$ level. CI = Conflictual Independence, FCI = Father Conflictual Independence, MEI = Mother Emotional Independence, FEI = Father Emotional Independence, EI = Emotional Independence, CDA = Career Development Attitudes, COT = Career Orientation Total, S&G = Support and Guidance, CD = Career Decision.

TABLE 6
FEMALES' CORRELATIONS BETWEEN SUBSCALES OF INTEREST AND
DEMOGRAPHIC-FAMILY QUESTIONS

	CI	FCI	MEI	FEI	EI	CDA	COT
Mother's Work	-.36	-.33					
Mother's S&G			-.50				.29
Father's S&G				-.53	-.31		
Confidence in Career Decision					-.29		
% of Father's Employment							-.33
Father's CC						.31	.41

Note: All correlations reported are significant at $p < .01$ significance level. CI = Conflictual Independence, FCI = Father Conflictual Independence, MEI = Mother Emotional Independence, FEI = Father Emotional Independence, EI = Emotional Independence, CDA = Career Development Attitudes, COT = Career Orientation Total, S&G = Support and Guidance, CC = Career Commitment.

CHAPTER V

DISCUSSION

Major Hypothesis

It was hypothesized that scores on subtests of the Psychological Separation Inventory would be significantly and positively correlated with scores on subtests of the Career Development Inventory. The results did not support this hypothesis. There were no significant correlations between the subtests of interests. Since this was an exploratory study relating career development to development of independence from parents, this is the first direct finding that these two aspects of development may not occur together, at least as these constructs are measured in the instruments used in the present investigation, although theory predicts that both should occur during late adolescence.

In Beilin's (1955) discussion of the application of general developmental principles to vocational theory, he discusses the "principle of developmental pre-eminence" (p. 55), which may apply to these non-significant findings. This principle is that a certain aspect of development may be predominant at a particular period of time. During that time, the individual's energies are directed upon that particular aspect of development to the exclusion of others. The lack of significant correlations between career maturity and independence from parents may indicate that these two aspects of general development may occur at different points in time, as an example of the principle of developmental pre-eminence. If freshmen are at a point where they are directing their energies to one of these areas to the exclusion of the

other, statistics would reveal a lack of relationship between the two. If this explanation is valid, a correlation may be found at a later point in time, when those who have fewer problems in their development would score high on both career maturity measures and psychological independence measures, and those who have more problems in their development would score low on both types of measures. Whether these projected developments would be manifested differently in men and in women would be a worthwhile question for further research.

There are some indications that consistent results are not obtained with the PSI. Lopez, Campbell, and Watkins (1986) found no correlations between scales of the PSI and measures of college adjustment. Although other studies (Allen, 1986; Hoffman, 1984) have found a positive relationship between the scales of the PSI and measures of college adjustment, these conflicting findings may indicate that there may be a problem with the robustness of the concept as measured by the PSI. It is also possible that the inconsistent research results reported above are related to variations in the samples studied. Although all subjects in these studies were college students, there may have been other characteristics of the samples which differentially impacted upon the results, depending upon the sample, and caused these different results to be obtained. An example of a characteristic which may have differentially impacted upon the various samples is social desirability. While male and female college students in Lubbock, Texas may have some ideas as to how "close" a family should be and may answer the PSI accordingly, in Boulder, Colorado and Chapel Hill, North Carolina, college students may have other ideas about the appropriate level of

closeness in a family. Either of these explanations may also apply to the current non-significant findings.

Gender Differences

Gender differences were found on career maturity measures and psychological separation measures of interest to the major hypothesis, and also on subscales which were not used in the major hypothesis. On the subscales of interest in the major hypothesis, females scored significantly higher on the COT, the global subtest score of the Career Development Inventory; males scored higher on the MEI subtest of the Psychological Separation Inventory. On subtests which were not used as tests of the major hypothesis, females scored higher than males on two other subtests of the CDI and males scored higher on two other subtests of the PSI. Females scored higher than males on the Decision Making (DM) subscale and the Career Development Knowledge (CDK) subscale of the CDI. Males scored higher than females on the Mother Attitudinal Independence (MAI) subscale and the Mother Functional Independence (MFI) subscale of the PSI.

These gender differences found on the career maturity measure were consistent with previous studies which have found that females score higher on career maturity measures than males (Smith & Herr, 1972; Westbrook, 1983; Thompson et al., 1980). As in Thompson et al.'s (1980) investigation, gender differences were not found on the attitude measure (CDA), but were found on the COT, the CDK, and the DM subscales, which all include a cognitive component. As Thompson et al. (1980) reported, since women typically score higher on tests which are cognitive in nature, differences in cognitive skills may be the reason for the gender

differences on these particular subtests. In summary, these particular differences were similar to differences obtained by Thompson et al. and other researchers, and may be due to that part of the variance related to cognitive achievement.

The area of the development of independence from parents has only recently been empirically measured and studied. There is, therefore, little empirical research regarding gender differences on the newly developed instrument, the PSI. The finding that males scored higher than females on the MEI, MAI, and MFI subscales of the PSI is consistent with previous research (Lopez, Campbell, & Watkins, 1986; Allen, 1986) which found that males score higher than females on subscales of the PSI. However, this has not been a consistent finding; other studies have not found that males score higher than females on the PSI (Hoffman, 1984; Garner, 1986). While the results of the research are not consistent, these results seem to support the necessity of further exploration of gender differences in this area.

A surprising gender difference was found in the relationship between scores on an intelligence test and scores of the subscales of interest. It was found that for females but not males, intelligence scores were positively and significantly related to scores on the COT of the CDI and the EI, MEI, CI, MCI, and FCI. This gender difference may indicate that there is a type of "cognitive maturity" which is related to females' approach to the tests but is not related to males' approach to the tests. It is speculated that perhaps females approach tests logically as a function of cognitive abilities, while males' approach to

tests is unrelated to their cognitive abilities. This is a possible direction for future research.

The finding that the correlations between women's intelligence test scores and subscale test scores were in the positive direction and most correlations testing the hypothesis were in the negative direction (and non-significant) yields further support to the assumption that intelligence did not impact upon any relationship between subscales in a systematic way.

Significant Post Hoc Results

Post hoc analyses revealed that independence from parents is related to familial factors for both men and women. In addition, for women a relationship was found between career maturity and familial factors, and for men, a relationship was found between career maturity and self-efficacy.

The finding that males and females who received more support and guidance in the career decision process from their mothers scored lower on the MEI subscale, and those who received more support and guidance from their fathers scored lower on the EI and FEI, suggests that family process is related to the career-decision process. While for females the "Mother's Work" question was significantly correlated with the CI and FCI subscales, for males the "Father's Work" question was significantly correlated with the CI and FCI subscales. This suggests that the same-gender parent's professional status is positively related to the development of Conflictual Independence, especially from the father. These findings also provide construct validity to the PSI in

that results were found to be specific to the gender of the parent as well as to the gender of the subject.

It was also found that family structure and process factors, such as percentage of father's employment, degree of father's career commitment, and amount of support and guidance from mother is positively related to women's level of career maturity.

For men, career maturity was positively correlated with their confidence in their abilities to cope with the career decision-making process and to make the right decision. This indicates that those men who have achieved a greater level of career maturity are aware of that achievement.

Conclusions

The major hypothesis, that career maturity is positively correlated with independence from parents, was not supported by the data. However, post hoc results indicate that there may be measurable relationships between various familial factors and the aspects of the career decision-making process. Gender differences were obtained both within measures included in the major hypothesis and within post hoc results.

One possible reason for these non-significant results is that college freshmen may be at a point in their development where they are directing their energies to either one area of development or another. The non-significant findings of the major hypothesis may also be related to a problem with the Psychological Separation Inventory. Since the PSI is a relatively new and untested instrument, it may not be a reliable instrument to measure psychological separation when used with several

other populations other than the original population on which it was normed.

In sum, it appears that the areas of psychological separation, career maturity, gender differences, and the interrelationships among these constructs would profit from continued investigation, with particular emphasis upon the development of reliable and valid instruments and upon longitudinal studies.

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APPENDIX A

CONSENT FOR RESEARCH PARTICIPATION

The present study consists of responding to some demographic questions and some standard instruments that are designed to assess various developmental factors. All of your answers will remain anonymous. A number will be assigned to your answer sheets for identification purposes. Information gained from this study will be used only for research and educational purposes. Research credit for this study is noted on the sign-up sheet. You may withdraw your consent at any time without penalty, or may ask after completion that your data not be used.

Sharon Thomason or Dr. Winer has agreed to answer any inquiries I may have concerning the procedures and has informed me that I may contact the Texas Tech University Institutional Review Board for the Protection of Human Subjects by writing them in care of the Office of Research Services, Texas Tech University, Lubbock, TX 79409, or by calling 742-3884.

If this was a project which could cause any physical injury to participants in this project, treatment is not necessarily available at Texas Tech University or the Student Health Center, nor is there necessarily any insurance carried by the University or its personnel applicable to cover any such injury. Financial compensation for any such injury must be provided through the participant's own insurance program. Further information about these matters may be obtained from the Vice President for Research and Graduate Studies, (806) 742-2153, Room 118, Administration Building, Texas Tech University, Lubbock, Texas 79409.

The nature and purpose of this research project have been satisfactorily explained to me.

Investigator

Signature of Participant

Date

APPENDIX B

PSI AND DEMOGRAPHICS

INSTRUCTIONS: Please complete the following instruments in the order assigned with a No. 2 lead pencil (available from the research assistant). It is VERY IMPORTANT that you complete EACH question; we cannot score the material if ANY items are left blank. If you have questions, feel free to ask the research assistant. All information is confidential and will not be identified by name.

PSI

INSTRUCTIONS: The following list of statements describes different aspects of students' relationships with both their mother and father. Imagine a scale ranging from "Not at all true of me" to "Very true of me" that tells how well each statement applies to you. On the answer sheet provided, mark with a #2 lead pencil the letter that describes how well each statement applies to you. Please be completely honest. Your answers are entirely confidential and will be useful only if they accurately describe you. For each statement:

A = Not at all true of me
B = A little bit true of me
C = Moderately true of me
D = Quite a bit true of me
E = Very true of me

1. I like to show my friends pictures of my mother.
2. Sometimes my mother is a burden to me.
3. I feel longing if I am away from my mother for too long.
4. My ideas regarding racial equality are similar to my mother's.
5. My mother's wishes have influenced my selection of friends.
6. I feel like I am constantly at war with my mother.
7. I blame my mother for many of the problems I have.
8. I wish I could trust my mother more.
9. My attitudes about obscenity are similar to my mother's.
10. When I am in difficulty I usually call upon my mother to help me out of trouble.
11. My mother is the most important person in the world to me.
12. I have to be careful not to hurt my mother's feelings.
13. I wish that my mother lived nearer so I could visit her more frequently.
14. My opinions regarding the role of women are similar to my mother's.
15. I often ask my mother to assist me in solving my personal problems.
16. I sometimes feel like I'm being punished by my mother.
17. Being away from my mother makes me feel lonely.

18. I wish my mother wasn't so overprotective.
19. My opinions regarding the role of men are similar to my mother's.
20. I wouldn't make a major purchase without my mother's approval.
21. I wish my mother wouldn't try to manipulate me.
22. I wish my mother wouldn't try to make fun of me.
23. I sometimes call home just to hear my mother's voice.
24. My religious beliefs are similar to my mother's.
25. My mother's wishes have influenced my choice of major at school.
26. I feel that I have obligations to my mother that I wish I didn't have.
27. My mother expects too much from me.
28. I wish I could stop lying to my mother.
29. My beliefs regarding how to raise children are similar to my mother's.
30. My mother helps me to make my budget.
31. While I am home on a vacation I like to spend most of my time with my mother.
32. I often wish that my mother would treat me more like an adult.
33. After being with my mother for a vacation I find it difficult to leave her.
34. My values regarding honesty are similar to my mother's.
35. I generally consult with my mother when I make plans for an out of town weekend.
36. I am often angry at my mother.
37. I like to hug and kiss my mother.
38. I hate it when my mother makes suggestions about what I do.
39. My attitudes about solitude are similar to my mother's.
40. I consult with my mother when deciding about part-time employment.
41. I decide what to do according to whether my mother will approve of it.
42. Even when my mother has a good idea I refuse to listen to it because she has made it.
43. When I do poorly in school I feel I'm letting my mother down.
44. My attitudes regarding environmental protection are similar to my mother's.
45. I ask my mother what to do when I get into a tough situation.
46. I wish my mother wouldn't try to get me to take sides with her.
47. My mother is my best friend.
48. I argue with my mother over little things.
49. My beliefs about how the world began are similar to my mother's.
50. I do what my mother decides on most questions that come up.
51. I seem to be closer to my mother than most people my age.
52. My mother is sometimes a source of embarrassment to me.
53. Sometimes I think I am too dependent on my mother.
54. My beliefs about what happens to people when they die are similar to my mother's.
55. I ask for my mother's advice when I am planning my vacation time.
56. I am sometimes ashamed of my mother.
57. I care too much about my mother's reactions.
58. I get angry when my mother criticizes me.
59. My attitudes regarding sex are similar to my mother's.

60. I like to have my mother help me pick out the clothing I buy for special occasions.
61. I sometimes feel like an extension of my mother.
62. When I don't write my mother often enough I feel guilty.
63. I feel uncomfortable keeping things from my mother.
64. My attitudes regarding national defense are similar to my mother's.
65. I call my mother whenever anything goes wrong.
66. I often have to make decisions for my mother.
67. I'm not sure I could make it in life without my mother.

sometimes resent it when my mother tells me what to do.
attitudes regarding mentally ill people are similar to my mother's.

like to show my friends pictures of my father.

sometimes my father is a burden to me.

feel longing if I am away from my father for too long.

ideas regarding racial equality are similar to my father's.

father's wishes have influenced my selection of friends.

feel like I am constantly at war with my father.

blame my father for many of the problems I have.

wish I could trust my father more.

attitudes about obscenity are similar to my father's.

when I am in difficulty I usually call upon my father to help me out of trouble.

father is the most important person in the world to me.

have to be careful not to hurt my father's feelings.

wish that my father lived nearer so I could visit him more frequently.

opinions regarding the role of women are similar to my mother's.

often ask my father to assist me in solving my personal problems.

sometimes feel like I'm being punished by my father.

being away from my father makes me feel lonely.

wish my father wasn't so overprotective.

opinions regarding the role of men are similar to my father's.

couldn't make a major purchase without my father's approval.

wish my father wouldn't try to manipulate me.

wish my father wouldn't try to make fun of me.

sometimes call home just to hear my father's voice.

religious beliefs are similar to my father's.

father's wishes have influenced my choice of major at school.

feel that I have obligations to my father that I wish I didn't have.

father expects too much from me.

wish I could stop lying to my father.

beliefs regarding how to raise children are similar to my mother's.

father helps me to make my budget.

when I am home on a vacation I like to spend most of my time with father.

often wish that my father would treat me more like an adult.

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102. After being with my father for a vacation I find it difficult to leave him.
103. My values regarding honesty are similar to my father's.
104. I generally consult with my father when I make plans for an out of town weekend.
105. I am often angry at my father.
106. I like to hug and kiss my father.
107. I hate it when my father makes suggestions about what I do.
108. My attitudes about solitude are similar to my father's.
109. I consult with my father when deciding about part-time employment.
110. I decide what to do according to whether my father will approve of it.
111. Even when my father has a good idea I refuse to listen to it because he has made it.
112. When I do poorly in school I feel I'm letting my father down.
113. My attitudes regarding environmental protection are similar to my father's.
114. I ask my father what to do when I get into a tough situation.
115. I wish my father wouldn't try to get me to take sides with him.
116. My father is my best friend.
117. I argue with my father over little things.
118. My beliefs about how the world began are similar to my father's.
119. I do what my father decides on most questions that come up.
120. I seem to be closer to my father than most people my age.
121. My father is sometimes a source of embarrassment to me.
122. Sometimes I think I am too dependent on my father.
123. My beliefs about what happens to people when they die are similar to my father's.
124. I ask for my father's advice when I am planning my vacation time.
125. I am sometimes ashamed of my father.
126. I care too much about my father's reactions.
127. I get angry when my father criticizes me.
128. My attitudes regarding sex are similar to my father's.
129. I like to have my father help me pick out the clothing I buy for special occasions.
130. I sometimes feel like an extension of my father.
131. When I don't write my father often enough I feel guilty.
132. I feel uncomfortable keeping things from my father.
133. My attitudes regarding national defense are similar to my father's.
134. I call my father whenever anything goes wrong.
135. I often have to make decisions for my father.
136. I'm not sure I could make it in life without my father.
137. I sometimes resent it when my father tells me what to do.
138. My attitudes regarding mentally ill people are similar to my father's.

INSTRUCTIONS: Complete the following questions by marking the appropriate letter with a #2 lead pencil. Begin with #139 on your answer sheet.

139. I am a: (A) Female (B) Male
140. My age is: (A) 17 (B) 18 (C) 19 (D) 20 (E) 21 or over
141. My marital status is: (A) Single (B) Married (C) Divorced
142. How many children do you have: (A) 0 (B) 1 (C) 2 or more
143. My ethnic heritage is: (A) Black (B) White-non-Hispanic
(C) White-Hispanic (D) Oriental (E) Other
144. My year in college is: (A) 1st (B) 2nd (C) 3rd (D) 4th
145. I am currently living: (A) in dorm (B) with parents (C) with
other relative (D) off-campus with someone else (E) off-campus
without someone else
146. The marital status of my parents is: (A) Together (B) Divorced
(C) Mother deceased (D) Father deceased
147. If above answer was not "A," what was your age when this occurred?
(A) Answer was "A" (B) Older than 14 (C) 12-14 (D) 8-12
(E) Younger than 8
148. My family size is (including parents): (A) 6 or more (B) 5
(C) 4 (D) 2 (parents divorced or one deceased)
149. How many siblings do you have? (A) 4 or more (B) 3 (C) 2
(D) 1 (E) 0
150. What is your place in the birth order of your siblings? (A) 1st
(B) 2nd (C) 3rd (D) 4th (E) Youngest of family larger than 6
151. My father was employed: (A) 90% or more of the time (B) 40-80%
of the time (C) less than 40% of the time
152. My mother was employed: (A) 90% or more of the time (B) 40-80%
of the time (C) less than 40% of the time
153. My father worked predominately as a: (A) Professional
(B) Manager (C) Business owner (D) Skilled worker (mechanic,
tailor) (E) Unskilled worker (assembly line)
154. My mother worked predominately as a: (A) Professional
(B) Manager (C) Business owner (D) Skilled worker (mechanic,
tailor) (E) Unskilled worker (assembly line)
155. My father's job required: (A) High school diploma
(B) an Associate's or technical degree
(C) a Bachelor's degree (D) a Master's degree
(E) a Ph.D., M.D., or Law degree
156. My mother's job required: (A) High school diploma
(B) an Associate's or technical degree
(C) a Bachelor's degree (D) a Master's degree
(E) a Ph.D., M.D., or Law degree
157. How committed was your father to a career? (A) not at all
(B) somewhat (C) moderately (D) quite a bit (E) very
committed
158. How committed was your mother to a career? (A) not at all
(B) somewhat (C) moderately (D) quite a bit (E) very
committed
159. In my family, education was: (A) not at all important (B) some-
what important (C) moderately important (D) quite a bit
important (E) very important

160. My father has provided support and guidance in my career decision-making: (A) not at all (B) a little bit (C) moderately (D) quite a bit (E) a great deal
161. My mother has provided support and guidance in my career decision-making: (A) not at all (B) a little bit (C) moderately (D) quite a bit (E) a great deal
162. How well do you believe you have adjusted to college thus far? (A) not well at all (B) somewhat well (C) moderately well (D) quite well (E) very well
163. How well do you believe you are coping with the career decision-making process? (A) not well at all (B) somewhat well (C) moderately well (D) quite well (E) very well
164. How confident are you in your ability to choose the "right" career for you? (A) not confident at all (B) somewhat confident (C) moderately confident (D) quite confident (E) very confident

APPENDIX C

DEBRIEFING FORMAT

This study is a study concerning the developmental processes of college students. It is believed that the developmental process of establishing independence from parents will be positively related to the development of career maturity. The instruments which you completed will establish whether a positive relationship between independence from parents and career maturity is found. If you have further questions about the purpose of the study, please ask the researcher here, and if you would like to know the results of the study, please leave your name and address in Sharon Thomason's mailbox in the psychology building. When the study is complete, an abstract of the results will be sent to you. Please do not speak to people taking general psychology about the purpose of this study until the course is complete, or the individual has already participated and been debriefed. Thank you very much for your participation.

APPENDIX D
SAMPLE DEMOGRAPHICS

CORRELATIONS BETWEEN AGE AND SUBSCALES
OF THE PSI AND CDI: MALES AND FEMALES

	Age	
	r	p
EI	-.07	.44
MEI	-.10	.26
FEI	-.03	.78
CI	.04	.66
MCI	.16	.10
FCI	-.07	.44
CDA	.04	.68
COT	-.11	.24

Note: EI = Emotional Independence, MEI = Mother Emotional Independence, FEI = Father Emotional Independence, CI = Conflictual Independence, MCI = Mother Conflictual Independence, FCI = Father Conflictual Independence, CDA = Career Development Attitudes, COT = Career Orientation Total.

ONE-WAY ANOVA: CDI BY ETHNICITY: MALES

	Source	df	SS	MS	F
CDA:					
	BG	4	585.09	146.27	.03
	WG	48	19774.97	411.98	
	Total	52	20360.05		
COT:					
	BG	4	412.91	103.23	.19
	WG	48	25702.28	535.46	
	Total	52	26115.19		

Note: All results are not significant. CDA = Career Development Attitudes, COT = Career Orientation Total.

ONE-WAY ANOVA: CDI BY ETHNICITY: FEMALES

	Source	df	SS	MS	F
CDA:					
	BG	4	1859.03	465.76	.77
	WG	57	34187.75	599.79	
	Total	61	36046.78		
COT:					
	BG	4	4590.29	1147.57	3.11
	WG	57	21004.57	368.50	
	Total	61	25594.85		

Note: All results are not significant. CDA = Career Development Attitudes, COT = Career Orientation Total.

ONE-WAY ANOVA: PSI BY ETHNICITY: MALES

	Source	df	SS	MS	F
MCI:					
	BG	4	2675.52	668.88	3.76*
	WG	48	8537.94	177.87	
	Total	52	11213.45		
FCI:					
	BG	4	2022.45	505.61	1.57
	WG	48	15486.21	322.63	
	Total	52	17508.66		
CI:					
	BG	4	9306.98	2326.75	3.03
	WG	48	36828.30	757.26	
	Total	52	46135.29		
MEI:					
	BG	4	35.78	8.95	.05
	WG	48	7968.70	166.01	
	Total	52	8004.48		
FEI:					
	BG	4	436.80	115.95	.65
	WG	48	8609.71	179.37	
	Total	52	9073.52		
EI:					
	BG	4	682.85	170.72	.28
	WG	48	29210.37	608.55	
	Total	52	29893.21		

Note: * indicates significance at the .01 level. EI = Emotional Independence, MEI = Mother Emotional Independence, FEI = Father Emotional Independence, CI = Conflictual Independence, MCI = Mother Conflictual Independence, FCI = Father Conflictual Independence.

ONE-WAY ANOVA: PSI BY ETHNICITY: FEMALES

	Source	df	SS	MS	F
MCI:					
	BG	4	390.67	448.12	1.69
	WG	57	17297.78	303.47	
	Total	61	17688.45		
FCI:					
	BG	4	6357.29	1589.32	6.61*
	WG	57	13695.64	240.27	
	Total	61	20052.93		
CI:					
	BG	4	9656.38	2414.10	3.07
	WG	57	44761.01	785.28	
	Total	61	54417.39		
MEI:					
	BG	4	360.17	90.04	.47
	WG	57	10773.15	189.00	
	Total	61	11133.32		
FEI:					
	BG	4	1792.49	97.67	.32
	WG	57	15165.35	266.06	
	Total	61	16957.84		
EI:					
	BG	4	2479.98	619.99	1.06
	WG	57	33469.41	587.18	
	Total	61	35949.39		

Note: * indicates significance at the .01 level. EI = Emotional Independence, MEI = Mother Emotional Independence, FEI = Father Emotional Independence, CI = Conflictual Independence, MCI = Mother Conflictual Independence, FCI = Father Conflictual Independence.

SCHEFFE' TEST OF SIGNIFICANT DIFFERENCES:
FCI BY ETHNICITY: MALES

	Black	White	F'_{ob} Hispanic	Oriental	Other
Black	-	6.03	13.97	1.42	5.13
White	-	-	7.05	.28	.42
Hispanic	-	-	-	3.85	1.45
Oriental	-	-	-	-	.70
Other	-	-	-	-	-

Note: At $p < .01$, the minimum significant difference (F') = 14.96.

SCHEFFE' TEST OF SIGNIFICANT DIFFERENCES:
FCI BY ETHNICITY: FEMALES

	Black	White	F'_{ob} Hispanic	Oriental	Other
Black	-	17.87*	13.13	.40	2.93
White	-	-	.08	7.21	3.55
Hispanic	-	-	-	2.75	2.33
Oriental	-	-	-	-	.80
Other	-	-	-	-	-

Note: At $p < .01$, the minimum significant difference (F') = 14.96.

NUMBER OF SUBJECTS AND PERCENTAGE IN EACH
DEMOGRAPHIC CATEGORY

	N	%
<u>Gender</u>		
Females	62	53.9
Males	53	46.1
<u>Age</u>		
17	13	10.0
18	76	66.1
19	26	22.6
<u>Ethnicity</u>		
Black	6	5.2
White	85	73.9
Hispanic	14	12.2
Oriental	4	3.5
Other	6	5.2
<u>Housing</u>		
Dorm	78	67.8
Parents	24	20.9
Relative	4	3.5
Roommate	5	4.3
Off campus alone	4	3.5
<u>Number of Children</u>		
0	109	94.8
1	4	3.5
2	2	1.7
<u>Parents' Marital Status</u>		
Together	87	75.7
Divorced	24	20.9
Mother Deceased	3	2.6
Father Deceased	1	.9
<u>Age at Divorce or Parent's Death</u>		
Older than 14	8	7.0
12-14	5	4.3
8-12	3	2.6
Younger than 8	14	12.2

NUMBER OF SUBJECTS AND PERCENTAGE IN EACH
DEMOGRAPHIC CATEGORY: CONTINUED

	N	%
<u>Family Size</u>		
6 or less	35	30.4
5	30	25.1
4	34	29.6
3	11	9.6
2	5	4.3
<u>Number of Siblings</u>		
4 or more	18	15.7
3	15	13.0
2	25	21.7
1	33	28.7
0	24	20.9

APPENDIX E

CONTRIBUTION OF EI, CI, MEI, FEI, MCI, AND FCI AS PREDICTORS OF CDA AND COT

STANDARD MULTIPLE REGRESSION OF EI, CI, MEI, FEI, MCI, AND FCI ON WOMEN'S CDA SCORES

Variable	B	Beta	T	Sig T
CI	-0.35	-0.43	1.58	.12
FEI	-0.43	-0.29	-2.00	.05
MEI	0.26	0.14	0.91	.36
MCI	0.43	0.30	1.08	.28
$R^2 = 0.10$				
Adjusted $R^2 = 0.04$				
$R = 0.32$				

Note: CI = Conflictual Independence, FEI = Father Emotional Independence, MEI = Mother Emotional Independence, MCI = Mother Conflictual Independence.

STANDARD MULTIPLE REGRESSION OF EI, CI, MEI, FEI, MCI, AND FCI ON MEN'S CDA SCORES

Variable	B	Beta	T	Sig T
CI	-0.04	-0.06	-0.18	.86
MEI	-0.41	-0.26	-1.13	.26
FEI	0.08	0.05	0.25	.80
MCI	0.10	0.07	0.24	.81
$R^2 = 0.06$				
Adjusted $R^2 = -0.02$				
$R = 0.24$				

Note: CI = Conflictual Independence, FEI = Father Emotional Independence, MEI = Mother Emotional Independence, MCI = Mother Conflictual Independence.

STANDARD MULTIPLE REGRESSION OF EI, CI, MEI, FEI,
MCI, AND FCI ON WOMEN'S COT SCORES

Variable	B	Beta	T	Sig T
CI	0.23	0.33	1.15	.25
FEI	0.00	0.00	0.02	.98
MEI	-0.11	-0.08	-0.46	.64
MCI	0.36	-0.30	-1.03	.30
$R^2 = 0.02$				
Adjusted $R^2 = -0.04$				
$R = 0.16$				

Note: CI = Conflictual Independence, FEI = Father Emotional Independence, MEI = Mother Emotional Independence, MCI = Mother Conflictual Independence.

STANDARD MULTIPLE REGRESSION OF EI, CI, MEI, FEI,
MCI, AND FCI ON MEN'S COT SCORES

Variable	B	Beta	T	Sig T
CI	0.19	0.25	0.77	.45
MEI	-0.04	-0.25	-0.11	.01
FEI	-0.50	-0.29	-1.38	.17
MCI	-0.06	-0.04	-0.13	.90
$R^2 = 0.10$				
Adjusted $R^2 = 0.02$				
$R = 0.31$				

Note: CI = Conflictual Independence, FEI = Father Emotional Independence, MEI = Mother Emotional Independence, MCI = Mother Conflictual Independence.

APPENDIX F
RESULTS OF ADDITIONAL ANALYSES

CDI AND PSI PEARSON PRODUCT-MOMENT CORRELATIONS

	Males				Females			
	CDA		COT		CDA		COT	
	r	p	r	p	r	p	r	p
MEI	-.23	.10	-.17	.22	-.05	.70	.01	.94
MCI	.01	.96	.12	.40	-.15	.23	-.02	.86
FEI	-.14	.30	-.24	.08	-.24	.06	-.05	.72
FCI	-.10	.48	.09	.54	-.19	.14	.12	.36
MFI	-.31	.02	-.25	.06	-.14	.28	-.05	.68
FFI	-.19	.18	-.24	.08	-.18	.15	-.06	.64
MAI	-.25	.06	-.29	.04	-.11	.37	-.14	.28
FAI	-.22	.12	-.24	.08	-.30	.02	-.18	.17
EI	-.19	.14	-.22	.11	-.19	.12	-.02	.84
CI	-.06	.68	.11	.44	-.20	.11	-.06	.65

Note: MEI = Mother Emotional Independence, MCI = Mother Conflictual Independence, FEI = Father Emotional Independence, FCI = Father Conflictual Independence, MFI = Mother Functional Independence, FFI = Father Functional Independence, MAI = Mother Attitudinal Independence, FAI = Father Attitudinal Independence, EI = Emotional Independence, CI = Conflictual Independence.

MEANS AND STANDARD DEVIATIONS OF OTHER SUBSCALES

	Males		Females	
	X	SD	X	SD
CDI				
Career Planning	97.47	20.31	102.02	21.84
Career Exploration	96.13	17.53	105.40	22.97
Decision Making	79.02	22.46	89.80	19.68
World of Work	83.77	27.61	92.42	20.59
Preferred Occupation	92.94	18.00	96.89	16.53
Intelligence Score	22.49	6.29	21.31	4.74
PSI				
MFI	31.70	10.40	26.63	10.72
FFI	31.09	12.21	30.56	13.55
MAI	27.40	9.50	21.31	11.36
FAI	26.77	12.73	23.84	13.00

Note: MFI = Mother Functional Independence, FFI = Father Functional Independence, MAI = Mother Attitudinal Independence, FAI = Father Attitudinal Independence.