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Crisis as Opportunity: Personality Constructs and Erikson Identity Development

Christopher E. Ruth
West Virginia University

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**Crisis as Opportunity:
Personality Constructs and Erikson Identity Development**

Christopher E. Ruth

**Dissertation submitted to the
College of Human Resources and Education
at West Virginia University
in partial fulfillment of the requirements
for the degree of**

Doctor of Philosophy

in

Counseling Psychology

**Margaret Glenn, Ed.D., Chair
James Bartee, Ph.D.
Katherine Byers, Ph.D.
Jeffrey Daniels, Ph.D.
Edward Etzel, Ed.D.
Luke Moore, Ed.D.**

**Department of Counseling, Rehabilitation Counseling,
and Counseling Psychology**

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career decision making, identity achievement**

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ABSTRACT

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Christopher E. Ruth

Identity development theory suggests that the developmental trajectory from childhood through young adulthood involves a movement from exploration towards eventual tentative commitment to adult values, beliefs, and career goals. Currently little research has focused on the impact of personality traits commonly studied in personal counseling and career work with college-attending emerging adults on the process of identity development. This study examined the predictive quality of personality preferences on Erickson's and Marcia's operationalization of identity status. More specifically, do particular personality preferences derived from the Myers-Briggs Typology Indicator more often result in particular Eriksonian identity statuses (i.e., foreclosed, diffused, moratorium or achieved) with college-attending young adults? Personality traits were measured by the MBTI and identity status was measured via the Objective Measure of Ego Identity Status. Multinomial logistical regression was employed in the study with odds ratios constituting the measure of effect size. Emerging adults attending a Southern public land grant institution participated in the study. Demographic information was collected and included in the model. Several findings suggested how the MBTI personality preferences may predict exploration of, and commitment to, adult beliefs, values and career goals for individual who exhibited Extroversion, Intuition and Judging preferences. The Perceiving preference approached significance. There was also a novel finding regarding ethnicity and ego identity development. Students who identified as ethnic minorities reported greater odds of explored commitments compared to their White peers. Clinical implications and suggestions for further research were also discussed.

Dedication

Baby Bird (for giving me a reason), Mom (for believing I could) and Pop (for showing me how).

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Table of Contents

Abstract	ii
Acknowledgement	iii
Table of Contents	iv
List of Tables	vii
Chapter1	1
Introduction.....	1
Erikson, Ego Identity Development and Young College-Attending Adults.....	2
Identity Status and Emerging Adulthood.....	6
Development Across the Lifespan	7
Ego Identity Status.....	8
Crisis	9
Ideology	10
The Identity Statuses.....	11
Further Development of the Concept of Identity Status	14
Erikson’s Work as Theoretical Underpinning	17
Demographic Variables’ Impact on Identity Development	21
The APA and Counseling Psychology: A Critique Issued from within the Field	21
Erikson’s Consideration of the Impact of Culture	23
Erikson’s Discussion of Identity Development and Gender.....	26
Typology Theory	28
Personality Theory, Trait Psychology and Typology Theory.....	28
Description of the Eight Preferences	34
Relationship between the Preferences and Preference Development	37

MBTI Measurement of Dominant Preferences and Subscales	38
The Impact of Preferences on Exploration, Commitment and the Identity Statuses	43
Personality Preferences and Identity Status with College-Attending Young Adults	50
Putting Personality and Identity Status Together: This Study's Niche.....	52
Chapter 2	54
Review of the Selected Literature.....	54
Identity Status and Career Decision Making	54
Identity Status, Indecision and Commitment.....	54
Identity Status and Decision Making Styles	57
Studies Involving Personality Preferences and Aspects of Identity Status.....	59
The Gap in the Literature Relating Personality and Identity Status	59
Five Factor Personality Traits and Features of Identity Status	60
MBTI Preferences and Facets of Decision Making.....	68
MBTI Preferences' Impact on Career Counseling Services.....	69
Personality Traits, Post-Formal Thinking and Decision Making Styles.....	72
Decision Making and Introversion-Extraversion.....	75
Combination of Preferences, Decision Making and Problem Solving	80
MBTI Personality Preferences and the Business Management Literature	81
MBTI Preferences and Business Simulation Decision Making.....	83
Literature Review of the MBTI Studies in the Management Literature	85
Issues with Comparing Business Literature and Emerging Adult Samples	88
Identity Development and Gender	90
Identity Status and Ethnicity	96

Evolving Domains of Identity Development	95
Ego and Ethnic Identity Development.....	97
Identity Status and Age.....	100
Interaction of the Variables of Age, Ethnicity and Identity Status.....	103
Research Questions and Hypotheses	105
Conclusion	107
Chapter 3	109
Method	109
Participants.....	109
Research Design.....	110
Data Analysis	113
Diagnostics.....	116
Measures	118
Identity Status	118
Objective Measure of Ego Identity Status	118
Reliability.....	121
Construct Validity	122
Predictive Validity	123
Summary of the OMEIS	123
Myers Briggs Typology Indicator.....	125
Reliability.....	126
Construct Validity	127
Predictive Validity	127

Summary of the MBTI.....	130
Data Collection Procedures.....	131
Chapter 4.....	133
Results.....	133
Demographic information.....	133
MBTI Preferences Comparison to Norming Samples	133
OMEIS Identity Status Comparison to Norming Samples	133
Research Questions.....	134
Research Question 1	134
Research Question 2	137
Research Question 3	138
Research Question 4	139
Research Question 5	141
Research Question 6	143
Research Question 7	144
Research Question 8	145
Research Question 9	146
Summary of Results.....	147
Chapter 5.....	150
Discussion.....	150
Brief Summary of Finding.....	151
Discussion of Findings.....	153
Minority Status Influence on Ego Identity Development.....	154

Discussion of Preferences Predicting More Advanced Ego Identity.....	157
Extraversion Preference Findings	157
Intuition Preference Findings.....	158
Judging Preference Findings.....	159
Perceiving Preference Findings	160
Introversion, Sensing and Feeling Preferences	161
Thinking Preferences	162
Summary of Conclusions	162
Limitations	163
Recommendations.....	167
Research.....	167
Interventions	171
Final Summary.....	174
References.....	179
Appendices.....	209
Appendix A: Informed Consent Form: Mississippi State University	209
Appendix B: Demographic Survey Questions.....	211
Appendix C: OMEIS.....	212
Appendix D: Permission to reprint MBTI	213
Appendix E: MBTI Sample Questions (Form M)	214

List of Tables

Table 1	135
Table 2	136
Table 3	138
Table 4	139
Table 5	140
Table 6	142
Table 7	144
Table 8	144
Table 9	146
Table 10	147
Table 1	148

Chapter 1

Introduction

Currently there is little research that examines the impact of personality on the process of exploration and commitment to adult values, beliefs and career goals for college-attending emerging adults. This proposed study was designed to investigate the predictive nature of a personality construct, and several demographic variables, on identity status in college-attending emerging adults. These findings will describe the relationship between personality preferences and identity status, and hence, may aid in interpretation of a commonly used psychological instrument. The result from this proposed study may identify areas in need of further research, or possibly, be incorporated in career and personal counseling with college-attending young adults designed to facilitate more normative identity development and adult commitments.

Identity development represents a core construct in personal and career counseling with young adults. University counseling and career centers often employ strength based assessments of personality to help young adults gain knowledge of self to foster more adaptive adult commitments related to vocational choice and personal values (Buboltz, Thomas, & Johnson, 2001). This proposed study examined the intersection of personality preferences, as measured by the Myers-Briggs Typology Indicator (MBTI), and ego identity development, as measured by the Objective Measure of Ego Identity Status (OMEIS), in order to better understand the impact of personality on identity development, and the identity statuses, with college-attending young adults. The researcher asked about the impact of personality on the developmental process during late adolescence through emerging and young adulthood. Because of how commonly this personality measure, the MBTI, is used in practice, the results may help clinicians and career counselors predict the potential developmental sticking points or byways that forestall an

individual's movement toward a tentatively achieved identity state. The specific research questions will be offered after review of relevant theory and selected literature. The next section briefly discusses the centrality of Erik Erikson's developmental theory on this current study.

Erikson, Ego Identity Development and College-Attending Young Adults

In the foundational writings on lifespan development by Erikson (1959, 1968) and Marcia (1966, 1980), ego identity status was described as a core concept related to the process of making adult commitments with respect to values, beliefs, occupation and interpersonal relationships. Adolescence signals a, "normal phase of increased conflict characterized by a seeming fluctuation of ego strength and well as by high growth potential" (Erikson, 1968, p. 163) with the period of late adolescence into young adulthood serving as a socially sanctioned period of exploration of values, beliefs and occupational choice in many cultures. With the coming transition to adulthood, the relative importance of exploring and committing to a more mature identity represented a normative developmental crisis for late adolescents and young adults by which, "the individual maintains himself as a coherent personality with a sameness and continuity in both his self-experience and in his actuality for others" (Erikson, 1968, p.73). Ideally, a stable ego identity is attained, but also relatively amenable to change as life circumstances may require.

Erikson's theory is a psycho-social one in that this developmental process is both about the individuals and their society, "for we deal with a process 'located' *in the core of the individual* and yet also *in the core of his communal culture*, a process which establishes, in fact, the identity of those two identities" (emphasis in original, Erikson, 1968, p. 22). There is a mutual recognition of both the individual and the society en route to establishing an adult identity. In finding a niche in society:

the young adult gains an assured sense of inner continuity and social sameness which will bridge what he *was* as a child and what he is *about to become*, and will reconcile his *conception of himself* and his community's recognition of him. (emphasis in original, Erikson, 1959, p. 120)

Hence, with a tentatively achieved identity status in young adulthood, the individual's identity, while revisable, internally coheres and the individual is also recognized by the larger community as an adult. When successful, individuals move on from the earlier developmental epochs of childhood toward a more mature self-understanding and also move into an established, recognized and productive role in the greater community and economy.

There may also be challenges in this process and, "where the resulting self-definition, for personal or collective reasons, becomes too difficult, a sense of role confusion results" (Erikson, 1968, p. 87). Here youth may settle on more extreme identifications in terms of belief or values amidst their crisis as part of the process of exploring or trying on alternatives. Temporarily at least, the individual may identify with extreme positions or reject offered norms in order to resolve the internal tension implicit in the reorganization of self in moving from the ways of childhood to adulthood. Erikson also described a more disruptive "identity diffusion," where there is a fissure of the developing self (1968, p. 212). Erikson wrote that the experience of identity diffusion existed upon a continuum but brought more confusion, or a loss of center, and was more destabilizing to the individual. The acting out behaviors associated with this state may be more dangerous or concerning to the social world of the individual and may even require hospitalization. Here the inpatient facility becomes the social milieu that temporarily anchors the individual with an eye towards transitioning the distressed adolescent back to greater community

beyond the institution's walls. Despite this seriousness, Erikson saw these more concerning behaviors or symptoms as best framed developmentally within the context of an identity crisis.

When, and if, a community identifies and confirms a more extreme, but transient, developing identity or negative identity as the individual's final identity, "that young person may well put his energy into becoming exactly what the careless and fearless community expects of him to be—and make a total job of it" (1968, p.196). In this case, what may have been serving as transient, but more extreme, exploration or adoption of values or beliefs may become trenchant with more longstanding consequences. The self may become defined more rigidly as other to more viable societal values and roles with correspondingly limited means of productive expression or niches. Prematurely fixating to a negative identification translates to misdirected growth and lost potential of the self during this critical juncture in the life cycle. It may forestall later development during the lifespan. From Erikson's perspective of development across the lifespan, the failure to tentatively resolve the crisis of identity will hamper or complicate the resolution of later developmental tasks or challenges (e.g., intimacy vs. isolation, generativity vs. stagnation...)

Erikson's work has deeply influenced developmental theory (Berk & Bacon, 2003; Sigelman, 2003). Erikson wrote, "It is hoped that the theory of identity, in the long run, can contribute more to this problem than a warning" (1968, p.196). He hoped his work could bring awareness to how a prejudiced cultural context limits the growth of the individual. He also highlighted the potential negative impact of framing the developmental crisis more clinically. He believed a more overtly psychiatric or pathogenic treatment was not warranted when symptoms were seen as normative and developmental in nature. This study is situated within Erikson's developmental theory. The researcher reviewed the literature on several personality and

demographic variables that impact the developmental process, as initially described by Erikson and further developed by more contemporary developmental theorists, to better understand how that process can go awry. These findings may be incorporated into preventative or remedial work with college-attending emerging adults.

The intersection between the process of identity development and career choice is a common focus of career and personal counseling, via assessment and interventions, with an emerging adult college-attending population. Erikson noted, “In general it is primarily the inability to settle on an occupational identity which disturbs young people” (1959, p.97), while Freud offered *arbeiten* (i.e., work) as one marker of a successful analysis. Today with emerging adults who attend college challenges regarding question of identity or career most often are addressed through college counseling and career guidance center services (Stone & Archer, 1990). According to the Counsel for the Advancement of Standards in Higher Education (CAS), the mission of college counseling centers is to, “assist students to define and accomplish personal, academic, and career goals by providing developmental, preventive, and remedial counseling” (1999, p. 67). Historically, the emphasis of counseling centers has been on developmental and preventive counseling (Kitzrow, 1999). Despite the increased severity of presenting problems at university counseling centers over the past two decades, developmental and identity issues remain a mainstay of college counseling work. A study with a sample of over 13,000 at a large public university counseling center examined presenting problems over a ten year period and, despite the increase in severity of mental health issues for college students, the researchers found an increasing linear trend in students presenting for “developmental issues” (Benton, Robertson, Tseng, Newton, & Benton, 2003). With this current project, the researcher examined how personality was related to this normative developmental process.

Young adulthood is a time when the questions, what is my major, and more broadly, who am I and what do I want to do with my life come to the fore (Nauta & Kahn, 2007). Some young adults may require more remedial help or exploration, compared to their peers who may exhibit more planful decision making skills (Amir & Gati, 2006; Erikson, 1968; Marcia, 1966; Scott & Ciani, 2008). Timely, and often brief, assessments and psychological interventions can help young adults clarify and ultimately commit to who they are becoming, both with respect to their values and beliefs, as well as interpersonally (Randahl, Hansen, & Haverkamp, 1993).

Counseling psychologists, in their roles providing career guidance services or personal counseling, focus on these developmentally appropriate phase-of-life issues at the moments when career guidance and personal therapy can facilitate healthy exploration and tentative identity commitments in support of the CAS mission (Gordon & Kline, 1989; Raskin, 1989).

The career guidance literature has centered on how to best identify and intervene with students who may be struggling with, or overwhelmed by, the process of making these more adult commitments in the form of career decision making (Betz, Klein, & Taylor, 1996; Gati & Amir, 2010; Holland, 1997; Osipow, 1997). The literature has also focused on those emerging adults who may have prematurely decided on a sense of self or career path without adequate exploration (Fouad, Cotter, & Kantamneni, 2009; Marcia, 1966, 1980; Stewart, 1995). The question of how identity development impacts career decision making is based on historically central domains within counseling psychology. These include working with intact personalities, using relatively brief interventions, capitalizing on clients' strengths and assets, and focusing on vocational and developmental issues in educational settings (Gelso & Fretz, 2001, pp. 6-9). Both measures employed in this proposed study resonate with these core Counseling Psychology

emphases. Having briefly introduced the Erikson frame that served as theoretical context for this proposed study, the next section offers a more detailed review of core Eriksonian concepts.

Identity Status and Emerging Adulthood

This major subsection covers the concepts of Erikson's developmental theory, ego identity status, the importance of the cultural and historical context of the developmental process, the meaning of crisis, ideology, exploration and commitment and a discussion of the four identity statuses. These concepts and terms served as the foundation and outcome measure for this research project.

Development across the lifespan. While Erikson's theory of human development covers the lifespan, this proposed study focuses on the fourth of the eight developmental stages proposed by Erikson, namely, Identity vs. Role Confusion (Broderick & Blewitt, 2010). In each developmental stage described by Erikson there was a different crisis signaling particular qualitative changes in individuals as a function of both innate biological processes and societal expectations during that period. Erikson described the challenges and tasks for resolution that each stage provided. This psycho-social process emphasized the interaction of the individual and the social context. Although each phase of development was signaled by biological markers of change unfolding within the individual, the process takes different normative shape in each varied cultural and historical context. Successful resolution of the challenge of each progressive stage facilitated the resolution of the next, but the process was not fixed. Individuals can return to unresolved issues from earlier epochs if they are supported in addressing those previous challenges. More will be said about Erikson's overall stature in the developmental literature later in the chapter. The next several sections describe the particular tasks related to identity development during late adolescence and emerging adulthood.

Ego identity status. Within his description of the lifecycle, Erikson's groundbreaking psychosocial works set forth a model to conceptualize young adults' identity formation (1959, 1968). Erikson described the subjective nature of ego identity as, "the awareness of the fact that there is a selfsameness and continuity to the ego's synthesizing methods" and this sameness is reflected in, "one's meaning for significant others in the community" (1968, p. 50). Alternately, he described an ego identity development as a process by which an individual's personality cohered with continuity in the individual's self-experience, and likewise, a consistency in others' experience of that individual (1968). Here there is stability in how individuals experience themselves, and likewise, are experienced by the community. Among ego identity's facets Erikson alternately described in his narrative style a, "sense of individual identity", a "continuity of personal character", the "silent doings of ego synthesis", and an "inner solidarity with a group's ideals and identity" (1959, p, 109).

This sense of inner identity provided continuity, acting as a bridge between the years of childhood and an anticipated future. Erikson described, in happy cases, a growing conviction that one was moving effectively towards a tangible future with a defined personality within a comprehensible and accepted social reality. This inner identity readied one for the tasks of adulthood (1959). Erikson balanced a discussion of the impact of culture, and the social and historical context within which development unfolded, with a more Freudian intra-psychic and biological emphasis. A discussion of Erikson's core concept of crisis and how it spurred on the developmental process from adolescence to young adulthood follows.

Crisis. Erikson referred to the particular developmental hurdle of adolescent and young adulthood as 'identity versus role confusion.' While he recognized cross-cultural variety in the duration, intensity and the rituals associated with adolescence, Erikson proposed that all societies

provided a scheduled time for completion of identity. For Erikson “crisis” was designated as a “necessary turning point” or “crucial moment” towards or away from greater individual development (1968, p. 16). He noted, in discussing what he called the epigenesis of the life cycle, that each successive developmental step represented a potential crisis due to it signaling a radical change in perspective for the individual (1959). Erikson borrowed from the biological model in contending that the growth of the organism followed a plan and he described the times of development of each of the varied aspects of self across the lifespan with identity development representing one of those innate times of change in the life of the organism (1968). Rather than signaling an impending catastrophe to be avoided, the crisis of identity development became the sanctioned, and necessary, touchstone for continued growth of the self into adulthood. Crisis provided the energy and opportunity for individuals to marshal their resources that led to further differentiation of the self (1968). To underscore this he wrote that, “adolescence is not an affliction but a normative crisis, i.e., a normal phase of conflict" (1959, p. 125). This “transversible” crisis, with its energy, conflict and anxiety may ultimately prove “self-liquidating” and contribute to the ongoing process of identity formation (p.125). The crisis initiated the process by which growth transpired. The crisis resolved for individuals in their productively responding to the more demands or tasks of late adolescence and in committing to a self that was beginning to forge a viable niche in the broader social context.

Erikson argued that the importance associated with forming an identity peaks during adolescence with physical intimacy, career choice, peer competition and psychological self-definition serving to precipitate this developmentally appropriate crisis (1959). He also contended that during late adolescence and early adulthood there was pressure to give up the ways of childhood. One was engaged in exploring and eventually adopting ideological beliefs

that reflect one's developing a coherent sense of self (Erikson, 1959). Particular to the current study Erikson remarked that, "in general it is the inability to settle on an occupational identity which most disturbs young people" (1959, p. 97; 1968, p. 132). Two prominent career theorists, Gottfredson (1981) and Super (1984), also contended that normative career development moved from a period of relative uncertainty about career options towards a commitment to a specific career choice during young adulthood. Having briefly summarized how crisis unfolds during adolescence, what follows next is a discussion of one of the core domains related to ego identity development: ideology.

Ideology. For Erikson, ideology was used in a specific sense. The term represented a coherent way of being that situated the individual in historical time and space. It also bridged generations and melded traditional values with fresh views and ideals (1968). Erikson viewed ideology as necessary for individuals and their developing egos to find their place in the succession of generations (1959). Here again Erikson's psycho-social emphasis described an interplay of the developing individual within an historical and cultural context. He further depicted ideology as a synthesis of past and future, which ultimately transcended the past, in the same way the individual's identity likewise linked past to future generations through the developing self. Erikson listed a number of functions which ideology provided the developing youth, including: a distinct vision of the future, opportunities to exhibit a self-sameness of appearance and action, to balance the struggle between a burgeoning individuality and the world or others, as providing incentives to attempt work roles, and as acting as a correspondence between the inner and outer worlds in real space and time (1959). Taken in sum, Erikson contended that ideology served as the vehicle for the continuity of self and the unfolding of ego identity in a geo-historical context. In terms of the concept's relevance for the proposed study,

the participants' exploration and commitment to aspects of ideology, as represented more specifically by their values, beliefs and career goals, served as markers for where they were in the process of addressing and resolving the crisis of identity vs. role confusion.

An Eriksonian shaped measure of ideology served as the outcome variable for this proposed study. Because of its importance in Erikson's thought, ideology represented one of the two domains of Marcia's (1966) identity status measure. Later it became one of the subscales in Adams' (1998) identity measure that grew from Erikson's and Marcia's initial theorizing. Adams' newest revision of that measure (2010), which returned to a more singular focus on the ideological realm, was employed in this study and will be discussed in greater detail in the methods section. The concept remains relevant as it represents the achievement of a stable and coherent self, situated in a particular historical context. The discussion will now shift to the two core concepts by which identity status was measured, namely exploration and commitment.

The identity statuses. Erikson identified two essential features of identity development that continue to resonate in the literature on the development of young adults: (a) exploration and (b) commitment (Erikson, 1959; Marcia, 1966, 1980). Exploration represented an examination of alternatives in ways of being or beliefs and commitment referred to a consistent, yet revisable, personal investment in a way of being or set of beliefs (Erikson, 1959; Marcia, 1966, 1980). The developmental stage of young adulthood was characteristically defined by a crisis and a lack of commitment to a stable set of values or beliefs (Erikson, 1959; Marcia, 1966, 1980). Erikson described aspects of exploration and commitment that were further defined and operationalized by Marcia with the four identity statuses of moratorium, foreclosure, diffusion and an achieved status.

Erikson chronicled a “psychosocial moratorium” where young adults, through “free experimentation,” find a niche in society which was well defined and seems uniquely suited for that individual. The “state-of-the-moratorium” provided an institutionally and societally supported period characterized by “defined duties, sanctioned competitions, and special freedoms” integrated within the array of expectable jobs or careers (1959, p. 156). College attendance could be seen the vehicle for this exploration within both its expectations and relative freedoms (Arnett, 2004). In sketching what Marcia (1966) would later call foreclosure, Erikson depicted a state where individuals prematurely defined themselves or, in bypassing their own volition, were defined due to circumstances in their environment or by an authority or parental figures (1968). In either case, with foreclosure the moratorium was halted too soon if it began at all. Erikson also discussed identity diffusion in which a, “split of self-image is suggested, a loss of center and a dispersion” (1968, p. 212). This identity status was also suggestive of a healthy moratorium gone awry or never begun.

Lastly, there was the tentative success of an ‘achieved’ ego identity which was, “characterized by the actually attained but forever to-be-revised sense of the reality of the Self within social reality” (1968, p.211). Here the community recognized the newly emerging individual, while the community, in turn, felt recognized by the developing individual (1968). Earlier, he also described the final adolescent version of the ego as related to economic opportunities and pragmatically realizable ideals (1959). Marcia forged the four respective identity statuses, diffusion, foreclosure, moratorium and achieved, from Erikson’s descriptive vignettes of these states. For Marcia, they served as markers for the progress of ego identity development. For this study they served as the outcome, or dependent, variable of interest.

In considering the social half of the psycho-*social*, Erikson had much to say about how the cultural context guided or dictated the identity development process. He discussed how one's relation to majority culture values and beliefs impacted this mutual recognition as well as how this developmental process may have more circumscribed ends for individuals who identified as ethnic minorities and women (1959, 1968, 1975). Their potentially different experiences with identity development will be discussed in greater depth in separate sections of the introduction and literature review that explicitly addressed the theory and research on gender, ethnicity and identity development.

Because of his extensive clinical background and relation to Freudian psychoanalysis, Erikson's works surveyed the gamut from the normative developmental processes to the more clinical extremes (e.g., negative identity, identity confusion, neurosis, psychosis). With each new developmental challenge during the lifespan, earlier unresolved developmental issues may reemerge, but Erikson was careful to avoid pathologizing the normative crisis of identity formation. He feared that an overly diagnostic label could negatively impact the process of identity formation (1968). Additionally, with more severe cases of identity confusion Erikson noted that, when diagnosed and treated within a developmental context, seemingly more extreme symptoms did not harbor the same negative prognoses (1968). The danger for authority figures in accepting these more maladaptive manifestations as a final identity was that they may prematurely consolidate the individual's pressing need for an orientation toward self and world. Hence, the individual's development process could forestall as he became what the community has negatively decided what he *will* become (1968). This caution is echoed in contemporary DSM-IV-TR 'V' codes related to phase of life, identity or occupational issues (V 62.89, 313.83, and V 62.2, respectively) and the debate in the clinical community in prematurely diagnosing

more severe Axis I or II disorders with emerging adults on the basis of symptoms without greater consideration of the developmental context. Erikson's conceptualization of ego identity development gained greater utility with its operationalization by another central theorist, Marcia.

Further Development of the Concept of Identity Status

Starting with his conceptualization of the identity statuses and the Identity Status Interview as an extension from Erikson's earlier writing, Marcia (1966, 1980) provided one of the most widely accepted and employed operationalizations of identity formation. Its current iteration, the Objective Measure of Ego Identity Status (OMEIS, Adams, 2010) remains relevant for research and practice today. Marcia, in reflecting back on his early work, wrote, "The identity statuses were intended initially as a kind of snapshot of late adolescents who could be expected to have made their first identity resolution" (2001, p.3). The most recent revisions of his instrument, which more quantitatively assesses the four identity statuses, began initially with a semi-structured interview. From the interview, Bennion and Adams developed an empirically scored instrument that has been updated several times since its creation. Later iterations have generated improved psychometric properties while being employed with a continually growing body of research (Adams, 2010; Bennion & Adams, 1995; Waterman, 1999).

Building from Erikson vignettes, Marcia described four identity states: (a) diffusion, (b) foreclosure, (c) moratorium, and (d) achieved (Marcia, 1966). In conceptualizing identity development in late adolescence, identity achievement was assumed to be the most advanced status. Moratorium, because of the component of exploration, was thought to be second most advanced. Foreclosure, with its premature commitment without adequate exploration, was seen as slightly more advanced than diffusion, which, as the least advanced, represented a state of no concrete identity without current exploration or commitment (Marcia, 2001).

Marcia (1966) employed Erikson's (1959, 1968) delineation of the statuses in utilizing the dual constructs of exploration and commitment. For Marcia and his instrument, individuals in a diffused status were avoiding both exploring alternatives related to identity as well as avoiding establishing ideological and interpersonal commitments; hence they were low on both exploration and commitment. Individuals in a foreclosed status had prematurely assumed stable commitments (often primarily from parents or other authority figures) without a healthy explorative crisis period. These individuals were low on exploration but high on commitment. Individuals in a moratorium status were experiencing an identity crisis and were responding to this state by actively exploring alternatives, but they had not yet established a stable coherent sense of self. In other words, they were high on exploration but low on commitment. Lastly, those in an achieved identity status had moved beyond the normative active exploration of personal and ideological values in having achieved relatively stable, yet still revisable, commitments. Therefore, these individuals were relatively higher on commitment after a period of developmentally appropriate exploration.

In a literature review of the concept, Waterman (1999) pointed out that a movement from a foreclosed status to a moratorium could represent an initial step towards opening the way for exploration and eventual achievement. As will be discussed next, with this transition one gives up a premature commitment (i.e., foreclosure) for an undecided exploratory state (i.e., moratorium). In taking the long view of 35 years of research on the construct and instrument, Waterman (1999) stressed the descriptive and fluid, yet progressive nature of the model over assuming a rigid stage-like quality. He recognized, in accord with Erikson and Marcia, that with commitment after an adequate exploration, an achieved identity status represented a temporary

and revisable resolution of a developmentally appropriate crisis that could change with further experience.

The descriptors of the various identity statuses came from Marcia's (1966, 1980) refining of Erikson's work (1959, 1968). Marcia and Erikson considered these categories and the developmental period as a whole, fluid, rather than fixed. Again quoting Marcia, "Identity researchers have been clear in stating that the initial identity is not the final one and that successive identities can be expected to undergo, in a Piagetian sense, disequilibrium and accommodation" (2001, p.61). In borrowing from Piaget, there is a shifting in the self (i.e., disequilibrium) so that the existing knowledge better accounts for new information (i.e., accommodation) (Broderick & Blewitt, 2010). The research broadly showed a trending towards the more advanced status as late adolescents move into emerging and young adulthood, but despite a general trending towards the more advanced statuses as one matures, individuals may also oscillate between statuses at different points in time. Marcia described the possibility of 'M-A-M-A' cycles as one moved between moratorium-achievement-moratorium-achievement (2001). In this case individuals may move between adopting and revising their tentative commitments to values, beliefs or occupational goals over time. While identity status served as the outcome measure in this study, in noting the process component to development there is recognition that the data collected represented a single sample of emerging adults and their tendencies in relationship to a commonly studied personality instrument in a particular cultural context.

The Bennion and Adams (1986) revision of the original Marcia structured interview attempted to better capture Erikson's differentiated conceptualization of identity by including two separate factors: an "ideological" and a "social/interpersonal" element. This division

corresponded to Erikson's differentiation between "ego-identity" and "self-identity" (1968). The ideological, or ego identity, portion included occupational, religious, political and philosophical life-style values, goals, and standards. The social/interpersonal, or self-identity, portion incorporated aspects of friendship, dating, sex roles, and recreational choices (Adams, 1998). The development of the construct of identity status, and the instrument that measures the statuses, has undergone several iterations since Erikson's and Marcia's early writings. This parsing out of the factors was thought to lend greater clinical relevance to the instrument in that an individual may be in different states with respect to these two domains. The latest version of the OMEIS returned to a singular focus on the ideological domains (Adams, 1986, 2010). Having discussed the development of the identity status constructs, the next section reviews Erikson's continued impact and relevance in the developmental literature.

Erikson's work as theoretical underpinning. In terms of the relevance of Erikson's constructs, his description of the life cycle resonates with many of the core Counseling Psychology central themes including: a focus on career choice, work in educational settings, working with intact personalities adjusting to normative developmental stressors, utilizing relatively brief interventions, and attention to a person-environment fit over a more solely intrapsychic model of development (Gelso & Fretz, 2001). These features figure prominently with Erikson's discussion of adolescent and young adult development, for which he is most often cited and discussed in the literature. His discussion of the developmental epoch of late adolescence through young adulthood is also seen as his most deeply-studied, fully delineated and most influential work within the entirety of his eight staged epigenesis of the developmental life cycle (Broderick & Blewitt, 2010; Sigelman, 2003). This proposed study focused on the period of identity development in late adolescence and early adulthood.

A review of a number of graduate level developmental psychology texts placed Erikson's work as the most often cited theorist with the bulk of these citations coming with his description of identity development in adolescents and young adults (Berk & Bacon, 2003; Broderick & Blewitt, 2010; Newman & Newman, 2003; Santrock, 2006; Sigelman, 2003). In their graduate level Counseling Psychology text, Gelso and Fretz (2001) likewise cited his importance to the field as a seminal developmental theorist. Erikson's writings on identity development (1959, 1968) have spawned a vast array of research lines (Berk & Bacon, 2003). Santrock wrote, "the most comprehensive and provocative story of identity development has been told by Erik Erikson" (2006, p. 398), while Newman and Newman offered an entire developmental text built around Erikson's psychosocial theory of lifespan development (2003). Sigelman (2003) and Berk and Bacon (2003) described Erikson as the most influential neo-Freudian whose work continues to guide researchers' understanding of developmental processes across the lifespan.

Erikson left an indelible mark on developmental psychology and the field of psychology as a whole. Douvan (1997) wrote that it is impossible to conceptualize adolescence without the persuasive narrative he offered, while a number of theorists comment on how Erikson situated the self within a cultural context with the self and context each influencing the development of the other (Berzoff, 2008; Douvan, 1997; Eagle, 1997; Schwartz & Pantin, 2006; Seligman & Shannook, 1998). Erikson brought attention to how the broader social, historical and cultural context influenced the developmental sciences in a rich and nuanced manner by helping to bridge the gaps between these areas of discourse (Seligman & Shannook, 1998). This perspective revised the more strictly intrapsychic psychodynamic formulations of self, and is in accord with the contemporary notions of a bio-psycho-social developmental science that recognizes the continued and bidirectional interaction of these domains (Hoare, 2005).

In addressing psychodynamic theory more directly, this perspective also fits with the contemporary dynamic view that self and context are inextricably intertwined with each influencing and shaping the other (Berzoff, 2008). Among contemporary psychodynamic theorists, Kernberg credited Erikson for the task of mapping normal ego development and differentiating a normative identity confusion or crisis from more severe pathology (2006). To his credit, Erikson also resisted psychodynamic theorists' tendency towards demagoguery by not creating a coterie of proponents to propagate his ideas (Friedman, 1998). Despite the fact that the richness of his thinking is often reduced in introductory psychology texts, from a survey of contemporary developmental theorists who discussed Erikson's concepts with an eye to the history of psychology it appeared clear that his perceptive writings will continue to influence contemporary developmental psychology, conceptions of identity and psychodynamic theory.

Moving beyond Erikson per se, each of the graduate texts previously discussed cited and described Marcia's expansion of Erikson's as the principle model and researcher among a cadre of identity theorists who followed Erikson and expanded upon his original work on adolescent identity development (e.g., M. D. Berzonsky, J. E. Cote, H. D. Grotevant, J. L. Kerpelman, W. M. Kurtines, and A. S. Waterman). Each of the texts' authors reviewed Marcia's discussion of the identity statuses that were used in this research project and are discussed at greater length in the literature review. Marcia's operationalization of the identity statuses led the efforts to quantify and to garner empirical support for Erikson's earlier more narrative theorizing (1966, 1980). This research project utilized a recently re-normed instrument developed from Marcia's semi-structured interview that was initially used to assess identity status (Adams, 2010).

Marcia's work has surpassed other researchers' degree of influence spawning over 500 studies and articles in the literature (Waterman, 1999). The inaugural issue of the journal,

Identity: An International Journal of Theory and Research, focused exclusively on Marcia's expansion of Erikson's work as the model that has drawn the most significant attention from the research community (Schwartz, 2001a, 2001b). It has been noted how Erikson's conceptualization has influenced the creation of more contemporary ethnic identity models (Phinney & Ong, 2007).

While some authors offered critiques of the model, they all noted its importance and stature in the identity development literature (Meeus, Iedema, Helsen, & Vollebergh, 2001; Schwartz, 2001a; van Hoof, 2001; Waterman 1999). Berzonsky and Adams (1999) noted that the theory has been revised to better represent a process orientation rather than a fixed stage model. Meues et al. (2001) asked about how persistent personality traits could impact the identity development process, while Kroger (2001) asked about the potential impact of the interaction of gender and personality on identity development. This proposed study followed these researchers' recommendation to further investigate the potential impact of social and cognitive variables on the identity process in order to identify or aid at-risk emerging adults.

Waterman (1999) added that Marcia's constructs have been discussed in nearly every textbook that addressed adolescent identity development and it has been a mainstay in the literature for over 40 years. More recently in 2009, Whitbourne, Sneed, and Sayer, in summarizing a 34 year sequential analysis, wrote that the Eriksonian (and by extension Marcian) model retains its appeal in developmental psychology and has stimulated widespread research that has attended to identity development from early adolescence through young adulthood. They noted both the application to continually evolving ethnic identity research as well as the impact of the changing social and historical context to identity development. Neither of these factors

(i.e., ethnicity or shifting cultural mores) was lost on Erikson who wrote extensively on the impact of culture and social context on developmental processes (1959, 1968).

Later ethnic and gender identity models (e.g., Archer, 1989; Cross & Vandiver, 2002; Helms, 1990; Phinney & Ong, 2007) also borrow from Marcia's schema in including the concepts of exploration and commitment en route to more advanced developmental stages in their respective models. Having discussed Erikson's place in this study as well as the developmental theory, the status of demographic variables in psychological research will be discussed next before addressing the relative importance of demographic variables on the construct of ego identity development.

Demographic Variables' Impact on Identity Development

The APA and Counseling Psychology: A critique issued from within the field.

Before discussing the Eriksonian theory regarding the relationship between demographic variables and the construct of ego identity development, there are questions about the meaning and utility of these categories, the methodologies employed and the variable attention of theorists, researchers and clinician to these variables. From a feminist and post-positivistic perspective Sorrell (2001) raised the question of whether Erikson's initial conceptualization of identity development was more descriptive of male development. She wrote, "It can be argued that from birth onward, women negotiate the same psychosocial conflicts as men. However, females approach and resolve these conflicts on the basis of their inherent relationality, whereas males seek resolutions that reflect and foster their dispositional agency and separateness" (p. 119). This same question can be raised in asking if Erikson is, more particularly, describing White male experience.

Sorrell, and counseling psychology in general, are currently asking if differential findings between gender and ethnic groups serve to make the case for clarification or revision of the content of traditionally used instruments. These findings may signal the need for the development of more culturally sensitive measures that better capture the unique developmental processes and lived experience of culturally diverse individuals (with respect to gender see Bargad & Hyde, 1991; Downing & Roush, 1985 and Rickard, 1987; with respect to ethnicity see Cross & Vandiver, 2002; Helms, 1990, 1995). These differences, when found, may provide clues as to the variability of those development processes as well as raising the question about the methodological approaches used to investigate both developmental processes and the traditional conception of individual differences.

In commenting on the impact of cultural variables in research, the APA Multicultural Guidelines stated,

The treatment of culture in psychological research has shifted in the past century from ignoring cultural variables to treating culture as a nuisance variable. Thus, for example, early research participants were White males, yet the results were assumed to generalize to the entire population. (2003, p. 12)

This critique could be leveled against the vast majority of studies included in the literature review in that they often ignored the ethnic representation of the sample. Arnett (2008) raised the question of cultural representation in psychological research in *The American Psychologist*. He reviewed the lack of diverse cultural representation in the major peer reviewed publications and questioned the generalizability of Psychology's research as a whole. Earlier, Sue (1999) described and espoused cultural competence in all aspects of psychological practice including testing and research. Beyond the realm of research, this emphasis on cultural context was also

included in the APA's statement on empirically based practice (APA, 2006) as well as being a prominent feature in Counseling Psychology's more culturally sensitive statement on empirically supported treatment (Wampold, Lichtenberg, & Waehler, 2002, 2005).

Despite these critiques from within the field, Psychology as a science is slowly shifting from the perspective that defined demographic difference as 'noise in the signal' to asking more fundamental epistemologically driven questions regarding how our methods account for differences and how differences are defined along cultural lines. In the social sciences, alternate constructions of ethnicity have impacted our previously more fixed notions about identity and self. These constructs have become decidedly more nuanced in the last decade (for example, see: Lee, Rosen, & Burns, 2013; Markus, 2008; Wimmer, 2008; Zagefka, 2009). The ramifications of this shift are currently reverberating through research psychology. The White Western bias is becoming more painfully clear as Psychology attempts to become a more relevant global discourse. Having briefly reviewed the controversy within the field and the APA's response, the focus will shift to a discussion of Erikson's recognition of, and theorizing about, the impact of culture on the process of ego identity development.

Erikson's consideration of the impact of culture. Erikson (1959, 1968) had much to say on the impact of gender and race on the process of identity development, as well as the impact of culture on the individual more broadly. In moving away and tempering the more intrapsychic Freudian conceptualization of Self he wrote, "for we deal with a process 'located' in the core of the individual and yet also in the core of his communal culture" (1968, p. 22). Erikson was keenly aware that he may have been describing a process highly dependent on the socio-economic context of a middle class that could afford the relative luxury of a psychosocial moratorium. The vast majority of studies sampling emerging adults focused on individuals

afforded the socially sanctioned moratorium, the period of delay from full time employment, which a university education often provides. Many lower SES or ethnically diverse emerging adults may not be afforded this same privilege or it may come with different challenges or pressures.

Erikson also discussed how racial prejudice foreclosed possibilities for individuals. This echoed some of the more contemporary findings with regards to ethnic minorities and identity development. Additionally, he described the concept of a “negative identity,” when an “exploited and oppressed minority” was aware of dominant culture ideals, but prevented from emulating them due to discrimination or lack of opportunities (1968, p.303). In way of example education has been valued as a means of improving one’s life options, but with the history of segregation groups were barred access to educational opportunities based on ethnic differences. Erickson wrote that under these conditions minorities may fuse the negative images held by the dominant oppressing group with those held by their own group (1968).

Erikson’s description of the experience of non-majority culture people suggested elements of the contemporary concept of stereotype threat where dominant culture expectations negatively impact performance for culturally diverse individuals living within, while feeling separate from, a majority culture (Steele & Aronson, 1995). Poor performance on standardized tests due to this pressure, or threat to esteem, is an example of this phenomenon. Particular to the American cultural context of his day, Erikson also asked what was known about the relationship between positive and negative elements within an African-American personality and community (1968). His more progressive awareness of varied cultural values as being functional in their own right tempered a valuing or privileging of one cultural viewpoint over another. With an increasing awareness of the impact of White privilege on ethnic minorities (Kendall, 2006),

Erikson's theorizing echoed the questions that a more multicultural attuned global psychology community is currently asking of its own discourse and practice. Researchers are providing answers to these questions by studying within group differences with the creation of racial identity scales and through more phenomenologically-driven research methods. Racial identity scales attempt to measure awareness of a cultural self from within the minority culture's own perspective and they utilize the same exploration and commitment components as the Erikson/Marcian model (Cross & Vandiver, 2002; Helms, 1990, 1995; Phinney & Ong, 2007). Erikson did not provide definitive answers to the questions he raised regarding the impact of race on identity development, and those answers are currently evolving within the discourse of Psychology, but these questions were well represented in his awareness and writings.

Perhaps ironically for the present debate over the value of the evolving construct of identity development, Erikson wrote, "It seems that hidden prejudice is even wilt into the very measurements by which the damage done is to be gauged...tests may be offering 'objective evidence' of racial differences and yet may also be symptomatic of them" (1968, pp. 305-306). In their work on the history of post-Freudian thinkers, Mitchell and Black (1995) wrote that Erikson situated the Self in a historical time and cultural context. The interdependence of individual and culture represented a primary theme throughout his theorizing. Erikson described a dialectic between the individual and the cultural-historical context with each half of the dyad informing, shaping and defining the other.

In anticipating this postmodern epistemological critique, Erikson spoke of the historic and culturally situated context in which identity development both unfolds and from which it is co-constituted, defined by and serves to define. As he noted, with significant differences between groups one may learn as much about those who created and administered a psychological

instrument as one learns about those whom pencil in the bubbles (1968). The negative legacy of testing and evaluation for individuals who identify as ethnical minorities remains, at the very least, in the background of that process (Herrnstein & Murray, 1994; Schultz & Schultz, 2008). In responding to an evolving construct, Bennion and Adams (1986) updated an early version of the OMEIS with the addition of an interpersonal subscale. Marcia (2001) noted that the OMEIS will need to be updated as research findings on the more recently developed ethnic identity development measures are synthesized and the relationship between the constructs and measure is better understood. In discussing ethnic identity development, Phinney and Ong (2007) discussed the continually shifting nature of the constructs. This proposed study may help to update the findings regarding the relationship between ethnicity and identity development, but due to proposed methodology it will do so within the limitations of the quantitative discourse. Having discussed Erikson's attention to the impact of ethnicity and cultural context on development, what follows is a discussion of his theorizing on the differences between the genders with regard to the process of identity development.

Erikson's discussion of identity development and gender. Regarding gender, Erikson revised the classical psychodynamic emphasis on biological determinacy stating, "The spokesman for the anatomical and for the social interpretations are thus both right if they insist that neither possibility may be ignored. But this does not make either exclusively right" (1968, p. 272). Erikson's position was a harbinger of contemporary thinking on the continual co-action of genes and environment (Carlson, 2007; Stahl, 2008). But Erikson certainly did not ignore the impact of biology. He described an innate propensity for different orientations to space as a function of sexual anatomy, namely inner space for females and outer space for males. This orientation influenced the respective genders' relationship to the external world of others. He

tempered the biological determinism of this perspective in stating that neither gender was doomed to one spatial mode or another, but rather, that one mode came more naturally for each of the sexes (1968). In revisioning Freud's famous dictum regarding the primacy of biology, Erikson wrote that, "anatomy, history and personality are our combined destiny" with the ego acting as an organizing principle (1968, p. 285). He also noted that for women a psychosocial moratorium postponed foreclosure and allowed for work training, while recognizing the potentially delimiting role possibilities, as a function of cultural mores, for women (1968). Obviously social roles have shifted in the U.S. since Erikson's writing in the 1950s-1960s, and one could also argue that Erikson's biological metaphor may have served to overstate or even perpetuate stereotypical differences based on anatomy in considering shifting social mores, rates of college attendance and work roles in the last 30 years (Hotchkiss, 2009; "Women more likely," 2009).

While Erikson clearly felt an individual needed an achieved ego identity before real intimacy could be established, the evolving constructs operationalized in the previous version of the OMEIS contained separate subscales (i.e., ideological and interpersonal). The separate subscales for the ideological and interpersonal domains allowed for a dual measure of identity and intimacy. Gender differences on these subscales will be discussed in the review of empirical studies on the relationship between the demographic variables and ego identity development. While noting the descriptive value and importance of the demographic categories, these opening paragraphs represent a footnote on the possible modernist assumptions embedded in our often too convenient labels of gender and ethnicity. The researcher has attempted to portray the flavor of Erikson's thinking on complex issues that remain up for debate amongst researchers and practitioners within the psychological community today. With this study, the researcher sought to

further delineate the scope and utility of a continually referenced construct in the literature while cautioning against assuming an *a priori* status to the hypothesized constructs. As products of culture, these constructs continue to evolve telling us as much about the latent assumptions researchers bring to their work as they tell us about the research participants who complete the assessments. The next section reviews the second major theoretical component of this proposed study, typology theory that underpins the personality measure used in this study, namely the Myers Briggs Type Indicator (MBTI).

Typology Theory

Personality theory, trait psychology and typology theory. What follows under this section is a description of trait psychology's relationship to the historical and contemporary developments in personality theory, a description of the MBTI preferences, a discussion of type development, and lastly, the potential implications of the personality preferences on the expression of the identity statuses. While Hippocrates (460-370 BC) is credited with developing a medical explanation of temperament based on bodily fluids, the modern conversation of personality starts in the early 20th century (Nutton, 2004; Schultz & Schultz, 2008). There has been a long history of the study of traits and individual difference and this discourse has been represented variously, but most notably, in the positivistic tradition in the works of Allport, Murray, Cattell and Eysneck (Barnebaum & Winter, 2008; Carducci, 2009; Pervin, 2003). Mischel (1968, 1973) offered a powerful counter argument to this classical tradition of personality trait theory.

In the literature, the debate Mischel's work generated had been commonly dubbed 'person versus situation' in terms of their relative explanatory power in predicting individuals' behavior (Funder, 2008; Mischel, 2009). The debate has called into question the methodology

and psychometrics of classical trait theory that served as its scientific foundation. It has also giving validation to social psychologists' focus on the context or situation as explaining more variance in behavioral outcomes (as opposed to innate or more static traits).

Since his text, *Personality and Assessment* (1968), there have been two compelling responses to this debate in personality theory (Hogan, 2005). One comes from integrationist models that attend to the co-action of trait and context (Bolger & Romero-Canyas, 2007; Cervone, Shoda, & Downey, 2007; de Raad, 2005; Derryberry & Siegle, 2000; Funder, 2008; Mischel & Morg, 2003; Mischel, 2011; Pervin, 2003; Robinson & Sedikides, 2009; Shweder, 2007). Attention to the interaction of person and context addresses the so called 'personality coefficient' that results when traits were examined without attention to the influence of context (Mischel & Shoda, 1995; Roberts, 2009).

The second response is best exemplified in how the Five Factor Model (FFM) addressed the theoretical and psychometric issues that Mischel's work raised (Ackerman, 2005; Carducci, 2009; Helsen & Kwan, 2000; John, Naumann & Soto, 2008; Wood & Caspi, 2008). Five factor theory refers to an entire body of research that served to re-energize the study of personality traits in the past 20 years, while FFM refers to a specific instrument designed to measure five traits: (a) neuroticism, (b) extraversion, (c) openness (d) agreeableness, and (e) conscientiousness (McCrae & Costa, 2008). The FFM attempts to empirically demonstrate that five factors, or traits, are quantifiable, exist cross culturally, are relatively enduring, have a biological basis and show a degree of cross-situational consistency (McCrae & Costa, 2008). By the 90s within personality theorists, majority consensus had built around the identification of these five uncorrelated factors or grouping of traits (Barnebaum & Winter, 2008). The NEO-PI Five Factor Inventory measures the five traits on a 0-5 Likert-type scale and consists of 300 questions. The

instrument, like the MBTI Step II, provides subscales (six per trait with the NEO) that further nuance the results and better differentiate behavior (Pervin, 2003). Other personality theorists, including those who addressed the early shortcomings of the MBTI, have emulated the FFM response in more astutely addressing the psychometric qualities of their instruments while also recognizing and accounting for the importance of context.

It is important to note that the integrationist and the FFM responses to Mischel's work are not necessarily mutually exclusive alternatives. As the literature review will highlight, trait theorists can and do attend to contexts and social psychologists often identify stable processes occurring within the individual that are quantified as individual differences and that affect outcomes in particular contexts. There has been a healthy rebalancing of perspectives in personality theory and social psychology overall. While Mischel's work highlighted an early imbalance, the trumping of one perspective over the other, person over context or vice versa, is not representative of the current state of personality theory. Currently, attention has shifted to identifying the traits and contexts that matter in relationship to one another. In the wake of a rebalancing of these two once seemingly either-or positions that began with Mischel's 1968 critique, the focus has turned to examining the meaningful co-action of person and context in predicting behavioral outcomes of importance. Mischel himself has recently addressed paradoxes in the debate as well as unintentional consequences that have been detrimental to the study of personality as an integrative discipline within psychology (Mischel, 2009; 2011).

Trait psychology initially struggled in the 70s to address the dual cognitive and social psychology critique, but it reemerged in the mid-80s with the dramatic expansion of FFM research (Hogan, 2005; John, Naumann, & Soto, 2008; Swann & Seyle, 2005). More contemporarily interactional models have also emerged that better account for the relationship

between innate, but malleable, capacities. These researchers also better identify the contexts in which particular traits become variables of importance with regard to outcomes and behaviors (Bolger & Romero-Canyas, 2007; de Raad, 2005; Matthew, Dewberry & Siegle, 2000; Shoda, Cevane & Bowney, 2007; Shweder, 2007). Despite the impact of Mischel's text and the subsequent cognitive, and later social-cognitive revolution, trait psychology remains a vibrant discourse with the highest degree of consensus around the most well-researched factors represented in the FFM (Carducci, 2009; de Raad, 2005; Helson & Kwan, 2000; McCrae & Costa, 2008; Nauman & Soto, 2008; Pervin 2003). This model is a direct descendent of, and improvement upon, the work of the Allports and Cattells of the mid-20th century. As will be detailed in the instrument section of this proposed study, the MBTI preferences compare predictably, consistently, and meaningfully with the FFM both conceptually and psychometrically. The Five Factor model's development has guided the development of the MBTI. As the contemporary 'gold standard' of trait theory, it is compared to the MBTI preferences for convergent and discriminant validity in the MBTI user manual, but unlike the MBTI, the FFM is used primarily in research rather than applied settings (McCaulley, 1990).

Mischel's work was important in highlighting the intrapsychic and decontextualized tendency of classical trait theory as well as shortcoming with regards to method and measurement (Cervone, Shoda, & Downey, 2007; Roberts, 2009). Despite these important points, Mischel's work was also not without critique. His most critical assumption may serve to set classical trait theory up as a strawman in asserting that certain behaviors (represented in traits) be exhibited across all contexts. Allport himself recognized this issue 75 years earlier in noting that inconsistent behavior in different situations does not necessarily rule out an underlying trait (1937). Likewise, in calling attention to the meaning of a trait in a particular

context, contemporary theorists echo this point in asserting that traits should predict temporal stability and consistent behavior in the same context, but not necessarily cross-situational consistency (Barnebaum & Winter 2008; de Raad, 2005; Funder, 2008; Roberts, 2009). This point helps account for the purported personality coefficient (de Raad, 2005; Funder, 2008; Roberts, 2009).

No known definition of trait calls for identical behavior across situations (Roberts, 2009). In other words, extraverted people are not necessarily extraverted in all contexts and behavior may differ dramatically as a function of context. The challenge remains for personality theorists to determine which traits are most often important, activated or predictive of outcome in what contexts. Traits are both stable and variable with the more central aspects of the self being better predictors of behavior, more resistant to influence via the context and more stable over time (Corr & Mathews, 2009). With the MBTI, more well-defined preferences account for more variance and are more reliable (Myers et al., 1998). There has also been decidedly increased attention to factor structures and psychometric qualities of personality assessment instruments compared to their pre-80s prototypes, and as the instrument has been refined, the psychometric properties of the MBTI suggest improved reliability and validity. The latest iteration of the MBTI employed item response theory which has further strengthened the instrument with removal of separate gender norms (Harvey & Hammer, 1999).

With regards to social psychology's emphasis on context, there remain significant challenges in replicating studies that attend to the power of the situation due to a contexts' variability, lack of a situational taxonomy and difficulties in quantifying situational factors (de Raad, 2005; Roberts, 2009). As Funder (2008) wrote, "The obviousness that behavior is a function of the person and the situation highlights the oddness of this debate," yet the debate

continues to simmer (p. 568). Some researchers have suggested this dichotomy may be more a function of political, rather than theoretical or scientific, differences (de Raad, 2005; Funder, 2008; Pervin, 2003). It may also be that different methods may be better suited to answering different research questions and that mixed methodologies are called for to better address this dilemma (Bolger & Romero-Canyas, 2007; Hampson, 1999; Weston, Gabbard, & Ortigo, 2008).

As evidenced in the instruments section of this paper, the MBTI has matured alongside the ‘person-situation’ debate, and its developers have had to answer the same questions related to validity and reliability. The most recent norming of the instrument provides this evidence along with measures of convergent and discriminant validity which compare favorably to the Five Factor Model (McCaulley, 1990; Myers et al., 1998). This current study asks about the relationship between the strength of personality preferences and developmental context rooted in Eriksonian theory. It employs a measure that is non-pathologizing, compared to the FFM or other assessment used in more clinical settings (e.g., the Minnesota Multiphasic Personality Inventory-2 or Personality Assessment Inventory). The MBTI is also already commonly administered to college-attending emerging adults and widely familiar to clinicians and career counselors who work with this population.

Meaningful differences regarding the developmental tasks of exploration and commitment could be further explored in ways that address variables of interest from the cognitive psychology researchers’ perspective (e.g., hot cognitions, coding, processes, expectations or beliefs, self-regulation, affect). Within-group differences could be identified with respect to these variables for preferences that are more challenged by the developmental crisis of a college environment. Alternately in focusing on strengths, the potential protective qualities of preferences (in way of more adaptive processes or other cognitive variables of interest) could be

identified that help spur on development toward achievement or help particular preferences avoid developmental byways. It may be that different processes may be adaptive or problematic for various preferences.

In addressing the importance of context from an alternate methodological perspective, qualitative work could examine these differences in attending to the subjective experiences of individuals that respond more or less adaptively to the demands of emerging adulthood. Here, in response to the social psychology perspective, the various meanings attributed to context could be explored in greater depth. How do those who struggle with exploration or commitment make meaning of the perceived demands of being at a university compared to those whom respond more adaptively? How might preference differentially shape those meaning making processes? Psychology as a scientific discourse would benefit from more dialogue between these often separate methodological camps. This research project attempted to address the question of situation or context in drawing from Erikson's and Marcia's discussion of the developmental context of emerging adulthood. The sample offered a single picture of individuals responding, or alternately ignoring or delaying, the press of a normative decision making process. Having briefly discussed the MBTI's place in personality theory, the next section addresses typology theory in greater detail.

Description of the eight preferences. Jung attempted to enumerate a complex theory on the constellation of self. The purpose of the MBTI was to make Jung's (1971) theory of psychological types more useful and accessible outside of the analyst's office. Jung believed that there were four principle functions by which an individual perceived the world and made judgments: Sensing, Perceiving, Feeling and Thinking. The perceptions refer to the various ways of becoming aware of people, happenings, or ideas; the judgments refer to the ways individuals

come to conclusions about what they have perceived. Jungian typology theory revolves around a systematic attempt to describe the conscious and unconscious relationship between the functions for any individual, and the differing effect of their expression as a function of their inter-relationships with one another. His theory also attempted to describe dominant, auxiliary and tertiary roles of the functions in an effort to explain differences in individuals. Through his psychoanalytical work, he observed and later described the relationship between the preferences and their conscious and unconscious functioning. Jung described an either/or nature each of the functions that would differentiate the psychology of the individual. For Jung, rather than attempting to achieve a balance between the dichotomous preferences, the task of youth and emerging adulthood was to develop one's dominant and auxiliary preferences as tools to help one find his or her place in the world. Integrating one's unconscious and conscious functions may represent the task of later adulthood

The following provides concise descriptions of the eight MBTI preferences which grew from Jung's typology theory. The preferences include: Attitudes, either Extraversion or Introversion; Perceptions, either Sensing or Intuition; Judgments, either Thinking or Feeling; and lastly, Styles of Dealing with the Outside world, either Judging or Perceiving.

The MBTI measures Attitudes, Either Extraversion (E) or Introversion (I). Jung described the Attitudes as a preparedness of the psyche to respond in a certain direction or an internalized expectation or preference to act in a predetermined direction (1946). Extraverts are primarily oriented toward the outer world of people and objects. Jung (1946) described this as, "a manifest relatedness of subject to object in the sense of a positive movement of subjective interest towards the object. Everyone in the state of extraversion thinks, feels and acts in relation to the object" (p. 542). Conversely, introverts are oriented toward their inner world of concepts and ideas. Jung

(1946) described it as, “a negative interest of subject to object is expressed. Interest does not move toward the object, but recedes to the subject...the subject is the chief factor of motivation” (p.567). For Jung, this dichotomy reflected the primary direction of the individual’s attention toward their inner experience or the external world.

Perceptions were classified as either Sensing (S) or Intuition (N). Sensing was described as perceiving what is immediately observable to the senses in one’s present experience (Myers et al., 1998). Jung defined sensing as, “that psychological function that transmits a physical sensation to the sense” (1946, p. 585). Jung described it as an awareness and attunement to the input from one’s physical senses. Intuition (N) permits perception beyond what is visible to the senses, including possible future events. Jung described intuition as, “a kind of instinctive apprehension...the certainty of intuition relies on a definite psychic matter of fact, of whose origin and state of readiness, however, the subject was quite unconscious” (1946, p. 568). Jung also wrote that the Intuition preference transmits images, or perceptions of relation between entities, which could not be ascertained by the other functions or that could only be understood in a circuitous manner. Jung stated that intuition attempts to apprehend the widest range of possibilities (1971). Here the divide with the Perceptions differ between awareness of concrete sensations in the moment (S) or an awareness of relationships or patterns and the use of a felt sense that focuses on future possibilities (N).

Turning to the Judgments, they were classified at Thinking (T) or Feeling (F). Thinking links ideas together by making logical connections and tends to be impersonal. In returning to the primary text, Jung described the Thinking function as, “one of the four basic psychological functions...the linking up of representations by means of a concept, where, in other words, an act of judgment prevails” (1946, p. 611). Conversely, the Feeling function is more subjective and

relies on a feeling of personal and group values for decision making (Myers et al., 1998). Jung described the Feeling function as, “a process that takes place between the ego and a given content, a process, moreover, that imparts to the content a definite value in the sense of acceptance or rejection” (1946, p. 543). The thinking/feeling divide highlighted difference in decision making based on subjective values or objective logic.

Jung considered Thinking and Feeling to be “rational” functions because they are decisively influenced by the act of reflection, whereas Sensing and Intuition aim at the most complete perception of events without deciding on value (1946). There may be implications for decision making with individuals as their strength of preference increases with regard to either a judging (T or F) or perceiving (S or N) function. Erikson stressed the function of the ego serving as the organizing principle for the functions and processes “within the field of consciousness” and possessing a “high degree of continuity and identity”, yet for Jung the ego was also subordinate to the constellation of the more holistic Self where the unconscious was accorded a comparatively greater degree of influence (1946, p. 540).

Lastly, the MBTI measures styles of dealing with the outside world were either Judgment (J) or Perception (P). Within the styles, individuals who favor a Judging preference are concerned with making decisions, seeking closure, planning and organizing, while alternately, those who favor Perceiving tend in their outward behaviors to be spontaneous, curious, adaptable and open to new events and changes (Myers et al., 1998). A formal J-P continuum was not explicitly expanded upon by Jung to the degree that he wrote about the other six preferences, but he did imply that the predominance of either style (J or P) would determine which function or process would be the dominant and auxiliary preferences (Jung, 1971, p. 267). Having briefly described the preferences, a description of their dynamic relationship follows.

Relationship between the preferences and preference development. According to the MBTI developed by Myers and Briggs, each of the eight preferences (E-I, S-N, T-F, J-P) exist on four separate continuums and the four poles are independent from each other. As to the relative strength of preference, Jung noted that the types very rarely exhibit the same degree of influence in any one individual, nor are they each preferred by an individual to the same degree (1971). Moreover he stated, “absolute sovereignty always belongs, empirically, to one function alone” with an auxiliary, or secondary, function exerting a balancing influence to the dominant function (1971, p. 266). Additionally according to Jungian typology theory, the auxiliary function never comes from the same pairing. Therefore, those with either a dominant T-F type are balanced by a secondary S-N preference and vice versa. As an example, because they come from the same dyad, T cannot be auxiliary for dominant F, and S could not be auxiliary for dominant N. Additionally, according to more classical typology theory the opposite pairing to the dominant function is considered the least developed (e.g., dominant T = least developed F, dominant S = least developed N and vice versa) (Jung, 1971). With the MBTI, Jung’s theory was translated into a whole or four-type scoring method that determined which preferences were dominant and auxiliary and which were expressed consciously and unconsciously as a function of the first and last scales (i.e., I-E and J-P). The challenge of quantifying Jung’s dynamic theory of self with the MBTI, the debate about the scoring method just briefly described and where this proposed study is situated within the debate are all discussed in greater length in the following section.

MBTI measurement of dominant preferences and subscales. According to Myers and Briggs and traditional typology theory, the J-P scale served as the pointer function for determining which function was extraverted while the I-E scale determines which was dominant and which was auxiliary (Myers et al., 1998). This prescribed scoring method for determining

the dominant preference as extrapolated from Jung's theory and as described in the manual and the previous section has not been well supported psychometrically, (Wilde, 2011; Reynierse, 2000, 2009; Reynierse & Harker, 2001; 2005). In particular, Reynierse and Harker (2008) examined over 700 MBTI four letter typologies and found no agreement between the manual's proposed scoring method of their ranking and an empirically ranked scoring of the individual preferences. In 2001, type theorists who stood by the manual's scoring method attempted to organize a conference to answer Reynierse and Harker's challenge to the traditional and more theoretically driven scoring procedure but it, "did not attract enough papers to be viable" (Wilde, 2011, p. 5). The research questions for this proposed study were shaped with awareness of the concerns and evidence regarding the measurement differences with researchers who employ the MBTI.

While Myers et al. (1998) contended that the four letter typology is greater than the sum of its parts. They also stated that, for research practices and as is the dominant practice in the literature, the four dimensions can be examined independently and/or separately as continuous variables. Additionally, in further emulating the development of the FFM and in attempting to align itself with contemporary trait theory, the Type II version of the MBTI identifies five subfactors within each preference in an effort to further delineate the individual facets of the preferences (Myers et al., 1998). This more sophisticated psychometric approach suggests greater individuation within each separate preference. There is a large corpus of research that utilized the single scales as independent variables and that has generated significant and meaningful findings with a host of dependent variables. Conversely, the scoring procedure for four whole types, that grew from an interpretation of Jung's typology theory and predated the

improved psychometric qualities of the instrument, does not appear to be as adequately empirically supported.

The measurement question regarding the use of the independent subscales has created significant controversy within the typology community (Carskadon, 2001) with most researchers who employ the instrument siding with more contemporary personality theory while more traditional typologists (e.g., Bebee, 2007a, 2007b; Keirsey & Bates, 1984) argue for the predominance of preference combinations and the traditional Jungian driven scoring procedure. Traditionalists see the manual's scoring rules as sacrosanct. Lloyd (2008), in making a case for the MBTI's theory free functionality on the basis of outcomes it predicts, suggested that the inventory is useful and meaningful even if it discards its theoretical underpinnings. Myers et al. (1998) appear to want it both ways in arguing for 'more than the sum of its parts' with four preferences combinations while clearly building an instrument around the existence of individual subscales and marketing it to the research community and private sector as such. The founding editor of *The Journal of Psychological Type* wrote that controversy regarding this issue would doubtless remain with the MBTI community with a schism between more traditional typologists and researchers interested in a more contemporary trait influence study of individual differences (Carskadon, 2001). Even with the widespread and global use of the MBTI, the insistence on a questionable scoring methodology may continue to limit its acceptance within the larger psychological research community.

Despite the legacy of Jung and his description of the preferences and their inter-relationships, for practical purposes the instrument is constructed around measurement of individual differences with the four separate subscales. Methodologically there are robust research lines that employ the MBTI which, influenced by the Costa and McCrae's response to

Mischel, examine the relationship between independent preferences and a host of outcome variables. The vast majority of empirical articles that employ the MBTI do not adhere to the manual's suggested scoring methods with regards to determining dominant and auxiliary functions. This is true even within the flagship *Journal of Psychological Type*. Moreover, most studies include the E-I and J-P poles as separate subscales or consider them independently and produce findings that intuitively cohere with the description of the preferences.

The findings from this individual subscale method are substantial and include diverse outcome variables such as cognitive style and processing (Edwards, Lanning, & Hooker, 2005; Isaksen, Lauer, & Wilson, 2003), adolescent self esteem (Papazova & Pencheva, 2008), memory repression (Spirrison, & McCarley, 2001), moral reasoning (Faucett, Morgan, Poling, & Johnson, 1995; Redford, McPherson, & Frankiewicz, & Gaa, 2001), leadership styles (Roush & Atwater, 1992), life satisfaction and self-consciousness (Harrington & Loffredo, 2001), measures of psychopathology (Coolidge, Segal, Hook, Yamazaki, & Ellett, 2001; Janowsky, Morter, & Hong, 2002; Janowsky, Morter, & Tancer, 2000; Mueller, Gallagher, Steer, & Ciervo, 2000), risk aversion (Filbeck, Hatfield, & Horvath, 2005), choice of counseling method (Erickson, 1993), therapy termination (Berry & Sipps, 1991) and perceptions of the quality of the therapeutic relationship (Nelson & Stake, 1994). This is a small sample of the literature that utilized the single scale methodology.

Suggestive of this shift in the use of the instrument, the separate or single subscale statistical analyses also represent the vast number of articles in the *Journal of Psychological Type*, a journal dedicated to research that employs the MBTI or similar instruments that purport to measure the same constructs. The percentage of the more FFM/trait influenced approach has dramatically increased in proportion to whole type research articles over the past 10 years. It

appears that classical typology theory is giving way as the construct moves from a more heuristic value in the analyst's office to the empirically grounded psychology research lab. Jung's complex vision of Self could never be adequately operationalized in a 93 question instrument, and one could imagine Jung's critical response to this endeavor. Despite this gambit, contemporary researchers interested in the MBTI must follow the data even if it means the MBTI, in its current form, has shifted from Myers and Briggs' extrapolation of its theoretical underpinnings. Jung's complex theory of Self may not lend itself to quantitative methods and that may serve more as a critique of the positivistic epistemological assumptions of the quantitative science of psychology as a whole. Despite this potential critique, this proposed study emulated that quantitative tradition in the literature.

The Myers Briggs Typology Indicator was chosen because of its continued relevance in work with emerging adults. The instrument, with its varied research and applied uses, attempts to straddle the divide between Jung's complex vision of self and current empirically driven trait-based conceptualizations of personality. Even from within the community that endorses its use and those researchers who oversaw its development, the debate continues regarding the importance of the interaction between the subscales. This schism is perhaps not as surprising in considering the pace of the evolution of dynamic thought and its sometimes rigid adherence to doctrine or technique despite new evidence, changing theory or innovations in technique. The either/or dichotomous nature of the traits that is built into the forced choice questions of the MBTI remains central to the measure and this feature may stir rancor with more personality theorists because it is an explicit growth from Jungian typology theory. It runs counter to the unipolar Five Factor traits which were intended to be developed as a non-theory driven model (although one could argue that the notion of personality, itself, has a particularly individualistic

and Western flavor that may not be quite so self-evident cross culturally). The current version of the MBTI retains the Jungian the either/or dichotomous nature of the preferences while allowing for scales to be examined independently.

The manual writers allow for distance from Jung's more complex and dynamically driven description of which traits are dominant and auxiliary and which are consciously expressed and which are unconscious based on the pointing function of the I-E and J-P scales. This method is extracted from Jung's primary writing on typology theory. The authors of the manual appear to recognize that there are a number of ways in which the instrument may be useful and they run the gamut from more faithful Jungian renderings to atheoretical empirically driven rank ordered approaches. The authors of the manual explicitly condone the instrument's varied uses while giving a significant nod to the richness of the interaction of the four whole types. This researcher is comfortable with the ambiguity that will remain with the instrument and sees its varied uses in applied and research settings as a strength of the MBTI.

The core dichotomous nature of the preferences (e.g. either I or E, N or S, T or F, J or P) has not been abandoned as the instrument has been improved in response to challenges to the trait-based study of personality. Furthermore, Jung pointed out that each preference would be expressed more or less strongly (e.g., slight N leaning or well-defined N) and this feature remains with the continuous nature of each half of the dichotomy. Despite the dichotomous nature of the preferences, the reliability of the scales remain high (see measures sections for exact values). With this study the researcher chose to side with a more contemporary and better empirically supported measurement approach, but admittedly this comes at the cost of some distancing from the instrument's theoretical underpinnings. This researcher would argue that Jung's theory of self, which evolved over thousands of hours of analysis, could never be

adequately captured in a paper and pencil inventory and the instrument's utility and familiarity outweighs overly pedantic concerns. The instrument's developers accept this approach, although it would likely wholly satisfy neither classical typologists, who revere the sanctity of whole types, nor personality researchers who may disagree with the dichotomous nature of the preferences as rooted in Jungian theory.

The instrument, and its concepts, can be used for different purposes and with different degrees of awareness of its Jungian theoretical underpinnings. Pragmatically and atheoretically, the instruments' scales predict outcomes and compare favorably to other more pathology oriented instruments. Its use in this study may represent a compromise formation of sorts between Jung's theory and the demands of a positivistic and natural science quantitative methodology. This more dominant practice in the literature has generated significant and meaningful findings, therefore the relative influence of individual preferences will serve as the principle independent variables of interest.

A recommendation to be discussed in the relevant section of this study is to examine preference dyads with this current study serving as a starting point. Further research that examines interactions between preferences, based on their empirical strength rather (as suggested by Wilde, 2011) or with attention to more traditional Jungian theory, would be warranted with this sample, but it is beyond the scope of the current research project. Having surveyed, but clearly not resolved, the controversy in the literature regarding the relationship between Jungian theory and contemporary measurement issues, the next section describes potential implications of the preferences on the expression of the identity statuses.

The impact of preferences on exploration, commitment and the identity statuses.

The description of each of the preferences provided clues as to potential propensities for decision

making, information processing, and by extension, identity development. It is important to note that the theory assumes that all types are valuable and necessary. This assumption informs the MBTI's developmental stance that focuses on increasing self-awareness of preferences over the individual's lifespan. While less advanced statuses may be predicted as more likely temporary way stations for certain more well defined preferences, it is important to note that all individuals can and do make their way to a mature expression of their personality preferences. In thinking developmentally, Myers et al. (1998) stressed that, with maturation, individuals obtain greater understanding of and exerts greater command over their use of the various perceptions, judgments, attitudes or styles over the lifespan.

Jung also wrote that, while he believed individuals had an innate propensity towards developing the relative strength of particular preferences, cultural factors impact the adaptive nature of any preference. Particularly, he described the extraverted nature of Western culture contrasted to the introverted Eastern character (1971). The implication of the relative valuing of particular traits in any unique cultural or environmental context, is that certain preferences may be seen more positively. These privileged preferences may provide a relative adaptive advantage for an individual regarding the skills called for and how the individual is perceived by authority or community. Alternately, there may be fewer viable niches for a particular preference in any particular environment. Research suggesting the relative fitness of preference in the college context helped inform the hypotheses regarding which preferences may more easily form viable adult commitments and which preferences may encounter a more challenging route to an achieved status.

The impact of context also drives the matching of work environment and preferences in finding more suitable niches for particular preferences or personality traits. This attention to

person-environment fit has a long history in career guidance and remains a mainstay of career counseling with strength based personality assessments (McCaulley & Martin, 1995). Type bias has even been leveled against those within the typology research and practice community (Kummerow, 2001). Lastly, the privileging by preference may also function in terms of the relative valuing by any particular society, subculture or ethnic group and this may shift over historical epochs. In recalling Erikson's notion of an achieved status as a mutual recognition of the individual in society, there may be fewer viable niches recognized for certain preferences in any particular society or one's preferences may run counter to more commonly endorsed values. Erikson also noted that there may be groups of people for whom identity development was less fostered or supported or for whom it is actively discouraged or barred via discrimination (1959, 1968).

With respect to application, Myers et al. (1998) suggested that knowledge of one's preferences aid individuals in better understanding their strengths as well as their relative growth edges. Challenges individuals face (here, career decision making and commitment to values and beliefs) are opportunities for either developing their preferred preferences, or accessing secondary preferences, in order to gain more control in their lives (1998). More specific to career counseling, the authors suggested that the MBTI can aid in choice of major, profession and work setting. The instrument can be used to help determine fit between the individual's most well defined preferences and the demands of a particular career path. Greater awareness of potential deficits or blind spots, by preference, can also help individuals recognize their particular challenges with decision making or social interactions (McCaulley & Martin, 1995).

In terms of the present study, a less mature understanding and expressions of an individual's preferences, may predispose a student to under-developing aspects of the self or

failing to utilize preferences to balance dominant decision making or perceiving strategies. The description of each preference and related research findings suggested potential differences in facing the normative developmental press of emerging adulthood. The research hypotheses have been extrapolated from the description of the preferences and relevant research with regards to the preferences and the dual facets of ego identity development, namely exploration and commitment.

What follows is a discussion of the potential implication of the preferences' expression on the identity statuses based on their description. In looking at the attitudes (Extraversion or Introversion), an individual who exhibits a well-defined E preference looks to the external environment for stimulation and guidance and this could increase healthy exploration. Moreover, their relative comfort with communication and more natural sociability could likewise create more opportunities for mentoring or adaptive help seeking through more readily accessing campus services. These tendencies could help high preference E individuals past diffusion and foreclosure to a healthy psychosocial moratorium. This could also potentially hasten their movement towards an adequately explored achieved status.

Conversely, students with a well-defined I preference (i.e., Introversion) may be at a relative disadvantage in their movement towards an achieved status. Their propensity towards introspection, detachment and a possible disinclination to seek out information from their environment due to their preference for turning inward could complicate their developmental trajectory as they manage the developmental challenges of college. The introvert's inward exploration of concepts and ideas may also not translate as easily to the adoption of adult roles and commitments. Likewise, their inward inclination may challenge these students in communicating with others. In discussing differences along the E-I continuum, the connection to

the outer world figures prominently in that Erikson stressed the importance of a mutually recognizing relationship between the individual and the community with identity achievement. This could suggest increased diffusion or premature decision making via foreclosure if the demands of the external environment overwhelm the introvert. Alternately, this could also translate to an extended moratorium as the inner exploration takes more energy and time to coalesce with the external environment and its demands. It may also be that introverts may be less likely to seek out social support or career guidance services because of the inward orientation and its potential impact on interpersonal relationships. From the description of the types it would appear that in the early stages of the more adult decision making of emerging adulthood, students who favor introversion may have a more complicated process in progressing toward the more advanced statuses, compared to their extraverted counterparts, who are more oriented toward their external environment.

In discussing the perceptions (i.e., Sensing or Intuition), those who favor Sensing focus on practicality, details and the present moment (Myers et al., 1998). From this description, one might surmise these individuals may not see the proverbial forest for the trees, and hence, individuals who favor Sensing may fail to adequately explore and consider enough options. This could suggest higher rates of foreclosure. Conversely, N preferred individuals make non-linear connections and attune to their felt sense and associations. They account for a wide array of possibilities (Myers et al., 1998). This approach may suggest an increased length of moratorium in order to allow options to be explored or more idiosyncratic sources of information to be integrated. High preference N's may also be inclined to higher rates of diffusion, due to being overwhelmed with the expanded number of possible choices and increased ambiguity with decision making in a less structured college environment away from home. They may struggle

with precluding possibilities in making a choice that requires extended commitment (e.g., choice of a major). Lastly, the pull toward less healthy options (e.g., drugs, alcohol or sexual behavior) may also be more appealing to high preference N's who are hypothetically more open to a wider array of options and may overlook practicalities or consequences when compared to individuals who favor Sensing.

Turning to the judgments, individuals who exhibit a well-defined Thinking preference rely on logical analysis and examining cause and effect for decision making (Myers et al., 1998). These students' movement through the statuses may be more orderly in considering that they display an orientation to time that focuses on connecting the past to the present with consideration of the future (Myers et al., 1998). This orientation bodes well for these individuals in considering Erickson's notion that the achieved identity status encompasses a continuity of earlier childhood identifications on the way to more adult internalizations (1968). It also bodes well in considering how choice of major and extracurricular activities may translate to future educational opportunities or employment.

Compared to the more analytical thinkers, emerging adults who value the Feeling preference may have more complicated developmental trajectories due to their attention to what matters to others and need for social harmony as well as the more subjective nature of their decision making processes. This could portend foreclosure, in acquiescing to the desires of authority figures for the sake of harmony. It could also be suggestive of increased rates of diffusion, if the student felt overwhelmed or has difficulties integrating the seemingly inflexible or alienating demands of external authorities or institutions that may fail to cohere with the saliency of one's inner callings and values. There may also be challenges if the subjective feelings in the moment do not readily translate to healthier adult commitments in the future.

Lastly, the Judging-Perceiving orientation to the outer world also suggested possible tendencies regarding the identity statuses. While the other three poles were discussed more explicitly and at length in Jung's (1971) work, Myers and Briggs added the J-P continuum noting that it was more implicit in Jung's work. Individuals who favor Perceiving tend to remain longer in observation and they appear spontaneous, curious and adaptable (Myers et al., 1998). Conversely, high preferenced Judging individuals may move more quickly through their perceptions to forge conclusions and make prompt decisions. They are concerned with decision making; they organize, plan and seek closure (Myers & McCaulley, 1985).

In discussing this dichotomy, Myers and McCaulley stated, "procrastination comes from perception with a deficit in judgment. Prejudice comes from judgment with a deficit of perceptions" (1985, p. 14). The quote suggests implications with respect to exploration and making mature commitments. Students who privilege Perceiving may be inclined to put off decision making in order to attend to the continually incoming information or for its own sake. These tendencies could translate to more lengthy moratoriums for these emerging adults. They may also tend toward diffusion in reaction to a perceived or explicit pressure to form commitments. Those who express a Judging preference, with their tendency to seek closure, may err in the opposite direction in prematurely deciding without having gathered adequate information. They may not allow enough time to process the more ambiguous information or challenging decision making of emerging adulthood. This tendency may suggest increased rates of foreclosure for these students.

In thinking about possible periods of stasis, avoidance of active exploration, or too quickly rendered commitments, one is reminded of Erikson's intent with the use of the word "crisis" (1959, 1968). The term described the conflict associated with the demands of this

potentially challenging, yet socially sanctioned, developmental period. He was interested in how that process may go awry on the way to an achieved status. Erikson offered a developmental lens and chided clinicians or other authorities who mistakenly confused a temporary identity state late adolescence for the final identity state of the adult. He also cautioned against over-pathologizing the temporary derailments along the way. This caution is worth repeating with respect to the hypotheses that will be offered regarding the relationship between personality preferences and the statuses. The data represents a single snapshot of emerging adulthood, rather than an endpoint or an indictment of the less mature expression of a certain preference. This sampling of the developmental process may also provide useful clues as to how to best intervene with the particular sticking points more often associated with a particular preference. It is also worth noting that the college environment may privilege certain preferences (possibly Thinking and Extraversion) because of the particular demands of the classroom or college environment that all students, regardless of major, face.

This represents a thumbnail sketch of the MBTI preferences as well as a discussion of their potential impact on the process of exploration of, and commitment to, adult values, beliefs and career goals as captured by the identity statuses. The research hypotheses will be narrowed to a single, most likely prediction, based on empirical studies that describe the relationships between the personality preferences and aspects of decision making and information processing. Because the relationship between the personality preferences and identity status represented a gap in the literature, studies that examined related constructs, that may represent potential proxies for the primary constructs of interest, may be examined to help inform the research hypotheses.

Personality preferences and identity status with college-attending young adults. It is the researcher's intent to better identify the intersection of personality preferences, as measured by the Myers Briggs Typology Indicator (MBTI), and Eriksonian identity development and the identity statuses, as measured by the Objective Measure of Ego Identity Status (OMEIS). The MBTI represents a non-pathologizing measure of individual differences that has a long history of use and remains a mainstay of assessment with young adults in many university career services and counseling centers across the United States ("CPP: Education," n.d., para. 7; McCauley, 1990, 2000). As of 2000 it was the most widely used personality instrument used in the world translated into more than 20 languages (Quenk, 2000, more recent figures could not be found). The OMEIS is an empirical instrument grounded in the foundational development theory of Erikson and Marcia (Broderick & Blewitt, 2010). It focuses on categorizing the developmental crisis of young adulthood in terms of degree of exploration and commitment into four distinct identity statuses (i.e., Diffusion, Foreclosure, Moratorium and Achievement).

Despite the longstanding and widespread use of more strength based personality testing in career counseling with college-attending young adults, researchers currently have little information about the relationship between the MBTI's often measured personality constructs and the process of identity status with this population because these constructs have not been examined in tandem (Adams, 1998; Waterman, 1982, 1999). Understanding the potential impact of these often identified personality preferences (i.e., Extraversion, Introversion, Intuition, Sensing, Thinking, Feeling, Judging and Perceiving) on the process of identity development could aid in more focused and impactful career oriented interventions. In taking a snapshot of young adults' development early in their college careers, the researcher examined the impact of the personality preferences on the expression of identity status. The statuses, of which there are

four, assess the degree to which students have explored their values, beliefs and career goals and how committed they were to them. The researcher offered predictions, guided by the literature, regarding increased rates of particular statuses for different personality preferences.

A better understanding of how the personality preferences may impact the identity statuses, and by extension exploration and commitment to adult values, could provide clinicians with a more nuanced understanding and application of the MBTI. A better understanding of the relationship between these two constructs could also provide clues as to *how* development may more typically go awry by clarifying which particular personality preferences are more often related to which identity statuses with emerging adults early in their college careers. Understanding this relationship could also help identify potential protective factors related to personality preference and movement towards more advanced statuses (i.e., Moratorium or Achievement) or avoidance of the less advanced statuses (i.e., Diffusion or Foreclosure). This knowledge could also be used to normalize student's experience, by preference, through psychoeducational outreach, group work or career and personal counseling.

Putting personality and identity status together: This study's niche. The researcher asked if the personality constructs of interest influenced the process of identity development with emerging adults in examining the predictive quality of those MBTI preferences on the four identity statuses as originally described by Erikson (1959) and further defined by Marcia (1966) and Adams (2010). Additionally, in replicating some previous yet tentative findings in the literature and in attending to the American Psychological Association's (APA, 2003) guidelines on multicultural sensitive research, the impact of ethnicity on identity status was also investigated. These research questions for this study were tested through the administration of both instruments with a sample of emerging adults early in their college careers.

The current literature, and the theories that underlie the personality and identity status constructs, provided clues as to the potential tendencies of the different personality types in forming adult commitments (Apostal, 1998; Kelley & Lee, 2005; Myers et. al., 1998). These findings informed the predictive hypotheses. While previous researchers have studied the relationship between the five factor personality constructs (Goldberg, 1990; McCrae & Costa, 1999) and the identity status measure, in reviewing the literature, this work appeared to be largely exploratory with respect to pairing the administration of the MBTI and the OMEIS (Adams, 1998; Bolea, 1997). While the five factor model (FFM), which measures five putative core personality traits, was prevalent in the research literature, the MBTI is a far more useful measure with respect to identity development in young adults because of its routine use in college counseling and career centers compared to the FFM (Reed, Burch, & Haase, 2004).

Having discussed the theory that served as foundation for this proposed study, empirical studies on the personality preferences of interest, the four identity statuses and the potential impact of the demographics are discussed in the next chapter. In it the implications from relevant studies on the personality constructs and identity status are discussed. The specific research questions, derived from the review of the literature, and the hypotheses that were developed are presented at the conclusion of the literature review.

Chapter 2

Review of the Selected Literature

Identity Status and Career Decision Making

In examining the link between identity status and career decision making, Erikson wrote that vocational choice represented one of the main tasks of adolescence and young adulthood (1968). Researchers have examined the relationship between identity status and career decision making. This section includes a summary of some of the more germane findings in an attempt to demonstrate how the more advanced identity statuses differentiate themselves from the less advanced regarding emerging adults' decision making. These findings set the stage for better understanding how the MBTI personality preferences may be related to the identity development process.

Identity status, indecision and commitment. In comparing the Extended Objective Measure of Ego Identity Status (EOM-EIS-II), an earlier version of the identity status instrument used in this study, with another measure of the career commitment, Vondracek, Schulenberg, Skorikov, Gillespie, and Wahlheim et al. (1995) found that students who had an achieved identity status, compared with the other three statuses, score significantly lower on an indecision subscales of the Career Decision Scale (Osipow, 1987). Moratorium was also significantly lower on all but one of the subscores (i.e., measuring need for support in career decision making) compared to the achieved identity group. These researchers, in accord with more career oriented researchers, used the ideological portion of the EOM-EIS-II, over the social or combined score, because of its greater relevance for career decision making.

In the Vondracek et al. study (1995), the researchers employed several multivariate analyses of variance (MANOVA's) that included grade and gender with a sample of 407 junior

high and high school students. The findings regarding age and gender will be discussed more extensively in a separate section of the literature review. Also of note for this and the majority of the studies that examined identity development via the EOM-EIS-II was that ethnicity was often excluded from the discussion of the sample. This shortcoming will also be addressed later in the literature review when discussing the relationship between demographic variables and identity development.

In a secondary analysis, where the researchers examined Pearson correlations, the achieved group was the only of the four statuses that produced positive correlations between the identity status score and “decidedness.” All other statuses’ Pearson coefficients were negatively correlated with “decidedness.” The data supported the hypothesized relationship between the statuses and career making indecision. Vondracek et al. (1995) helped to establish the relationship between the constructs of identity status and career decision making. The researchers suggested that further studies examine the relationship between the EOM-EIS and vocational identity. The MBTI often serves as a link between personality and career choice in university counseling and career counseling settings and can be used to help determine facets of an individual’s vocational identity (Myers et al., 1998).

In another study, Wallace-Broschious, Serafica, and Osipow et al. (1994) employed MANOVA’s to examine the relationship between identity status, career planning and career decidedness. Again they included gender and age into the analysis of 268 9th and 12th graders who identified as White. As hypothesized by the underlying construct of identity status, they found that individuals in a moratorium and diffusion status were positively associated with career indecision while individuals in an achieved status were negatively related to career indecision as measured by the EOM-EIS and Career Decision Inventory, respectively. Similar to

this study, Wallace-Broschious et al. (1994) employed regression analysis to determine if identity status was a significant predictor of career certainty and career planning. They determined that identity status was a better predictor of career certainty and planning than was the construct of “self-concept” (as measured by the Self Perception Profile for Adolescents; Harter, 1988).

They chose to focus explicitly on the ideological factor of the EOM-EIS because of its hypothesized relevance to career decision making compared to the social/interpersonal subscale or combined score on the EOM-EIS. Likewise, in further establishing the hypothetical relationship between the constructs of the four statuses and career decision making, the researchers again pointed to the need to generate a better understanding of, “the dynamic interaction among individual attributes and contextual factors” (p.146). The current study investigated this gap in the literature by asking about the relationship between strength of personality preference (i.e., individual attributes) and identity statuses with college-attending emerging adults.

Both the findings from Vondracek et al. (1995) and Wallance-Broschious et al. (1994) support the hypothesized constructs underlying Marcia’s identity statuses. The results suggested that identity achieved individuals demonstrated significantly less career indecision compared to the other less advanced statuses. Additionally, both sets of researchers called for an exploration of personality factors that impact identity development. Identity status appeared to be related to career decision making and decidedness in meaningful ways, but from a review of the literature, researchers and practitioners know relatively little about the relationship between the more commonly employed personality measures and identity development. This gap was especially true when one looked to the MBTI or the Strong Interest Inventory (SI-II)) that are commonly employed in applied settings with a college-attending emerging adult population. Having

considered potential relationships between identity status and indecision, the next section discusses decision-making styles.

Identity status and decision making styles. Blustein and Phillips (1990), via regression and cluster analysis, also addressed the relationship between ego identity states and how late adolescents make decisions about career. This article helped establish the link between identity states and more or less adaptive decisional styles. With the researchers' more sophisticated methodology, they also extended the line of inquiry of decision making and identity status by better capturing the underlying construct of identity status. Rather than drawing inferences from data farther removed from the theory via group differences or correlations, they more directly explored the underlying construct.

Blustein and Phillips (1990) employed Marcia's EOM-EIS for measuring identity statuses and the Decision-Making Styles (DMS) section of the Assessment of Career Decision (Harren, 1984) to measure decision making style with a sample of 99 college students (31% freshmen, 28% sophomores, 24% juniors, 16% seniors, and 3% graduate students; 52% women and 48% men; ethnic composition of 76% Whites, 11 % Blacks, 6% Hispanics, and 6% from other ethnic groups). To study the relationship between identity status and decision making style they employed a canonical analysis. In their study, 20% of the unique variance was accounted for by identity status in a model that predicted decision-making style and included age, gender and identity status. When the researchers controlled for age and gender, the variance explained by the overall model only dipped to 19% ($p < .001$). The amount of variance explained suggests the relatively large impact of identity status on career decision-making.

Their analysis yielded three canonical roots that contributed significantly to the model (Blustein & Phillips, 1990). The first root had a heavy positive loading with a "dependent"

decision style and a heavy negative loading with identity achievement. The second root paired foreclosure and “dependent” decision-making style. Lastly, the third root loaded with “rational” decision style and an identity achievement. It also loaded negatively with an “intuitive” decision style. Conceptually, these clusters cohered with identity status theory in that a dependent decision making style fits with the active exploration of an achieved identity status. Conversely, a foreclosed identity status and dependent decision style hang together conceptually. Lastly, a rational decisional style was more suggestive of the deliberate exploration that accompanies an achieved status, while it simultaneously appeared to preclude an intuitive decision making style. Bluestein and Philips (1990) also provided Pearson correlations between the scores on the EOM-EIS and DMS that further supported the findings from the cluster analysis. The results further served to differentiate an achieved status from the other three identity statuses.

Taken together, these studies helped establish the relevance of the construct of identity status with regards to the challenge of career decision making and the potential difficulties associated with career indecision (i.e., moratorium and diffusion) or premature decision making (i.e., foreclosure). This study also suggested the decision style most and least associated with an achieved identity status.

While Healy and Woodward’s (1989) study identified relationships between MBTI types and a taxonomy of 12 career decision making obstacles with college-attending adults, there is little other research depicting how these various personality traits’ expression may impact emerging identity status with college-attending emerging adults (Adams, 1998; Vondracek et al., 1995; Wallance-Broschious et al., 1994). Having explored the connection between the identity statuses and career decision making, the following section will be a discussion of the personality

preferences that constitute the MBTI in order to examine their relationship with the identity statuses.

Studies Involving Personality Preferences and Aspects of Identity Status

This section reviewed selected research related to the particular impact of each of the personality preferences on aspects of decision making, exploration and commitment. The discussion will turn to studies that have included personality constructs from the MBTI, or other measures that tap similar constructs. The researcher examined the various preferences' relationship to aspects of identity status in order to develop hypotheses regarding the most likely relationships between the MBTI personality preferences and the expression of particular identity statuses with emerging adults.

The gap in the literature relating personality and identity status. Erikson's identity development theory is often cited in the literature related to working with university students (Adams, 1998; Lewis, 2003; Urbin, 2005). Despite this fact, few researchers have investigated what the more commonly employed assessments used with this population may tell clinicians about identity development. Waterman, a principle writer on identity status, noted that only a few personality variables have been examined and identified as predictive of the trajectory of identity formation (1982). Understanding the potential connection between personality preference and identity status could improve the interpretation of commonly used career assessments.

Only one other researcher has examined the relation between an earlier version of the OMEIS, the EOM-EIS, and another less pathology oriented instrument, the Strong Interest Inventory (SI-II), commonly used in college counseling settings. In a doctoral dissertation, Bolea (1997) studied college students preparing to become elementary school teachers. He predicted

that they would be significantly more foreclosed when compared to non-education major peers while also being more social, as measured by the Holland codes, and dualistic, as measured by Perry's cognitive schema. Apart from this select sample, the relationship between these important and widely used measures and their underlying constructs remains largely unexplored.

While many researchers cite the combined use of the SI-II and MBTI in career counseling (Buboltz et al., 2000; Katz, Joyner, & Seaman, 1999; Miller, 1992; Myers & McCaulley, 1985; Myers et al., 1998), no other studies that compared either of these commonly used measures alongside of the OMEIS, or its predecessors, were found. Despite the call to further examine personality variables and identity status, there remains a gap in the literature regarding this variable and the strength based instruments more commonly used in personal and career counseling with college-attending emerging adults.

Five factor personality traits and features of identity status. Previous researchers have compared the more research oriented Five Factor Model (FFM) (McCrae & Costa, 2008) with Marcia's measure of the identity statuses. For example, Clancy and Dollinger (1993) correlated the identity statuses, via the EOM-EIS, with the five factor personality traits, via the NEO-Personality Inventory (Costa & McCrae, 1985), and found some statistically significant correlations in an ethnically diverse sample of 198 college students from a large midwestern university. They found that extraversion was positively related to achievement identity status, but negatively related to moratorium and diffusion, while neuroticism was related to moratorium, diffusion and achievement. As hypothesized openness was negatively correlated with foreclosure and there was a small, but statistically significant inverse relationship between agreeableness and diffusion. As discussed in the Measures section of this study, there are a number of strong correlations between the FFM and the MBTI. In terms of the research findings in this study,

there is a link between extraversion with achievement. The study may also suggest a link between MBTI feeling and diffusion due to the inclination for maintaining social harmony (via Fs correlations with five factor agreeableness (Myers et al., 1998)). Lastly, openness may be related to MBTI Perceiving and this NEO trait had a negative correlation with a diffused status.

A similar study by Wang, Jome, Hasse and Burch (2006) employed an ethnically diverse sample of 184 undergraduates at a public Northeastern university evenly distributed throughout freshman to senior year. The research found that extraversion was positively correlated to career exploration with both a White and a minority college-attending sample via the Vocational Commitment and Exploration subscale of the Commitment to Career Choice Scale (Blustein et al., 1989). This finding is suggestive of a more advanced identity status (moratorium or achievement) with extraversion.

In a post hoc analysis, they found two separate structural equation models for students who identified as White and minority cultured individuals with neuroticism negatively correlated with career decision making for the minority students, but not for the Whites, while extraversion had a smaller impact on career decision making for the minorities compared to the White students as measured by the Career Decision Making Self-Efficacy Scale (Betz et al., 1996). They measured extraversion and neuroticism with the NEO-FFI (McCrae & Costa, 1999) subscales for these particular traits.

The researchers hypothesized that personality traits may figure differently for students who identify as ethnic minorities compared to those who identify as White with respects to career decision making self-efficacy (Wang et al., 2006). With regards to identity status, there may be interaction effects between ethnicity and personality preference, or ethnic identification may impact the rates of identity status differently by preference. The literature that will be

discussed later suggested that the foreclosed status is seen at higher rates with students who identify as ethnic minorities.

These results may have been different for minorities at Historically Black Colleges or Universities (HBCU's) compared to Primarily White Institutions (PWI's), although the authors did not mention this. The differential results by ethnic identification highlighted the need to attend to demographic differences within the sample because if ignored the unique findings with respect to ethnicity would have been lost or muddled within a combined sample. The variable of ethnicity was often ignored before 2000 in identity status research or students who identified as White more often served as research participants. Wang et al. (2006) also supported the overarching notion that personality, as a measure of individual difference, affects decision making and by extension the process of exploration and commitment conceptualized in the statuses.

Reed, Burch, and Haase (2004) also found that the personality traits, as measured by the FFM (NEO-FFI) (McCrae & Costa, 1999) correlated with aspects of career exploration. With an ethnically diverse sophomore and junior heavy sample of 204 undergraduates, these researchers found three canonical roots providing evidence for the impact of personality traits on career decision making behavior. Career exploration was measured by the Career Exploratory Survey (CES) (Stumpf et al., 1983). While reporting ethnicity, the study failed to include it as a variable of interest. The root that captured the most unique variance was high conscientiousness, high extraversion and low neuroticism which predicted higher levels of career exploration. A second root constituted openness and a lack of career search self-efficacy and exploration.

Again the findings suggested a link between extraversion and more advanced identity states (i.e., moratorium and achieved; Reed et al., 2004). They also suggested a somewhat

counterintuitive link between Perceiving (via openness) and a lack of exploration. In thinking about MBTI preferences, perhaps individuals who favored Perceiving could be overwhelmed by the possibilities of identity development and hence they were more likely to remain identity diffused by avoiding active exploration. Alternately, their curiosity may not translate readily to the daily tasks that commonly represent career exploration. This current project could extend these findings with a more widely administered practice oriented instrument compared to the more research oriented FFM while also accounting for the potential impact of ethnicity.

More recently, Witteman, van den Bercken, Claes and Godoy (2009) examined the relationship between the FFM and two instruments that measure an individual's preference for a "rational" or "intuitive" information processing style, the Rational-Experiential Inventory (REI) (Pacini & Epstein, 1999) and the Preference for Intuition or Deliberation (PID) (Betsch, 2008). These researchers employed regression models with separate Dutch (774 undergraduates), Spanish (141 3rd year psychology students) and American (399 largely White undergraduates) samples to determine which five factor traits were predictive of which processing style. They found a number of significant predictors for both the rational and intuitive measure in each sample with the Dutch and American sample being more similar than the Spanish sample. While recognizing cultural differences in the correlation of the measures, the researchers concluded that the rational-intuitive dichotomy was valid cross-culturally. Specific to the American sample they found that Conscientiousness, Openness, Extraversion and low neuroticism correlated significantly with the rational subscale while all traits but neuroticism correlated with the intuitive subscale. The REI contained two separate factor structures (Pacini & Epstein, 1999). The researchers provided evidence for the relationship between personality traits and information processing styles, and by extension, decision making.

In two smaller pilot studies the same researchers attempted to correlate the rational and intuitive measures previously described with behavioral correlates in attempts to investigate lines of further research. They found significant differences on decision making tasks related to the rational-intuitive divide (namely, the missing-a-flight vignette, the thematic version of the Wason task, the jelly bean task, and a diagnostic classification task) with positive performances moderately and positively correlated with the rational measure ($r = .40$) and strongly and negatively correlated with intuitive measure ($r = -.57$). In a timed decision making task they found that, while the rational measure was not significantly correlated with time taken on task, the intuitive measure predicted quicker decision making.

Extrapolating from the instruments in the study, an intuitive style could be related to N or potentially F on the MBTI, while a rational style may resonate with the Thinking preference. Here rational (high preference Ts) performed better than those individuals with an intuitive style (high preference Ns) and high intuition style predicted faster, but not improved, decision making. The implications with respect to MBTI Ts and Ns may be more advanced statuses for Ts due to their more analytical decision making practices, while Ns may have been less engaged or frustrated with the puzzle-like quality of the research tasks suggestive of foreclosure or diffusion when pressed with decision making.

Witteman et al. (2009) demonstrated a meaningful link between personality, decision-making strategies and behavioral outcomes that may be related to the aspects of exploration and commitment of identity development. Using several international and an American sample of college-attending emerging adults, this study provided evidence for the connection between aspects of personality and information processing styles along with some initial findings relating the rational and intuitive information processing styles with various performance task behaviors.

As seen in the previous studies on personality, assuming the homogeneity of the American sample (or any sample for that matter) may mask meaningful within group differences.

Perhaps one of the most relevant and applicable studies on the relationship between personality and the expression of identity status came from Dollinger (1995) who employed the less well-known and researched 39 item Identity Style Inventory (Berzonsky, 1992). It purports to differential between an 1) information-oriented style, 2) diffuse/avoidant style, and 3) normative style. These three styles represent the processes through which the individual determines identity. Information oriented represents active exploration (i.e., moratorium), diffuse/avoidant involves procrastination (i.e., diffusion), and an individual with a normative style is closed to novel information and seeks approval from authority figures for decision making (i.e., foreclosure) (Dollinger, 1995). The instrument is driven by both Erikson's (1968) and Marcia's (1966) conceptualization of identity status and development, but it only focuses on the exploration half of the identity status construct.

The sample for the study consisted of 189 psychology undergraduates who were primarily female (N = 142). The ethnicity of the sample was not reported. Dollinger (1995) found a number of significant Pearson correlations between the five factor personality traits (NEO-PI; Costa & McCrae, 1985) and the three identity styles with small to moderate Pearson correlations ranging between .17 and .36. More specifically, the researcher found that the information-oriented and normative styles were positively correlated to extraversion, agreeableness and conscientiousness, while openness was positively related to information-oriented and negatively related to a normative identity style. Lastly, the diffused/avoidant style positively related to neuroticism and negatively related to agreeableness and conscientiousness.

These findings lend greater credence to the notion that personality and identity status interact in meaningful and predictable ways. These findings also suggested fluidity between personality and the statuses in that some of the same NEO-PI traits were predictive of more than one status or more strongly correlated with particular statuses. The suggestion is that there may be tendencies with regards to personality, but a high preference individual is not doomed to stasis in a particular status. For example with Dollinger's (1995) study, conscientiousness correlated positively both with more advanced statuses (via information-oriented style) as well as a normative style (representing foreclosure) and negatively with a diffused/avoidant state. Highly conscientious individuals more often decide too quickly or decide after adequate exploration, but they rarely, (statistically speaking) fail to explore and fail to commit (via diffusion). NEO-PI conscientiousness may share some similarity with a MBTI J preference. Openness, which may share similarity with a MBTI P preference, correlated positively with information seeking style and negatively with normative style suggesting increased moratorium or achievement with high preference Ps and decreased foreclosure. Conceptually, but with a lesser known identity status measure, these correlations also appeared to cohere with the theory underlying the statuses.

In an earlier study employing an ethnically diverse undergraduate sample ($n = 198$), Clancy and Dollinger (1993) also found significant and meaningful Pearson correlations between the NEO-PI and the OMEIS. Neuroticism was positively correlated with moratorium ($r = .35$) and diffusion ($r = .25$) and negatively correlated with achievement ($r = -.27$). Extraversion was positively related to achievement ($r = .35$), but negatively correlated to foreclosure ($r = -.50$), diffusion ($r = -.30$) and moratorium ($r = -.19$). Agreeableness and diffusion negatively correlated ($r = -.17$) while Conscientiousness positively correlated to achievement ($r = .30$) but was negatively related to diffusion and moratorium ($r = -.38$ and $-.22$, respectively).

From these findings, achieved individuals appeared to be well adjusted extraverts, foreclosed individuals were decidedly low on openness, diffused subjects were more prone to negative emotions and disagreeableness while individuals in moratorium also appear to struggle with negative affect while being slightly more extraverted and conscientious when compared to the diffused subjects. The correlations from Clancy and Dollinger's (1993) study provided provocative vignettes of the personality characteristics of the different statuses with a psychometrically improved measure compared to the Identity Styles Inventory (Berzonsky, 1992) that was employed by Dollinger (1995). Taken globally, the FFM maps meaningfully on aspects of decision making, and more particularly, the earlier measures of the identity statuses themselves.

While the theory underlying the MBTI suggests all the personality preferences can lead to optimal functioning, Jung cautioned that particular preferences may have fewer niches in any particular cultural or historical context (1971). This current study sought to extend these findings with a more reliable measure of identity status (the OMEIS) and a personality instrument that is much more commonly used in applied settings for personal and career counseling with emerging adults. In counseling and career interventions, clinicians can be mindful of these tendencies while using both the positive aspects and an awareness of the growth edges of an individual's preferences to facilitate personal development. Knowledge of the tendencies by preference may allow clinicians to address potential roadblocks or utilize client strengths that students may not have awareness of due to the still maturing nature of their preferences.

The studies that examined the five factor traits provided support for the existence of meaningful relationship between personality and identity status but more clinical or research oriented personality instruments (e.g., the NEO-PI-R) do not lend themselves so readily to a

more developmental strength-based approach. They create proverbial winners (i.e., high extraverts and high openness) and losers (i.e., high neuroticism) with regards to the personality traits they measure. As will be discussed in the measures section of this study, there are significant and meaningful correlations between the FFM and the MBTI. The next section more directly focuses on the various MBTI preferences and decision making.

MBTI preferences and facets of decision making. With a sample of nearly 1300 first year undergraduates enrolled in a program for undecided students Kelley and Lee (2005) found that those exhibiting perceiving, intuition and extraversion MBTI preferences were overrepresented in the undecided sample. While they had hypothesized that perceivers, who tend to collect as much information as possible before making a decision, would be overrepresented, they had not anticipated Ns and Es reaching significance. Whereas intuition, and its focus on possibilities, is easier to explain in terms of undecidedness, extraversion was a more puzzling finding. In way of explanation, the researchers suggested that this first year sample of extraverts, with a more trial and error approach to problem solving, may simply not have had enough time to make satisfying connections and adequately explore the array of alternatives.

Kelley and Lee (2005) provided some clues as to potentially problematic types with regards to decidedness or commitment, but they failed to capture the component of exploration that is also operationalized in the identity status theory and measure. Therefore, the study tells one something about who had decided, but not their level of exploration en route to a major and career choice. The study may help predict the personality preferences associated with individuals more likely to struggle in their efforts to move towards an achieved identity status, via decidedness, but likewise, it could also lump foreclosed individuals in with achieved statuses.

They are both high on decidedness with only achieved individuals adequately exploring their alternatives. This proposed study would extend these findings.

Similarly, Apostol (1988) employed a sample of 144 mainly freshman and sophomore college students at a small Midwestern university and he examined the students' decidedness as to their major. Like a fair number of the articles from that decade, ethnicity was not reported as a variable of interest. In Apostol's (1988) study MBTI Thinking preferences represented the more decided students when comparing four levels of decidedness via ANOVA. There were no other significant differences on degree of decidedness with any other MBTI preference. This finding suggested that the more analytical, impersonal and logical decision making style of individuals who favor an MBTI Thinking preference translated to more assuredness with one's decision making. Therefore, analytical approach to decision making may correspond with higher rates of achieved identity statuses. Students with a Thinking orientation may experience a more expedient movement en route to making adequately explored commitments. Having examined research studies that focused on the impact of the personality preferences on decidedness, what follows is a discussion of the relationship between preferences and aspects of exploration as it represent the other half of the identity status construct.

MBTI preferences' impact on career counseling services. In studying the impact of MBTI preferences on the seeking of career services with a sample of 135 recent graduates from a small women's liberal arts college, Nelson and Roberge (1993) found that three of the four poles (i.e., E-I, T-F, and J-P) showed significant differences in what particular career services were sought at a college counseling center. The researchers used chi squared analysis to determine these group differences, and again in terms of a common limitation of identity development research, the ethnicity of the sample was not reported and the sample was also all female.

There were a number of potential implications for particular personality preferences and identity status. Specifically, students who favored Perceiving were less likely to seek services compared to those who favored a Judging preference. The researchers hypothesized that this tendency was a function of Js emphasis on organization and planning compared to Ps higher degree of openness and spontaneity. By extension these results suggested that emerging adults with well-defined Perceiving preference may have more difficulty making a commitment to a career choice and get lost in the shuffle (i.e., diffusion or moratorium), where conversely, Js may prematurely decide (i.e., foreclosure) or alternately attain earlier achieved statuses.

The researchers also found, as predicted with their contrasted orientations towards their inner and outer worlds, that Extraverted students were more likely to seek out face-to-face services, while conversely, students oriented toward their inner world (i.e., Introversion) were more likely to use computer guidance software. Introverted students may fail to connect with career services in being less inclined to seek them out or they may be more likely to be unaware of the array of available career services. They may also more likely struggle if online resources are underdeveloped at their institution. Where extraverted students may move more steadily towards achievement in more readily connecting to university resources, those who favor introversion process may be more delayed due to less help seeking behaviors in addressing the new and ambiguous tasks of emerging adulthood. This could be compounded if a university's outreach services, or online career and/or counseling services are underdeveloped. If overwhelmed by this decision making task, these students may be more likely to avoid exploration via diffusion.

Lastly, students who favored a Thinking orientation preferred objective data from career oriented tests and faculty advising while more subjective decision makers (Feeling preference)

opted for “other” career guidance methods over testing. This fits with the Thinking oriented students’ propensity for more analytical and objective data over the Feeling oriented students’ more subjective, and potentially varied, decisional influences and process. The subjective and potentially more idiosyncratic experience of the Feeling oriented career seeker may not garner as efficient or systematic a match compared to the Thinking students’ more objectively and planful approach. This potential difference does not mean that well defined Feeling types will or cannot find their way toward adult commitments, but rather, that the Thinking types’ route to an achieved status may be relatively favored in an academic setting or be less idiosyncratic compared to the Feeling types. One might expect more moratoriums and achieved statuses at earlier ages with Thinking types when compared to individuals with a well defined, but still developing, F preference. Additionally for these emerging adults, “other” guidance may come from family of origin as a function of the need to maintain social harmony. This could translate to increased rates of foreclosure.

Nelson and Roberge (1993) provided some interesting findings regarding how personality preferences can impact potential exploration and decision making for college students. They studied the services students were more or less inclined to utilize, although because this sample contained only graduates one may wonder about the career services sought and decision making of the students who did not make it to graduation. This untapped sample would likely differ from their successfully graduating peers with potentially greater ranks of the less advanced identity statuses compared to the graduates.

By focusing on undergraduates on the early part of their college career with introductory psychology students, this proposed study provided a better sample of the identity status tendencies of college-attending emerging adults as they were embarking on the process toward

tentative adult commitments. The next section covers research regarding the relationship between personality and other aspects of decision making that may also impact the dual constructs of exploration and commitment.

Personality traits, post-formal thinking and decision-making styles. Friedman (2004) examined the relationship between post-formal thinking and personality traits with senior undergraduate and graduate college women. Personality traits were measured by the Omnibus Personality Inventory (OPI; Friedman, 2004). The OPI is purported to measure ability to behaving intellectually via 14 personality traits (Heist & Yonge, 1968) while reflective judgment was measured by the Reflective Judgment Interview (King & Kitchener, 1994). Reflective judgment represents a seven stage model with increasingly substantive and sophisticated reasoning on ill-defined problems. The researchers found that the highest correlation ($r = .48$) with “reflective judgment” was “thinking introversion” from the OPI. Thinking introversion was described as reflective thinking, an enjoyment of academic activity, and a willingness to explore new thoughts and ideas without being dominated by commonly accepted norms.

One could see in thinking introversion aspects of a more systematic exploration that could lead to an achieved identity status as well as aspects of both the Thinking and Introversion preferences from the MBTI in the academic aspect and the ability to consider one’s internal processes versus more readily adopting societal norms. When more strongly oriented via Introversion individuals are interested in, “their inner world and give weight to concepts and ideas to understand events” (Miller, 1992, p. 51) and when using thinking, people, “rationally decide through a process of logical analysis of causes and effects (p. 52).” These results, and the MBTI descriptors, suggest that individuals who express well-defined Thinking and Introversion

preferences may more steadily progress towards the advanced ego identity statuses by their senior year.

In the Friedman (2004) study there were several other OPI personality traits that appeared to be proxies for other preferences measured by the MBTI, but they had non-significant correlations with reflective judgment. Among the non-significant personality traits were “social extraversion”, which may be suggestive of MBTI E, “estheticism” and “impulse expression”, both of which may be indicative of a MBTI F type, and “practical outlook”, which could correlate with an S type. None of these OPI personality traits correlated significantly with reflective judgment. Hence, this operationalizing of reflective judgment does not seem significantly related to well-defined E preferences with an external orientation, or high S preferences, who stick more literally to concrete evidence. It may also have precluded high F preferences, which may be more impacted by the social context and their subjective appraisal. In terms of the identity statuses themselves, an individual’s emphasis on reflective judgment seemed to run counter to both foreclosed and diffused statuses with the former’s acceptance of others’ views over self-determination and the latter’s lack of both contemplation and exploration. This study was of interest because it drew the parallel between personality and a more adaptive model of thinking with a emerging adult college-attending population.

The OPI appears to privilege thought processes and decision making more often associated with a traditional academic setting. This conceptualization may not capture more advanced expressions of estheticism and more subjectively oriented, yet equally valid or adaptive, decision making processes. The researcher noted that the lack of statistical significance between estheticism and reflective judgment may be a harbinger of, “a diverse array of intellectual problems” for individuals who exhibited this trait (Friedman, 2004, p. 302), but this

conclusion may invalidate the potential strengths of this preference and decision making orientation. Despite this caveat, it may suggest increased difficulties in attaining an achieved status for high F preferences because of their utilizing a more subjective and idiosyncratic decision making style that may not be as readily validated in more traditional academic environments. This potential lack of fit between person and environment may complicate the developmental process.

A similar finding regarding aspects of a more analytical approach to career decision making came from Amir and Gati (2006). These researchers employed a young adult Israeli population who had completed their two year compulsory military service post high school. These individuals were in a preparatory academic program before they were to enroll in a major university; 42% of the sample was woman and 35% came from low SES families. In their study, participants with more clearly defined career plans reported statistically lower career decision difficulties, higher career decision making self-efficacy and higher thinking (vs. feeling) and introversion (vs. extraversion) decision making style. The researchers used a taxonomy of career difficulties (the Career Decision-Making Difficulties Questionnaire, CDDQ) and a multidimensional career self-efficacy measure (The Career Decision-Making Self-Efficacy scale or CDMSE) comparing both measures to the Vocational Decision Making Style Indicator (VDMSI, Walsh, 1986). It is assumed that the instruments were administered in their original form in English as the study does not specify that any were translated. The VDMSI borrows conceptually from the MBTI in having poles of Thinking-Feeling and Extraversion-Introversion. The Thinking-Feeling scale reached significance with higher Thinking groups demonstrating greater decidedness ($r = .49$, via the CDMSE) and fewer career making difficulties ($r = -.43$ via the CDDQ), compared to the feeling group. The Introverted group also reported greater

decidedness ($r = .22$) and fewer career making difficulties ($r = -.23$) compare to the extraverts. While Thinking and Introversion were both significantly correlated with the measures, the correlations were stronger for the Thinking subscale.

The researchers' hypothesis regarding a thinking style and career decision making was supported. They also believed that introversion would contribute to great career self-efficacy and decidedness and this was also supported, but not as strongly. Implications for the present study were whether the similar MBTI preferences of Thinking and Introversion predicted more advanced identity statuses in terms of greater career making self-efficacy, fewer career making difficulties and hence an easier movement toward the more advanced identity statuses via explored commitments. Also due to their lack of correlation, the potential negative implications of a well-defined Feeling preference on career decision self-efficacy and decidedness echoed Friedman's work (2004). Conversely, the potential negative impact of E on career decision making tends to run counter to other researchers' findings explored in the next section of the literature review. With an Israeli sample that has served in the military, one is reminded of Jung's discussion of how the utility of a particular personality preference is potentially shaped by its particular cultural and historical context (1946, 1971) as well as this being more of a young adult versus emerging adult sample.

Decision making and Introversion-Extraversion. In looking again at the introvert-extravert divide, Shiomo (1978) found in an earlier study with a sample of undergraduates that, with respect to decision making, introverts took longer to answer questions under an "ego oriented" condition. Shiomo correlated decision times with two separate measures of extraversion and found high correlations between the measures of volunteers' extraversion and decision making time under separate task and ego oriented conditions. In other words, answer

times for high extraverts were similar under both conditions and similar for low extraverts under both conditions. Conversely, for high introverts, their decision making time differed significantly as a function of the testing conditions (task vs. ego oriented). The researcher hypothesized that the ego orientation of the testing environment created stress for the introvert and increased difficulty responding compared to the extraverts who responded similarly across testing conditions. This study attempted to bridge personality and social psychology research in accounting for persona (trait) and context (testing condition).

From an Eriksonian perspective, one's sense of self is under revision during the developmentally sanctioned crisis of emerging adulthood. This study suggested that conditions can complicate individuals' ability to decide or delay their responding by trait. By extension, delayed decision making could translate to less advanced identity statuses in avoiding exploration and the decision making process entirely (via diffusion) or prematurely deciding due to the anxiety generated (foreclosure). These findings suggest a more complicated journey toward an achieved status for students with well-defined preference for Introversion compared to extraverted individuals. Interventions, framed by the particular challenges more often encountered by students who favor Introversion, may normalize the anxiety associated with this normative developmental task on their way towards adult commitments. Timely career or personal counseling could serve to teach more adaptive self-talk with regards to this developmental stressor.

In considering decision making for introverts in contexts where one's sense of self is in question, these findings may encourage clinicians to attempt to shape career counseling as more explicitly task versus ego oriented (Smith, 2006). In more contemporary research, task oriented conditions focus on mastery of a particular skill and deemphasize focus on one's self worth. This

approach may decrease potential anxiety and judgments about the self that introverted individuals may experience. According to these findings, extraverts may be inclined to take an externally oriented task focused approach with their decision making with less self-focusing compared to introverts (Shiomo, 1978).

Using ANOVA's, Heaton and Kruglanski (1991) also examined decision-making propensities of introvert and extravert college students who took introductory psychology classes at the University of Maryland. They found that under time constraints and in ambiguous situations where there was uncertainty as to how to behave, introverts were more likely to seek closure and base their decision making on early presented and more stereotypic information when compared to their extraverted classmates. Extraversion and introversion was measured with the Eysenck Personality Inventory (EPI) with the top third on the measure representing extraverts and the lowest third representing introverts (Eysenck & Eysenck, 1964). Threat processing, sensitivity to errors and negative affect with decision making have also been exhibited by introverts, more recently, in two studies by Robinson, Meier, Wilkowski, and Ode (2007).

Choosing a major and/or career path has a component of time pressure and career decision making and the adoption of adult commitments represent novel, ambiguous and often confusing experiences for emerging adults (Arnett, 2004). These challenges often prompt undergraduate to seek counseling or career services (Benton et al., 2003) although introverts are less likely to utilize these services (Nelson & Roberge, 1993). Additionally to this point, while Sundermeier (1998) found no differences in career decidedness in a sample of college-attending emerging adults, introverts in the sample exhibited more state anxiety in face-to-face career counseling sessions compared to extraverts as measured by the State-Trait Anxiety Inventory

(STAI; Spielberger, 1983). The sample was 113 college students from a midwestern university who were offered the opportunity to volunteer for career counseling for extra credit. In light of the statistically significant difference in anxiety for introverts, one may wonder about those introverts who opted out of the study due to the anxiety they anticipated the encounter might provoke. Seeking closure could predispose students who privilege their inner experience to forego adequate exploration opting instead for a foreclosed ego identity states compared those who look outward. Introverts may temporarily abandon the decision making task entirely in opting for an extended diffused identity state if struggling to manage the anxiety provoked as a function of an ambiguous decision.

Research suggests that individuals who exhibit high preference Introversion, because of their turning inward and relative disinclination to connect to the outer social world, would seem to be overrepresented in the group that avoids seeking out services, and possibly, participation in research. This untapped group of introverts, who are part of a broader college-attending population, may look very different from the introverted individuals who, by their own volition, are willing to darken the doorways of a career services or counseling center despite their anxiety. Because of a potential underrepresentation in the researchers' samples and amongst those that receive services, researchers may know less about the identity development of introverts, who appear to struggle comparative to extraverts with a number of aspects of decision making, and potentially by extension, identity development. Research focusing on individuals who withdraw from college would tell us more about how the developmental process goes awry. Compared to face-to-face administration, which may potentially provoke anxiety, the online administration of the instruments with this proposed study may prompt greater enrollment of students who favor extraversion (Sundermeier, 1998).

In looking more globally at the E-I results, Friedman's (2004) study suggested that introversion (along with a thinking preference) qualitatively improved one's judgment, while Shiomo (1978) and Heaton and Kruglanski (1991) manipulated decision making conditions in ways that negatively impact introverts compared to extraverts under the same conditions (i.e., ego orientation, confusion or time constraints). In addition, Sundermeier found that those that favor Introversion exhibited significantly more state anxiety in the face-to-face career guidance process.

The fact that the introverts in the more clinical studies would seek out career counseling, despite increased anxiety in these face-to-face interventions, may also be a sign that the anxiety that came up in going to a center was less than they experienced in the normative identity crisis. Introverts in this subsample of college students may be more suggestive of the individuals experiencing the negative contextual effects described by Shiomo (1978) and Heaton and Kruglanski (1991), rather than the more mature highly reflective thinker-introverts from Friedman's (2004) study who made their way to graduation and a more likely achieved identity status.

Taken together these four studies suggested that introversion can alternately affect an individual's decision making in ways that extraverts are less effected, both positively and negatively. These contrary findings may be an artifact of the different samples from the studies with Friedman employing older recent graduates who could be more likely to have developing a better understanding of their preferences on their way to an achieved status. The sample for this current study is weighted toward students early in their college careers and may provide a better snapshot of the relative impact of introversion on exploration, commitment and identity development for an early college-attending emerging adults. Taking these findings as a whole, it

appeared that well defined preference for Introversion may complicate the identity development process via increased diffusion or foreclosed statuses. These students may experience greater challenges due to increased anxiety or self-focusing compared to their more well-defined extravert peers. As will be discussing in the implications section, the combining of particular well-defined preferences, over other combinations, may suggest easier movement towards explored commitments for emerging adults. Having discussed the extraversion-introversion divide, the impact of other MBTI preferences on aspects of decision making will be examined.

Combination of preferences, decision making and problem solving. In turning to research on other preferences, with a sample of 80 college students and recent college graduates who represented well defined MBTI preferences on the Intuition-Sensing (N-S) and Judging-Perceiving (J-P) continuums, Hunter and Levy (1982) examined the four different possible combinations' (i.e., NP, NJ, SP, SJ) performance on the Dunker's Box Problem and Witkin's embedded figures problems. In the Dunker's Box Problem one is challenged to use a box top and tacks to fix a candle to the wall without dripping wax on the floor while in the Witkin's embedded figure problems one is asked to identify shapes embedded in a distracting gestalt. They found that on the Dunker's Box Problem NJs listed a statistically significant greater number of solutions compared to the SJs. The researchers felt NJs improved performance would be a function of the Ns ability to see beyond the literal aspect combined with the Js orderliness. On the embedded figure problems NPs outperformed SJs hypothetically because of their spontaneity and flexibility, where the SJs may have gotten bogged down by their concrete and systematic orientation. There were no significant effects for gender or interaction effect based on preference and gender.

These results also suggested that there are measurable differences between the preferences on various problem solving tasks that relate predictably to established characteristics of the types. The career decision-making process embedded within the larger task of identity formation could thereby be impacted by some of these same dynamics. Particular to Hunter and Levy (1982), the Sensing individuals' literalness did not improve their performance on either of the tasks with Sensing types producing fewer viable solutions. One could hypothesize that because this preference was more likely to focus on concrete information and lack a flexible perceiving style, they may demonstrate a propensity towards less exploration and higher rates of foreclosed status. In considering these features, a strong Sensing preference could slow the movement towards the more advanced identity statuses (i.e., moratorium or achieved). Having reviewed literature that has primarily focused on aspects of decision making in young adults, what follows next is a brief review of the rather extensive research on the MBTI preferences in the business and management literature.

MBTI Personality Preferences and the Business Management Literature

The MBTI continues to be a popular measure in the private sector and business world and as a result there were many articles within the literature on management style, competence and decision making that explicitly employed the MBTI ("CPP: The People Development People," n.d., para 1). Because this literature focused on aspects of decision making and the MBTI is often referenced in the business management literature, it was examined to identify how the findings regarding the personality preferences and decision making might help shape the hypotheses for this current study. The clear differences regarding the samples used in the business management literature and identity development research will be addressed after the literature is discussed.

Taggart and Valenzi (1990), in the development of a Human Information Processing Survey (HIP) took the MBTI preferences for Thinking and Intuition and developed three subscales each from these preferences (logic, planning and ritual from Thinking and insight, vision and feeling from Intuition). The researchers hypothesized these subscales' relationships with the more established MBTI. They found that the HIP Feeling scale correlated positively with MBTI Extraversion ($r = .32$) and negatively with MBTI Introversion ($r = -.31$). Their Logic scale correlated positively with MBTI Sensing ($r = .50$) and negatively with MBTI Intuition ($r = -.52$). Conversely, Vision correlated positively with MBTI Intuition ($r = .41$) and negatively with MBTI Sensing ($r = -.44$). There was a positive correlation between HIP subscale of Ritual, which describes using established principles and conforming to objective reality, and MBTI Thinking ($r = .22$) while Ritual was negatively correlated with MBTI Feeling ($r = -.21$). Planning correlated positively with MBTI Judging ($r = .63$) and negatively with MBTI Perceiving ($r = -.59$), while conversely, Insight correlated positively with MBTI Perceiving ($r = .41$) and negatively with MBTI Judging ($r = -.41$).

The proposed and hypothesized relationships between the respective measures' constructs were supported by the analysis. While the measure was created from the management literature, the HIP constructs of feeling, logic, vision, ritual, planning and insight relate meaningfully to the MBTI and highlight how variations in information processing may be impacted by or reflected through stable personality preferences. Because this measure comes from the more pragmatic business literature, the purpose was to create a deliverable that could be used to explicitly shape information processing and decision making through awareness one's propensities. Much like the MBTI, the notion was that no information processing style was correct to the exclusion of the others, but rather, that developing awareness of the preferences,

both within individuals and within work teams, improved decision making. The greater awareness may help identify the growth edges of individuals and work teams that employed an imbalanced information processing style.

MBTI preferences and business simulation decision making. Building from the earlier work of Haley and Stumpf (1989), Stumpf and Dunbar (1991) investigated how certain type combinations potentiate biases in decision making in a business management context. They used a well-studied business simulation, The Metrobank Simulation, (Hartman & Stump, 1986) to categorize the decisions with 407 middle and senior managers from 117 corporations who attended executive development programs focused on strategic planning. The average age of participants was 40.4 years ($SD = 7.9$ years) with 10.6 years ($SD = 6.2$) of work experience. As to the results, STs took more actions suggestive of a selective perception bias (i.e., low risk, quick fix), NTs exhibited a positivity bias (i.e., overemphasize positive aspects and underemphasize the negatives), SFs demonstrated a social desirability bias (i.e., social approval overly impacted decision making), and NFs displayed a reasoning by analogy bias (i.e., too often compare current issue to another situation).

In terms of implications, the authors recommended that business decision makers develop an understanding of their preferences and potential bias and they suggested strategies that could help bring those biases to the awareness of the managers (Stumpf & Dunbar, 1991). These same potential biases could affect young adults' career decision making and identity commitments. A quick fix approach (selective perception bias), failure to consider potential negative consequences (positivity bias), seeking approval from others (social desirability bias) or unduly comparing one's situation to someone else's (analogy bias) could all impact the necessary exploration indicative of an achieved status. This study lent further credence to the notion that

personality constructs, as measured by the MBTI, consistently impacted information processing and decision making in predictable and meaningful ways.

Similarly, Hough and Ogilvie (2005), with their use of another well-established business simulation (Looking Glass, Inc. Behavioral Simulation, Van Velsor, Ruderman, & Phillips, 1989), found that NT managers used objective data to make intuitive leaps for higher quality decision making when compared to NF, SF or ST type combination managers. SFs made the fewest decisions during the simulation and this was again hypothesized as being a function of seeking social approval for their decisions, while the combination of analytical thinking with intuition (NT) performed best among the four possible types. Their sample consisted of 749 experienced managers from a variety of industries who attended executive training programs offered by the Center for Creative Leadership. These results mirrored the earlier discussed findings from Friedman (2004) on intuitive thinkers and higher levels of reflective judgment with older college students and recent college graduates.

The J-P continuum did not impact decisiveness or perceived effectiveness but, when being rated by other managers in the simulation, Thinking and Extraversion managers were perceived as being more competent than Feeling and Intuition managers even when there were no differences in decisiveness. As an important note for clinicians, the greater perceived effectiveness of the decision making of Thinking and Extraversion oriented individuals, compared to Feeling and Introversion oriented individuals, may belie actual decision making difficulties or abilities. High preference Ts and Es may more logically or comfortably express themselves compared to Fs and Is. Well defined Fs may favor their subjective appraisal over a more objectively or impersonal perspective while Is may more likely struggle expressing their internal thoughts or feelings to others. With Erickson's (1959, 1968) discussion of the

recognition or acceptance of the greater community as confirmation of a viable identity, Ts and Es may have an easier time garnering this acceptance, compared to Fs and Is, because of how these preferences are perceived by authorities in the community. In thinking about emerging adulthood, these findings suggest that NTs may naturally gravitate toward higher identity statuses and SFs may overly depend on outside sources of approval for their decision making. The results also suggest that personality preferences effect how one is perceived even when demonstrating like capacity with regards to decision making. Overall, with samples of trained and experienced business managers, Stumpf and Dunbar (1991) and Hough and Ogilvie (2005) demonstrated how personality preference differences impacted decision-making style.

Literature review of the MBTI studies in the management literature. Having taken a look at a few of the studies on the MBTI, information processing and decision making, Gardner and Martinko (1996) provided a critical and comprehensive review of the research on the MBTI preferences noting the best supported and most meaningful findings. For the studies they included, these researchers analyzed the psychometric properties of the instruments, their research methodologies and samples employed in their effort to categorize the findings and sift out both the best and least well-designed studies. I will note the most strongly supported findings that were of particular significance to the present study.

Gardner and Martinko (1996) found that intuitive managers engaged in strategic planning more often and more frequently than sensing managers. Here again the researchers noted the Ss lack of forward vision in focusing on more immediate and concrete data. This suggested increased foreclosure for Ss and increased moratorium for Ns in that Ss may decide without adequate exploration with the potentially limited data at hand, while Ns penchant for future planning suggested the increased exploration indicative of a psychosocial moratorium. In accord

with the preferences' descriptors, they also found that T managers engage in impersonal and analytical decision making and also tended to be more assertive in managing problems, whereas Feeling oriented managers used affect and exhibited more subjective responses and were more inclined to accommodate others with their decision making. Predictably, this finding was echoed by Stumpf and Dunbar (1991) and Hough and Ogilvie (2005).

Students who express well defined thinking preference, with their more objective tact may demonstrate an improved ability to navigate the interpersonal pulls associated with forging one's own meaningful adult commitments. This capacity may incline them toward a more readily achieved status while this process may be more challenging for emerging adults with Feeling orientation. The feeling oriented individual's focus on the subjective with their decision making could predisposed towards them foreclosure when feeling pulled in different directions or when pressed with the need to accommodate others. The social dilemma implicit in career decision making conjures images of the demonstrative advice Dustin Hoffman receives at his college graduation party scene in the movie, *The Graduate*, that culminates in the famous phrase: "one word...plastics" (Nichols, 1967). Without speculating on his personality preferences, in the movie, Hoffman's character, Benjamin, opts for an extended period of diffusion poolside in his parents' backyard.

Additionally from Gardner and Martinko (1996), SFs perceived low risk and were risk tolerant compared to STs who were more inclined to identify risks and were highly risk aversive. SFs may move more quickly towards a decision whereas STs forestall decision making because of being overly sensitized to the risk taking inherent in deciding. STs may avoid risk entirely by remaining in the more avoidant state of diffusion. Regarding risk taking and aversion, NTs and NFs were positioned between these more extreme poles of the SFs and STs. Other findings of

potential import from the literature review were that dominant Ss take more time and are more confident in their decision making compared to Ns. Here Ns may have relatively more difficulties making a commitment due to the kinds of data they seek, compared to the more concrete Ss, which would be suggestive of increased rates of moratorium for Ss and increased rates of diffusion for Ns.

Within the literature review the researchers also found, that predictably, individuals who favored Extraversion were more active, assertive and social, while individuals who favored Introversion were more avoidant and employed more accommodation. These findings cohered with the MBTI descriptions. Here again one also saw elements of avoiding commitment or relying on authority figures to help make decisions for high preference Is (i.e., diffusion, foreclosure or overly extended moratoriums) compared to the more active and help seeking Es. These findings were echoed in the research on emerging adults and they again suggest that Is route may be more complicated or circuitous compared to high preference Es. Lastly and predictably, individuals who favored a Judging preference behaved more orderly and methodically, while those who were Perceiving oriented were more spontaneous and flexible; again these finding cohered with the hypothesized constructs underlying the MBTI. This finding suggested extended exploration and moratorium with high preference Ps students and a more systematic process of exploration or deciding more quickly with Js (either achievement or foreclosure).

Gardner and Martinko's (1996) surveyed the best designed studies from the management literature and provided the strongest findings regarding the MBTI preferences and decision making. They found consistent and meaningful results regarding the preferences' relationships to decision making processes in a number of well-designed studies. In considering the decision

making involved in exploring and making commitments to adult values, beliefs and career goals, collectively these findings helped to establish the meaningfulness in asking about the potential relationships between the personality preferences and the identity status. Having discussed these findings, it is important to recognize limits to generalizability of these findings with college-attending emerging adults.

Issues with comparing business literature and emerging adult samples. In reviewing the business and management related research, it is important to note that the samples for the vast number of management studies were middle adult managers. These samples differed significantly from the predominantly emerging adult college students typically represented in the studies comprising the identity development and career decision-making literature. As a result of these differences, the business/management findings are not directly generalizable to this studies question regarding the relationships between personality preferences and identity status.

The management literature likely underestimates the potential impact of MBTI personality preferences on decision making because, regardless of personality preferences, middle adult and mid-career managers have significantly greater work and life experience compared to early career college students. They have also received education and training in effective decision making when compared to the experiences of late adolescent and emerging adult undergraduates. They are clearly different samples with regards to lifespan development, yet significant, reliable and meaningful differences were found with regards to personality preference and decision making with the older samples of business managers.

To this end Haley and Stumpf (1989), suggested that preferences influence cognitive styles but managers should be adept at switching between cognitive styles depending on the situational requirements of the task. By extension they would like be more adept at utilizing their

preferences than emerging adults. They note that effective information processing and decision making represent central and vitally important management job duties. Conversely, emerging adults are in the process of learning and testing more independent decision-making strategies. As a result, they would be more likely to struggle with fully utilizing their well-defined preferences' strengths or employing a secondary preference due to a lack of awareness, the inherent newness that comes with the more independent decision making of young adulthood and the qualitative difference in the kinds of decisions being made in late adolescence and emerging adulthood compared to childhood. As Myers and McCaulley (1985) suggest with the MBTI's grounding in Jungian typology theory, over time and with maturation individuals become more aware of their preferences. As a result, they become better at recognizing their potential perceptual and judgment biases as well as utilizing their preferences' strengths. With maturity, one grows more adept at shaping one's responses and utilizing an auxiliary preference to balance the most strongly defined preference (Jung, 1971).

As to the malleability of the MBTI constructs, the notion of flux is interesting with emerging adults due to the relative fluidity of the developing self through late adolescence, emerging and young adulthood. This point is supported by the findings that older adults produced more reliable test-retest results on the MBTI, although as the theory underlying the instrument would predict, the most clearly defined preference was the most stable (McCaulley & Moody, 2008; Myers & McCaulley, 1985; Myers et al., 1998). The increased reliability with age was hypothesized to represent the greater awareness of preference for older samples when compared to the relative malleability of younger test takers' personality preferences. A study examining a number of well-established personality instruments suggested that the later in life an individual took the inventories the more stable their responses were over time (Schuerger, Tait,

& Tavernelli, 1982). These findings support the notion that measures of personality become more characterologically stable (or fixed from a classically dynamic perspective) as one matures. From an Eriksonian perspective, this finding also makes sense in considering the increased propensity for vacillation and less stability of the self during the crisis of identity development.

Understanding the potential interaction between these personality preferences and identity statuses could influence the interpretations of commonly employed career assessment instruments. To this end, Blustein and Phillips (1990) wrote, “It is thus conceivable that some aspects of individual variations in decision-making strategies may not be best understood as intrinsic traits, but rather they may be manifestations of expected developmental processes” (p.167). This point echoes Erikson’s notion of the particularity of the developmental challenges of ego identity development that manifest in late adolescence as part of the unfolding of the epigenesis of development across the lifespan. This proposed study is examining personality preferences at a crucial time in an emerging adult’s development using Erikson’s theory as theoretical framework. Having discussed the theory regarding the relationship between the demographic variables of interest and ego identity status in Chapter 1, the next section contains a review of relevant empirical studies on the demographic variables and ego identity development.

Identity Development and Gender

In looking at studies that examined demographic differences, the vast majority included Analyses of Variance (ANOVA’s) or Multivariate Analyses of Variance (MANOVA’s) to examine the potential interaction of gender, ethnicity and/or age. Therefore, the same studies may appear in several of the three literature review sections dealing with the demographic variables as the research narrative detailing these variables and their relationship to the identity statuses has unfolded over the past several decades. The initial findings regarding differences

between genders and identity statuses had been somewhat mixed with some researchers finding higher rates of movement towards an achieved status in early and middle adolescent females. These findings were hypothesized to be a result of females' earlier physical maturation, compared to same age male peers, and was in accord with the theoretical construct of the identity statuses (Adams, 1998; Streitmatter, 1998).

Conversely, other researchers found no significant differences with an early and mid-adolescent sample (Archer, 1982, 1989; Streitmatter, 1993). Archer employed cross sectional data and Streitmatter used a longitudinal sample. As predicted from Eriksonian theory, with both genders Streitmatter (1993) found a predictable movement from foreclosure to moratorium through the middle adolescent years as these individuals began to question received authority as part of their individuation processes. Despite this movement towards moratorium, the process was not complete during middle and early adolescence as the number of achievement statuses remained small and stable with no significant differences between the genders. Several other researchers found no differences across identity status by gender (Adams & Fitch, 1982; Adams, Shea, & Fitch, 1979; Adams, Ryan, Hoffman, Dobson, & Nielsen, 1985; Archer, 1989, 1992; Bennion & Adams, 1985; Rodman, 1983; Scheidel & Marcia, 1985; Waterman, 1982).

Adams, Shea and Fitch's (1979) original study, with a sample of 48 Freshman at a Southwest university, compared the Marcia semi-structured interview with the newly developed Objective Measure of Ego Identity Status. The researchers found no main effect for gender and no interaction effect for gender and identity status. The authors concluded that the measure had utility for assessing identity status for both genders. In the most recent norming of the OMEIS, no significant gender differences were found (Adams, 2010). With another young adult college-attending sample (75 females, 76 male), Bilsker, Schiedel and Marcia (1988) found no

differences between the genders' representation in different statuses using the earlier interview version of the OMEIS, but they did find gender differences based on particular domains in the interview. In examining the concordance between domain status (i.e., interpersonal and ideological) and overall status, the researchers found a higher concordance between the interpersonal domain and overall status with women and the ideological domain and overall status with men. Contrary to their hypothesis, the occupational domain did not differentiate between genders.

These findings lend some support to the theoretical work of Gilligan (1983) and Belenky, Clinchy, Goldberger and Tarule (1986). Gilligan's theory regarding female identity development was incorporated into an early revision of the quantitative measure of identity status with the creation of the independent ideological and interpersonal subscales as well as an overall, or combined, identity status score (Grotevant, Thorebecke, & Meyers, 1982). That earlier version of the measure has evolved into the most current version of the OMEIS, which is being used in the study, and has now returned to a singular ideological domain. It is important to note that with the vast majority of the early studies on identity status, the ethnic representation of the sample was often not reported or the samples were almost entirely White, so the potential impact of this variable was masked in the early research.

In reanalyzing the results of one study with an evenly split gender sample of 160 6th, 8th, 10th and 12th graders, Archer (1989) found no significant differences between genders on the process, timing or domains of identity development from early to late adolescents. She replicated the study with two other similar samples and found minimal differences with those samples. In these studies she employed Marcia's interview, for which there are moderate to strong correlations to the OMES, to assess identity status (Adams, 1986). In light of the minor

differences and contrary to her research hypotheses she wrote, “These adolescent females did not put aside identity tasks because of their interpersonal concerns. These adolescent males did not forge ahead with regards to self-definition” (1989, p. 136). It may be that Erikson discussion of inner and outer space has become less relevant as stereotypical gender roles have loosened in the U.S. during second half of the 20th century.

In a chapter summarizing the gender research, Archer (1992) wrote that both genders used the processes of exploration and commitment similarly and that the timing of their identity development was comparable while noting some minor differences in reaching an achieved status in the interpersonal versus ideological domains. Despite the potential relational and individuating differences between women and men, their developmental trajectory looked more similar than dissimilar from the perspective of the identity statuses.

In his literature review Waterman wrote that the empirical measures of identity status indicated few differences between males and females and he found far more similarities than differences (1982). He noted both Erikson’s discussion of biological differences and Erikson’s writing that both genders could undergo similar experiences with crisis and commitment. In reviewing the research on gender and how it had evolved over several decades, Waterman contended that gender differences, when found, could be interpreted as culturally influenced. It may be as Erikson initially believed that in social-historical contexts which permit, and despite the influence of biology, both sexes are able, “to make use of, to share, and at times to imitate, the configurations most typical of the other sex” (1975, p. 233). While there were studies that identified some differences between genders with regard to the relative importance of the interpersonal versus ideological domains, the majority of studies pointed to there being little or no differences between genders.

With the proposed study sampling a public institution where enrollment is greater than 50% female, gender differences may have further receded in considering the socio-historical developments over the past 30 years (Hotchkiss, 2009; “Women more likely,” 2009). College attendance is seen to spur on identity development with emerging adults of either gender because of the opportunity and encouragement to explore one’s career options and the exposure and interaction with alternative belief systems and world views both in and outside of the classroom (Arnett, 2004).

In studies that focused on career choice, political or religious beliefs or values, the ideological domain of the OMEIS was primarily used, whereas studies that focused on relationships and dating employed the interpersonal half of the instrument. Because the newest iteration of the OMEIS (Adams, 2010), which will be used in this study, has returned to a singular focus on the ideological domain, it would be even more likely to find no significant differences between the genders on the measure with college-attending young adults.

Despite the lack of significant differences by gender, it should be noted that there were detractors for the ideological and interpersonal dichotomy who called for a change in methodology and a revisioning of identity on epistemological grounds (Cushman, 1990; Gergen, 1982). While this debate continues to unfold in the social sciences, this current study was admittedly grounded in the quantitative and positivistic traditions and attempted to account for these potential differences from within those empirical camps. The theory section on the demographic variables introduced a discussion of the limits of a quantitatively driven discourse based on a natural sciences model. It served as a brief recognition of how research findings are inevitably informed by the epistemological assumptions that underlie the methodology.

Identity Status and Ethnicity

Before investigating the relevant literature on the relationship between ethnicity and identity status one should clarify how the term ethnicity is understood. As per the American Psychological Association's definition in the multicultural guidelines, ethnicity refers to an individual's self-identification or "the acceptance of the group mores and practices of one's culture of origin and the concomitant sense of belonging" (2003, p.378). Attention to ethnicity is of greater importance in considering the increasing diversity of both the United States, and by extension, the newest generations of college-attending students in the U.S. (Stone & Archer, 1990).

Evolving domains of identity development. With an attention to the impact of ethnicity on the construct of identity status, Marcia (2001) noted in review of the identity status literature that the domain content may evolve over time. This was the case when the scale was modified to be more representative of women's experience after being in use for five years. Marcia attempted to capture meaningful identity domains with the semi-structured interview. Researchers are currently asking if the OMEIS adequately represents those domains for diverse groups or if diverse groups produce reliably different results as a function of their experience or as a function of how the constructs are operationalized.

Marcia conceded that the process of identity development, and what constitutes an achieved status, may be different for different groups. He wrote, "The validity of the extension of the identity statuses to other ethnic-cultural contexts is still an open question...How and whether they apply to other contexts is a question for research" (2001, p. 6). While recognizing the limitations of the available sample, this proposed study helped to further explore the intersection

of ethnicity and identity development. To that end, the focus will turn to quantitative studies that have previously addressed this question.

In looking at ethnicity as a variable of interest, the mass of earlier research prior to 2000 primarily used largely homogenous samples of students who identified as White, or simply failed to report the demographics of their samples (Rotheram-Borus & Wyche, 1994). Schwartz and Montgomery (2002) raised the question of how ethnicity may differentially impact identity development. More specifically, they looked for possible interaction effects between gender and ethnicity on the joint Erikson-Marcia construct of identity status. With a decidedly more ethnically diverse population sample (i.e., only 12.6% White), Schwartz and Montgomery (2002) found significant differences for gender on five of the eight possible categories on the EOM-EIS-II (four statuses X two subscales for eight possible outcomes).

With an urban southwest adolescent sample with 60% of the participants identifying as White ($N = 367$), Streitmatter (1988) found differences in both the ideological and interpersonal domains of the EOM-EIS. White participants showed lower rates of foreclosure compared to minorities in the aggregate, while non-White females had the highest rates of foreclosure. This study produced a finding with regard to ethnic differences where a subgroup of minority females had the lowest rates of identity achievement while females, taken as a group, showed the highest rates of identity achievement.

Markstrom-Adams and Adams (1995) found that in an ethnically diverse sample of 143 African American, Native American, Mexican American and White 10th-12th graders, the participants who identified as White scored lower on foreclosure than all other diverse ethnic groups on the ideological portion of the EOM-EIS, but that all ethnic groups scored similarly on the interpersonal half of the measure. These authors speculated that this ideological difference

was a function of more collectivist and family-driven values as compared to the White participants who may more commonly promote autonomy and independence as a function of a more individualistic orientation. The findings regarding increased foreclosed identity status for minorities have been replicated by other researchers suggesting that minorities were more likely to accept identity elements from significant adults compared to Whites, there were fewer opportunities for achievement for culturally diverse individuals, or alternately, that normative identity development for minorities was not adequately measured via the OMEIS (Abraham, 1986; Phinney, 1989; Streitmatter, 1988).

Additionally, Markstrom-Adams and Adams (1995), controlled for SES and differences by ethnicity remained. Including SES may further nuance the picture with regards to identity status and ethnicity (Rotheram-Borus, 1989; Rotheram-Borus & Wyche, 1994). Rotheram-Borus and Wyche (1994) also pointed out the potential impact of degree of acculturation and ethnic identity on more classical notions of identity development. In considering these within group differences, the question of how group membership is constituted becomes more muddled. This study will follow the precedent of previous quantitative research while recognizing categorical definitions of ethnicity as a limitation of research that examines individual differences. These limitations qualify what can be said about the meaning of these differences and will be further discussed in the appropriate section.

Ego and ethnic identity development. Despite these issues, Markstrom-Adams and Spencer (1994) stressed that, while socio-cultural factors may shape the developmental process differentially for different groups, the dual constructs of exploration and commitment remain viable in both the Erikson/Marcia and more contemporary ethnic identity models. Phinney (1989) wrote that the Erikson/Marcia model represented a useful starting point for the

conceptualization of ethnic identity with ethnic identity models also assuming an exploratory period for individuals' relationship to their ethnicity to evolve. Phinney and Ong (2007) continue to espouse this position.

In her study, Phinney (1989) found significant group differences based on ethnic identity development and identity status with an ethnically diverse urban adolescent sample ($N = 91$). Interestingly the White students' results were not included because, apart from a few participants who identified with a particular European country of origin, as a group they did not see themselves as having a unique ethnic identity. The students who identified as White had either not examined their ethnic identity as a function of being in the majority culture, or their ethnic identity was not adequately measured by the modified Phinney and Tarver interview (1988). This may echo the experience of minorities when measured on instruments normed primarily on samples of individuals who identify as White. It was not until the mid-90s that a measure of White racial identity was developed (e.g., Helms, 1995 or Choney & Behrens, 1996).

In more recent research Branch, Tayal, and Triplett (2000) examined the interaction of ethnic identity and identity status with a diverse sample of 248 urban adolescents, emerging and young adults. The sample was broken down into three age groups (13-19, 20-23, and 24-26) and five ethnic categories (African American, Asian/Asian American, Euro-American, Latino/Hispanic and Other). The researchers only found a significant relationship between ethnic identity, as measured by the Multigroup Ethnic Identity Measure (MEIM, Phinney, 1992), and identity status with a diffused identity status. Conceptually this means that those who lack an explored and established ethnic identity were also in a diffused ego identity status (i.e., low exploration and low commitment). In contrast to their research hypotheses, the researchers found no significant differences between the identity statuses and the particular ethnic groups. Lastly,

they also found no relationship between the ethnic identity and ego identity measure at the higher identity status levels (i.e., moratorium and achieved). This suggested that the respective higher statuses of these two constructs may not be dependent on or related to each other. Therefore an achieved identity status may not necessarily have a meaningful relationship with a more advanced ethnic identity. The significant caveat to this study is that it was a mixed college and non-attending sample with the emerging adults. This variable would likely impact both ego and ethnic identity development due to the exposure to different values and worldviews and varied opportunities for exploration typical of a college classroom and campus.

With respect to individuals from diverse groups, Branch et al. (2000) concluded, “It appears that ethnic identity and ego identity status are fostered by two different sets of conditions. Conceptually it is also more possible to live effectively in American society without ever having to forge an ethnic identity” (pp. 788-789). The researchers suggested that one can function at high levels of ego identity status without attending to the question of ethnic identity.

Alternately, as Phinney (1989) demonstrated with the inability to classify White adolescents according to ethnic identity, and before the creation of the White Racial Identity Scale or the Oklahoma Racial Attitude Scale (Helms, 1995; Choney & Behrens, 1996, respectively), a lack of exploration of ethnic identity may be more a function of White privilege (Kendall, 2006). Ethnicity may not represent a problem to be solved or a part of self to understand for the individuals who identify as White if ethnicity is defined as other to an invisible, and assumed normative, White baseline. This lack of exploration of the question of ethnicity would be harder or impossible to avoid for individuals defined as other to the majority culture. Being defined as other and daily confronting the awareness of one’s ethnicity, as a minority living in a country which continues to struggle with issue revolving around race and

racism, may help explain the variable findings regarding the processes of ethnic identity and identity status for majority and minority culture individuals.

It may be possible to achieve a more advanced ego identity status without a complementarily advanced ethnic identity status, but adequate support is lacking to determine if exploration of one's ethnic identity fosters ego identity development. Answering these compelling set of questions represents another line of research. The relationship between these corollary development models remains an area where the findings, underlying theory and emphasis of the profession of Psychology are currently in flux. In the least this study hopes to account for the influence of ethnicity statistically, where earlier studies often failed to ask about or account for this important variable at all. Having explored the more mixed and still evolving literature on the potential impact of ethnicity on identity status, the next section focused on empirical findings regarding the demographic variable of age.

Identity Status and Age

Among the demographic variables of interest here, the studies on the impact of age on identity development with adolescence, emerging adults and young adults offered the most consistent findings. As hypothesized by the construct of ego identity development, Markstrom-Adams & Adams (1995) found there was a predictable movement towards higher levels of ideological achievement with an ethnically diverse sample of 10th to 12th graders. In returning to an earlier meta-analysis containing studies from 1966-1993, Meeus, Iedema, Helsen, and Vollebergh (1999) divided the samples into two groups, high school and college aged, and found a greater decrease of diffused statuses in the high school sample, suggesting that they were beginning the process of identity development. The researchers also found a greater decrease in

foreclosure and increase in achievement with the college samples suggesting a continuation toward more advanced statuses with the relatively older college-attending samples.

In the original combined sample of the high school and college studies, Meeus (1996) found an increase in achievement and moratorium or a decrease in foreclosure or diffusion in 77% of the studies with progressively older samples. The meta-analysis pointed to an identity developmental trajectory that evolved from early adolescence through late adolescence and emerging adulthood into young adulthood with greater rates of the more mature statuses (i.e., Moratorium and Achieved) predominating at the older ages. These findings supported Erikson's conceptualization that as adulthood approaches there was an increased pressure to give up childhood identifications for more mature adult commitments (1968).

Similarly, Streitmatter (1993) followed two cohorts from 7th and 8th grade to 10th and 11th grade respectively in a Southwestern urban school to study the developmental trajectory of identity statuses. He reported results that were consistent with Erikson's theory (Streitmatter, 1993). More specifically, rates of foreclosure and diffusion decreased significantly over the two time periods while rates of moratorium, operationalized as the degree of exploration of values, beliefs and career goals, increased and the rates of achievement remained stable. As suggested by the results, participants were moving from unexplored commitments (i.e., foreclosure) towards exploration while not having matured enough, by 10th and 11th grade in high school, to consolidate that process with an achieved status. As hypothesized and demonstrated from this study, the most advanced identity status may not fully emerge until later adolescence and/or emerging adulthood. In an earlier study, Streitmatter (1988) found similar results regarding grade level with increased rates of achievement and moratorium statuses with the older group and increased number in a diffused status with the younger group.

In turning toward the emerging and young adult population, Waterman, Geary and Waterman (1974) found a steady increase in the achieved status using McNemar's test (similar to Chi-squared) over the course of the students' time in college. Additionally, an achieved status was the most stable of the statuses while diffusion was the least stable. They compared the longitudinal development of college students from freshman to senior year using the original Identity Status Interview as their measure. These early findings also support Erikson's notion of the trajectory of identity development into young adulthood.

With a cross-sectional design to avoid the possibility of a cohort effect, Adams and Fitch (1982) also found hypothesized changes that were consistent with Erikson's theory. In their study the vast majority of the 148 college students in the study remained stable or advanced with respects to their identity status in comparing each progressive class as well as with each class's initial and end of year retest. In another cross sectional study with a wider age range (broken into grouping of 12, 15, 18, 21 and 24 year olds with 25 participants in each grouping), Meilman (1979) also found a large and statistically significant increase in the number of individuals in an achieved status and a significant decrease in diffused and foreclosed statuses at the older age groups. He also found no backsliding from an achieved status with the post college age bracket.

Like the other studies that examined age, this trend supported the hypothesized trajectory of identity status described by Erikson. In a review of the literature Waterman wrote, "The results of numerous studies confirm that, in general, senior men and women [in college] have a stronger sense of personal identity than do their freshman counterparts and that the identity commitments held as seniors are more likely to have been arrived at through the successful resolution of identity crises" (1982, p. 346). Taken solely as a variable of interest, the impact of

age on identity status appeared most definitive, and hence, no hypotheses regarding this variable will be offered.

Interaction of the Variables of Age, Ethnicity and Identity Status

The interaction of ethnicity and age is less well studied, understood and their interaction produced more variable results. Branch et al. (2000) wrote, “The literature suggests that there are pronounced age effects in the development of ethnic and ego identities. In noting the pattern...ethnicity researchers have failed, however, to show that age effects are the same in diverse ethnic groups” (p. 781).

In attempts to redress this gap in the literature, Branch et al. (2000) examined an ethnically diverse urban sample breaking them down into three age brackets (i.e., 13-19, 20-23 and 24-26) for comparison to examine the relationship between age, ethnicity and identity status. They found some significant differences according to age, but contrary to their hypotheses, they found no interactions between age and ethnicity. When looking at post hoc analyses the researchers found that the youngest group was significantly higher on both foreclosure and moratorium. The findings regarding foreclosure support previous findings whereas the findings with respects to moratorium run counter to most previous findings in that moratorium was seen as a movement towards exploration and a more advanced identity status. This anomalous finding may be a function of the impact of the variable college attendance of the 20-23 and 24-26 year old groupings. Whereas the majority of studies on emerging adults and identity statuses generally only sample college-attending individuals at those ages, this was not the case with the Branch et al. (2000) sample. They sampled a non-college attending emerging/young adult population, and this represented a significant divergence from the vast number of studies involving young adults.

Clearly there could be different developmental trajectories for youth (of either gender or any ethnicity) who do not attend college and encounter an environment that more explicitly challenges individuals to explore and develop their ideological and interpersonal commitments. With the process of choosing a major and in being exposed to different values and belief systems both in and out of the classroom, college can spur thinking about possible adult commitments. Additionally, both the cross-sectional and longitudinal studies of college students would necessarily fail to capture those individuals that withdraw from college after their freshman year. The absence of these individuals who leave college could impact the findings with regards to career exploration and commitment. For instance, a death of the primary caregiver could prompt a continued or return to foreclosure with a student needing to come home and provide immediate financial assistance, or alternately, a diffused state could manifest in increased substance use, failing grades and an academic suspension or expulsion. Those that remain successfully enrolled could increase the number of the more advanced statuses (i.e., moratorium and achieved) without accounting for the impact of attrition with college-attending samples.

In summary, the vast majority of earlier studies that examined the chronological trajectory of identity development produced findings that were in accord with Erikson's and Marcia's theory. As more researchers attend to the APA's multicultural guidelines and recognize the importance of recruiting more ethnically diverse samples, or with samples of young adults who do not attend college, the findings regarding age and identity development may become more equivocal. The variables of age, gender and ethnicity will be entered into the first regression model that explicitly examines these variables but they will be controlled for in each of the second runs of the model. If gender is not a significant predictor it will be removed from the models in order to improve cell counts. Because ethnicity remains a variable over which less

can be clearly asserted compared to age and gender, a hypothesis regarding it will be offered along with the other hypotheses related more directly to the preferences.

Research Questions and Hypotheses

In considering the theory of types (Jung, 1947, 1971), its operationalization with the MBTI (Myers & McCaulley, 1985; Myers et al., 1998), the operationalization of identity status (Erikson, 1959, 1968; Marcia, 1966, 1980, 2001) and the research findings on various personality preferences and identity status in the literature review, there were a number of potential relationships between the MBTI personality preferences and identity statuses that served as research questions for this study.

Because the process of identity development, as measured by the statuses, appears to not be differentially impacted by gender and the trajectory of identity development, with respects to age, has been well established, no hypotheses are offered with respects to these more well researched variables. As discussed in the methods chapter, after the initial analysis, which included the demographic variables, gender was removed from the models due to its non-significance in each of the models. However, having reviewed the more mixed literature on ethnicity and ego identity development, one research question was offered with regards to these variables. It is as follows:

Research Question 1: Do ethnically diverse students demonstrate higher rates of Foreclosure compared to White students? Hypothesis 1: Ethnically diverse students, as measured by self-report, will exhibit significantly higher rates of Foreclosure, as measured by the OMEIS, compared to White students.

The research hypotheses regarding the MBTI personality preferences and identity status were as follows:

Research Question 2: Does a relative increase in the strength of the E preference predict significantly increased rates of Moratorium compared to an achieved status? Hypothesis 2: After controlling for age and ethnicity (as measured by self-report), an increase in the strength of the E preference will predict significantly increased rates of Moratorium compared to an achieved status as measured by the MBTI and OMEIS respectively.

Research Question 3: Does a relative increase in the strength of the I preference predict significantly increased rates of Diffusion compared to an achieved status? Hypothesis 3: After controlling for age and ethnicity (as measured by self-report), an increase in the I preference will predict significant increased rates of Diffusion compared to an achieved status as measured by the MBTI and OMEIS respectively.

Research Question 4: Does a relative increase in the strength of the S preference predict significantly increased rates of Foreclosure compared to an achieved status? Hypothesis 4: After controlling for age and ethnicity (as measured by self-report), an increase in the S preference will predict significantly increased rates of Foreclosure compared to an achieved status as measured by the MBTI and OMEIS respectively.

Research Question 5: Does a relative increase in the strength of the N preference predict significantly increased rates of Moratorium compared to an achieved status? Hypothesis 5: After controlling for age and ethnicity (as measured by self-report), an increase in the N preference will predict significantly increased rates of Moratorium compared to an achieved status as measured by the MBTI and OMEIS respectively.

Research Question 6: Does a relative increase in the strength of the T preference predict significantly increased rates of Achievement compared to the other statuses? Hypothesis 6: After controlling for age and ethnicity (as measured by self-report), an increase in the T

preference will predict significantly increased rates of Achievement compared to the other statuses as measured by the MBTI and OMEIS respectively.

Research Question 7: Does a relative increase in the strength of the F preference predict significantly increased rates of Foreclosure compared to the other statuses? Hypothesis 7: After controlling for age and ethnicity as measured by self-report, an increase in the strength of the F preference will predict significantly increased rates of foreclosure compared to an Achieved status as measured by the MBTI and OMEIS respectively.

Research Question 8: Does a relative increase in the strength of the J preference predict significantly increased rates of Foreclosure compared to an achieved status? Hypothesis 8: After controlling for age and ethnicity (as measured by self-report), an increase in the J preference will predict significantly increased rates of Foreclosure compared to an achieved status as measured by the MBTI and OMEIS respectively.

Research Question 9: Does a relative increase in the strength of the P preference predict significantly increased rates of Moratorium compared to an achieved status? Hypothesis 9: After controlling for age and ethnicity (as measured by self-report), an increase in the P preference will predict significantly increased rates of Moratorium compared to an achieved status as measured by the MBTI and OMEIS respectively.

Conclusion

Through this research project, the researcher sought to delineate potential relationships between personality preferences and identity status via an instrument commonly employed with college-attending emerging adults in career and personal counseling. The researcher explored the relationship between the personality preferences and identity status via the OMEIS and MBTI as well as the predictive quality of different demographic factors (e.g., age, gender, and ethnicity).

Because of their wide usage in college counseling settings and the large amount of research focused on this personality measure with this population, there was particular relevance to the, as yet under-examined, relationship between the constructs of personality and identity status. Having researchers employ measures with which clinicians are widely familiar and that resonate with Counseling Psychology's developmental and strength based emphasis should increase the utility of these findings for practitioners. It may also help bridge gap between research and practice in these traditional Counseling Psychology domains.

It may be that the predictive quality of these constructs is more pronounced with particular personality preferences, more suggestive of certain identity states or that ethnicity impacts the expression of personality on development. These findings could offer suggestions for further research to generate better understanding of developmental forks in the road. This research may ultimately increase clinicians' awareness of how personality impacts the development process. Having reviewed selected literature and offered research questions driven by that literature, the next section focused on the design of the study.

Chapter 3

Method

Participants

The participants included in this study were undergraduates ($N = 281$) enrolled in Introductory Psychology courses at a large land grant university in the Southern United States. An estimated 1400 students enrolled in the introductory psychology classes and were potential volunteers. The university is a primarily White institution (PWI) with a sizable African American population (21%). The original intent of the researcher was to include two other land grant PWI's in the study (one Southern Coastal, one Mid-Atlantic). After obtaining IRB approval from these additional two institutions, the Southern Coastal institution was no longer able to participate due to restrictions with their research pool. The Mid-Atlantic PWI, with a possible volunteer pool of approximately 2000 students, only generated twenty-four participants. These twenty-four individuals were not included in the study due to the possible impact of less than 10% of the total sample coming from a different geographic region. There were also concerns regarding other variables of influence with such a small number of participants enrolling from such a large potential pool. Due to these enrollment issues, and the lack of identity status research in the Southern region of the country, the entire sample came solely from the Southern PWI.

Demographic information was obtained (see table 1). All participants provided consent via an electronic consent waiver, included in appendix A, before they took the online assessments. The waiver specified that their data would only be used for research purposes. Professors teaching in the psychology department offer course credit for their students' participation. They routinely offer opportunities to participate in a number of studies for varying

credit over the course of the semester as well as offering non-research related course credit opportunities during the term as well.

Research Design

This study employed a quantitative descriptive design. Heppner, Wampold, and Kivlighan (2008) stated that this research design is used to, “define the existence and delineate characteristics of a particular phenomenon” and “describe the relationship between two or more variables” (p.224). Heppner et al. (2008) wrote that the quantitative descriptive design is commonly employed in counseling psychology research and that this research design is instrumental in developing both remedial and preventative interventions. Interventions employed in university counseling and university career centers to promote exploration and commitment in university students address the continuum of normative and preventative issues to the more remedial extremes of where identity development can go astray. Furthermore, this methodology was situated within Counseling Psychology’s developmental and strength-based focus on intact personalities, utilizing brief interventions while focusing on an educational setting (Gelso & Fretz, 2001).

This design typically employs a naturally occurring population with participants not being randomly assigned due to the predetermined nature of the independent variables (i.e., personality preferences and demographic categories) (Heppner et al., 2008). As described in the Participants section, the sample came from a representative, yet accessible, population: undergraduates enrolled in introductory Psychology courses at a large primarily White Southern Public land grant institution. The sample utilized students for whom these constructs and instruments commonly apply in actual clinical practice. These are the very individuals who may take advantage of services at university counseling and career services centers. This will make

the findings more directly applicable for practitioners as well as potentially more impactful for the emerging adults being served at these centers. While the institution is a PWI, in employing a large introductory general education requirement class, the demographics were more representative of the overall institution compared to upper level classes in any particular academic department that may contain a more striated subsample. For a PWI, the university does have a sizable African American population (21%) with another 9% from various diverse cultural groups. The sample in the study closely mirrors these percentages and appears to be representative of the demographic makeup of the broader institution. Concerns regarding the small number of non-African-American minorities (e.g., Hispanic/Latino, Asian-Americans) are discussed in the conclusions and limitation sections.

The researcher employed online surveys accessed through the Psychology department research portal (<https://msstate.sona-systems.com/Default.aspx?ReturnUrl=%2f>) to gather the data related to the demographics, the personality preferences and the ego identity statuses via the instruments described in detail in the Measures section (i.e., the Myers Briggs Typology Indicator (MBTI) and the Objective Measure of Ego Identity Status (OMEIS)). The Identity statuses served as the dependent or criterion variable as was measured by the OMEIS (with four possible outcomes: Diffusion, Foreclosure, Moratorium or Achievement). The personality preferences, which were used as continuous variables, and the demographic categories served as the independent variables. A full description of the instruments is presented in the measures section. The demographics categories are: (a) age (measured as a continuous variable), (b) ethnicity (divided into six categories: African-American, Asian-American, Hispanic/Latino, International student, Other and White) and (c) gender (male or female). As in previous research on identity status at PWI's, the ethnicity categories were collapsed due to inadequate sample size

in some of the cells. As discussed in the Data Analysis section, frequencies in all cells of the independent variables were tabulated before the analyses were conducted to determine this need.

A series of multinomial logistic regression analyses were conducted to determine the relationship (or lack thereof) between demographic characteristics, MBTI preferences and identity status. Garson (2010) wrote that multinomial logistic regression is an extension of logistic regression designed for instances where there is one dependent variable which is a categorical variable consisting of more than two categories. The demographic variables were entered into a multinomial regression model to evaluate the impact of ethnicity and age on the identity statuses. The MBTI preferences were added each singly to eight separate multinomial regression models to evaluate the relationship between the MBTI preferences on the OMEIS statuses with the demographic variables serving as covariates in all of these models.

Garson (2010) wrote that among its functions, multinomial logistic regression can predict a categorical dependent variable via independent variables, provide effect sizes for the independent variables' relative impact on the dependent variable, rank the relative importance of the various independent variables, determine interactions between the variables as well as help determine the impact of covariates. In terms of the variables particular to this analysis, multinomial regression was used to predict identity status from the MBTI preferences. Petrucci, in speaking to the utility of multinomial logistic regression in the social sciences stated,

three (or more) unordered group structure can be used as a dependent or outcome variable for group classification purposes, or as a predictor variable. By devising group classifications that are of importance to clinicians, findings can be of immediate use to practice. (2009, p. 204)

The independent variable of personality preference is routinely used by practice-oriented clinicians and these findings would help delineate the impact of the respective demographic categories and personality preferences on the expression of the identity statuses.

As recommended by Peng, Lee and Ingersoll (2002) the results section includes: (a) an overall model evaluation, (b) statistical tests of individual predictors, and (c) a goodness-of-fit statistic. Garson (2010) and Peduzzi et al. (1996) recommended 10 cases per independent variable as a general rule, while Field (2005) recommended between 10-15 cases per predictor, which for this study suggests an n of approximately 30-45 to provide adequate power. Green (1991) provided a rule of thumb for the overall model of $50 + 8(k)$ and $104 + k$ for individual predictors with k being the number of predictor variables. This formula would suggest an n of 74 for the overall model and an n of 107 for individual predictors. Tabachnick and Fidell (2007) also suggested having cell frequencies greater than one and no more than 20% of cells being less than five to avoid extremely large parameter estimates and standard errors. To address this concern, cells were examined before the model was run. As per Field's (2005) and Garson's (2010) recommendations, and because of the disagreement about the usefulness of R^2 with multinomial logistic regression, the Beta coefficient, the logistic regression coefficient (B), provided the measures of effect size. More specifics with respects to all analyses will be described in the Data Analysis and Diagnostics sections, which follow the description of the research design.

Data Analysis

The SPSS statistical package v. 20.0 was used for all statistical analyses involving regression. According to the identified research questions, the following statistical analyses were employed.

Research Question 1: Do ethnically diverse students demonstrate significantly higher rates of Foreclosure compared to White students?

For the first research question, a forced entry multinomial regression analysis was run with the variables of age and ethnicity simultaneously entered into the model. Age and ethnicity, as measured by self-report, represent the independent variable while identity status, as measured by OMEIS, represented the dependent variable. Significance values for this model were set at $\alpha = .05$. An overall model evaluation for the first run (via chi-squared), a goodness-of-fit statistic (Pearson's statistic) and statistical tests of individual predictors (chi-squared) were reported as well as 2 way interaction effects. Odds ratios ($Exp(B)$), with parameter estimates, were examined as a measure of effect size using the Wald statistic as the measure of significance. Odds ratios indicate the change in odds with a one unit change in the predictor (here the predictor variable ethnicity was categorical, either self-identifying as Minority or White). The Wald statistic is analogous to the t -statistic in linear regression and it is used to determine if the predictor variable, here the identity statuses, is making a significant contribution to the prediction of the outcome in the model (Field, 2009). Iterations for the model were left at the default value (100).

Research Question 2: Does a relative increase in the strength of the E preference predict significantly increased rates of Moratorium compared to the status of Achievement while holding the effects of age and ethnicity constant?

Research Question 3: Does a relative increase in the strength of the I preference predict significantly increased rates of Diffusion compared to the status of Achievement while holding the effects of age and ethnicity constant?

Research Question 4: Does a relative increase in the strength of the S preference predict significantly increased rates of Foreclosure compared to the status of Achievement while holding the effects of age and ethnicity constant?

Research Question 5: Does a relative increase in the strength of the N preference predict significantly increased rates of Moratorium compared to the status of Achievement while holding the effects of age and ethnicity constant?

Research Question 6: Does a relative increase in the strength of the T preference predict significantly increased rates of Achievement compared to the other three statuses while holding the effects of age and ethnicity constant?

Research Question 7: Does a relative increase in the strength of the F preference predict significantly increased rates of Foreclosure compared to the status of Achievement while holding the effects of age and ethnicity constant?

Research Question 8: Does a relative increase in the strength of the J preference predict significantly increased rates of Foreclosure compared to the status of Achievement while holding the effects of age and ethnicity constant?

Research Question 9: Does a relative increase in the strength of the P preference predict significantly increased rates of Moratorium compared to the status of Achievement while holding the effects of age and ethnicity constant?

Eight separate forced entry multinomial regression models addressed research questions 2-9 stated above. The independent variable of each of the preference subscales, as measured by the MBTI as a continuous variable, was added to each of the eight separate multinomial regression models. The identity statuses continued to serve as the dependent variable in each model. Age and ethnicity were added as covariates in each model. Significance values for these

eight separate second runs were set at $\alpha = .05$. Again, an overall model evaluation (via chi squared), a goodness-of-fit statistics (Pearson's statistics) and statistical tests of individual predictors (chi squared) were reported as well as all two way interactions. Odds ratios ($Exp(B)$), with parameter estimates, were examined as a measure of effect size using the Wald statistic as the measure of significance. The iterations for the model were left at the default value (100).

Diagnostics. Prior to running the regression analyses, cross tabulations for each model were examined to determine if there was adequate cell representation. As previously discussed in the proposal for this study, categories might be collapsed if Tabachnick and Fidell's (2007) recommendations discussed previously in the methods section (i.e., cell frequencies greater than one and no more than 20% of cells being less than five to avoid extremely large parameter estimates and standard errors) were not adequately met. Previous literature suggested non-significant differences with gender and identity status. Before this variable was removed all the models were run with gender included and the variable was found to be a non-significant predictor in all of the models, hence it was removed. It was determined that cell representation would be improved with removal of gender as a variable of interest. Also due to cell representation, and as previously discussed with the initial proposal of this study, ethnicity categories were collapsed to 'Minority' and 'White' for all analyses due to the small numbers of non-African American ethnic minorities (i.e., three Asian-American, five Hispanic/Latino, two International, four Other). The number of empty cells would have well exceeded Tabachnick and Fidell's (2007) recommendation without combining these categories. While the percentages for all ethnic groups were closely aligned with the institutional rates as a whole, they were not large enough to stand alone, and hence, they were collapsed.

Multicollinearity was assessed by checking the tolerance and variance inflation factor (VIF) by running a series of linear regression models. These models included the same independent and dependent variables as in the previous models. With SPSS v 20.0 multicollinearity cannot be examined directly as with logistic regression, hence multiple binary regressions were run to evaluate multicollinearity. As per Field's (2009) recommendation, a tolerance value less than 0.1 or a VIF value greater than 10 represents multicollinearity between variables. There were no issues with regards to multicollinearity in any of the models.

Because the assumption of linearity is violated with a categorical outcome variable in multinomial regression, as per Field (2009) the interaction between the predictor and its log transformation was tested to determine if the interaction between these terms were significant. The log transformation acts as a means of expressing a non-linear relationship (which cannot be done with a categorical outcome variable) in a linear way (Field, 2009). A significant finding ($p < .05$) between the variable and its log transformation would indicate that the main effect violated the assumption of linearity of the logarithmic transformation (i.e., there was no linear relationship). All interactions were non-significant.

Also in terms of diagnostics, residuals were examined via Cook's distance (ideally values less than 1), centered leverage values (ideal values $(k + 1/N)$ with $k = \#$ of predictors), standardized residuals (ideally only 5% outside ± 1.96 (2 SD's) and only 1% outside ± 2.58 (3 SD's)) and DFBeta values (ideally values less than 1). Examining residuals according to these guidelines helps to determine if there were any possible errors with inputting values, if particular cases exerted undue influence on the model or if there was justification for omitting single anomalous cases from the data set (Field, 2009). Because SPSS v. 20.0 does not provide residuals with multinomial logistic regression, multiple binary logistic regression models (i.e., 3

comparisons per each model that included a personality preference) were run to obtain these statistics.

Two cases produced unusual values on several of the measures of influence. When examined individually, it was found that the ages of these two participants were 28 and 29 years old. The next oldest participant in the study was 23 years old and 88.9% of the participants were 18 or 19 years old with one 22 and one 23 year old in the sample. Due to their relatively strong influence on the model as outliers, and their being outside the stated population of interest as non-traditionally aged college students, they were excluded from the data set. Diagnostics were within acceptable ranges with removal of these two influential cases. Eight additional cases were removed from the data set before any analyses because they did not meet the scoring criteria for any of the four identity statuses. As discussed in the Measures section that follows, these individuals have been referred to as ‘undifferentiated identity status’ in the literature and the scoring manual advised removing them from consideration or possibly analyzing them separately (Adams, 2010). The final *N* was 281 after these cases were excluded.

Measures

Two instruments were used in the study. The OMEIS (Adams, 2010) served as a measure of the dependent variable of identity status and the MBTI (Myers et al., 1998) measured the personality preferences and served as the primary independent variable. An online demographic questionnaire was used to obtain information related to age, ethnicity, gender and whether participants were first generation college students or not.

Objective Measure of Ego Identity Status (OMEIS). The original empirically scored version of the OMEIS was created in 1979 based on Marcia’s semi-structured interview that assessed the same construct (Adams, 1998; Bennion & Adams, 1985; Marcia, 1966). According

to the instrument's developer, the ideal range of use is between 13 and 30 years old. The manual states that the instrument can be used for research, clinical or educational assessment of identity status (Adams, 1998) as well as the measurement of individual differences (Adams, 2010).

A new revalidated version of the measure was published in 2010 and used in this study. It consists of 24 self-report items scored on a six point Likert-type scale compared to the previous 64 item measure. The previous version of the instrument, the Extended Objective Measure of Ego Identity Status-II (EOM-EIS-II) consisted of two domains, ideological and interpersonal, each of which provided a measure of the four statuses (i.e., diffused, foreclosed, moratorium or achieved). Each status measures the degree of exploration and commitment. Diffusion is defined as a state lacking both exploration and commitment, while commitment without an exploratory crisis period is referred to as foreclosure. Individuals who are currently exploring without having made tentative commitments are characterized as being in a moratorium, and those that have made more adult commitments after a period of exploration are considered identity achieved (Adams, 2010).

The ideological domain assessed identity status with regard to occupation, politics, religion and philosophy, while the interpersonal domain assessed identity status with respects to friendship, dating, sex roles and recreation. The revised 2010 version has returned to the singular ideological domain of the original empirically scored instrument with slightly updated wording of the questions. As stated in the literature review, the ideological domain was the subscale employed for the vast majority of studies relating to career decision making and personal values because of its obvious relevance to those areas of interest via the question domains (i.e., occupation, politics and religion).

The newest revision contains six items for each of the four identity statuses. There are two questions each pertaining to the occupation, politics and religion under each status ($2 \times 3 \times 4 = 24$ questions total). As per the manual, identity statuses are derived by totaling all six items across the three content domains into a separate summed score for each of the four statuses. Each identity status summated score can range from a low of six (6×1) to a high of 36 (6×6). Because OMEIS has been shortened, compared to the previous version, the administration of the 2010 version takes less than the 15 to 30 minutes required for the EOM-EIS-II. Using the established cutoff scores of one standard deviation above the means from the new norming sample individuals are classified in a pure status (one status above cutoff), transition statuses (two or three statuses above their respective cutoffs) or undifferentiated status (all four scores fall below their respective cutoffs). According to the manual, transitional statuses are classified in terms of the lowest of the identity statuses that meet the threshold while the author also recommends that undifferentiated scores not be classified as they may represent a diffused subgroup (Adams, 2010). This study will follow the author's suggestion for scoring, which was used for the norming sample, by classifying transitional statuses by the lowest identity status and including them in the data but, as suggested, undifferentiated individuals (i.e., all four scores below the threshold for a status) will not be included in the data set.

The manual that accompanies the new instrument indicates slightly improved psychometric qualities compared to the EOM-EIS-II. The 1998 test manual reports on 65 separate studies of the instrument's validity and 20 separate studies discussing the instrument's reliability (Adams, 1998). The 2010 manual describes the original validation studies as well as the most recent research regarding the re-normed items (Adams, 2010). The previous versions of the instrument have been used in hundreds of studies since the publication of the manual and that

instrument was available for free use on the principle researcher's webpage (<http://www.uoguelph.ca/~gadams/EOM-EIS-II.htm>) before the publication of the newest revision. As stated in the 2010 manual, the latest revision is available for free use with the purchase of the manual. As of 1999 Waterman wrote, "the number of articles, papers, and dissertations using the identity status paradigm has been estimated to run over 500 and it is discussed in virtually every textbook in the area of adolescent development" (p. 592).

Reliability. Because each iteration of the instrument represents a slight reworking on the previous version, psychometric information from the EOM-EIS-II as well as a recent 2010 validation study on the new instrument (OMEIS) will be included here. The manual stated that available test-retest correlations have a median coefficient of .76 (Adams, 1988). One of the original studies (Adams, Shea, & Fitch, 1979) reported test-retest correlations for the composite measure of the ideological and interpersonal scales ranging from between .71 to .93 (time period not reported in Adams et al., 1979). The authors noted that the ideological measure, which has been retained for the 2010 version and was used for this study, was the more stable of the two subscales. Grotevant and Adams (1984) reported four week test-retest correlations, with the earlier version, ranging from .63 to .83, but again these authors reported a composite ideological/interpersonal score before the interpersonal subscale was removed with the 2010 version.

From the literature review, it is worth repeating that the vast majority of studies related to decision making and information processing that used the OMEIS only assessed the ideological portion of the instrument. Additionally because of the developmental nature of the construct of interest, one would expect some degree of movement between the statuses with the possibility

that taking the measure, and being asked about occupation choice, religious and political beliefs, could have a priming effect in promoting exploration and thereby impacting the retest results.

In terms of item level internal consistency, as measured by Cronbach's alphas, again the ideological portion of the measure produced slightly higher internal consistencies than the interpersonal subscale (Adams, 1998) and this is the subscale of interest that was retained with the newly validated OMEIS. The following Cronbach's alphas came exclusively from studies involving college students.

In a study by Adams and Montemayor (1987), the subscales for three consecutive years had the following ranges: .69 to .73 (Diffusion), .81 to .86 (Foreclosure), .70 to .77 (Moratorium), and .84 to .89 (Achieved). Benion and Adams' (1986) results ranged from $\alpha = .62$ to .75, while Carlson (1986) reported alphas for diffusion were .69, foreclosure, .81, moratorium, .66, and achievement, .76 with an overall mean of .77. Streimatter (1993) found alphas ranging from a low of .56 with achieved status to a high of .82 with foreclosure. There were several other studies cited in the manual, and consistent with the underlying theory, the older individuals produced higher measures of internal consistency.

The Cronbach's alphas from the 2010 validation study were improved compared to the previous versions of the instrument. For the newest revision of the OMEIS, Adams (2010) reported a validation study with 1620 college students entering college, a population very similar to this sample, which had improved alphas: .88 for diffusion, .84 for foreclosure, .91 for moratorium and .90 for identity achievement.

Construct Validity. The 2010 validation study included a factor analysis that used orthogonal rotation and extracted four factors at or above .70 with each factor representing one of the four statuses. These findings suggested high internal validity within each of the statuses. In

addition, correlations between the individual statuses were .22 or less (Adams, 2010) suggesting a weak correlation between the four statuses. These findings represented a cleaner factor structure and improved differentiation between the respective statuses.

Predictive Validity. There were a number of articles that support the notion identity statuses in young adults correlate with other constructs in a hypothesized manner. Among the correlated instruments are measures of moral and ego development (Adams, Shea & Fitch, 1979; Francis, 1981; Mead, 1983), epistemic development (Boyes & Chandler, 1992), authoritarianism and rigidity (Bennion & Adams, 1985) cognitive development (Weiss, 1984), intimacy (Bennion & Adams, 1985), locus of control (Francis, 1981; Markstrom-Adams & Adams, 1995), self-consciousness (Adams, Abraham & Markstrom, 1987), self-esteem and self-acceptance (Adams, Shea, & Fitch, 1979; Owen, 1984), shyness (Hamer & Bruch, 1994), conformity behavior (Adams, Ryan, Hoffman, Dobson, & Nielsen, 1985), and more adaptive social functioning (Read, Adams, & Dobson, 1984). In these studies an achieved status on the EOM-EIS-II represented more advanced stages or scores on these other constructs of interest, while diffusion represented lower scores and foreclosure and moratorium were in the mid-range (Adams, 1998). A survey of the literature produced hundreds of articles employing the updated versions of the measure over the past three decades.

Summary of the OMEIS. Globally, studies on the OMEIS produced more than adequate measures of reliability and internal consistency and the relationship between the OMEIS and various other measures supported the construct validity. The newest version of the OMEIS updated the wording of the questions to reflect more contemporary language. Adams revalidated the new measure with several of the measures used in previous validations and found the same hypothesized relationship between the statuses and measures of self-acceptance, rigidity and

authoritarianism (Adams, 2010). The manuals also provided cross sectional and longitudinal data (Adams, 1998, 2010). The data associated with the newly validated instrument suggests that it represents an improvement over the previous versions with an improved factor structure and internal consistency.

As to the 2010 version of the OMEIS, and as suggestive of the previous literature reviewed in the demographic section, there was no interaction found between identity status and gender. Yet even with the 2010 update, Adams, perhaps surprisingly, failed to report the ethnic breakdown of the sample so this remains as a potential limitation of the instrument that will be further discussed. There were a number of studies which support the developmental trajectory, from early, mid and late adolescence into emerging and young adulthood, as a movement towards the more advanced statuses (i.e., moratorium and achieved) (Adams & Fitch, 1982; Markstrom-Adams & Adams, 1995; Meeus, 1996; Meeus et al., 1999; Meilman, 1979; Streitmatter, 1988, 1993; Waterman, 1972, 1982). The construct underlying the OMEIS was supported by its psychometric properties and remains a mainstay in the literature on late adolescence and early adulthood.

While the research findings regarding the demographic variables of age and gender are broadly in accord with the underlying theory proposed by Erikson on ego identity development, the findings are more equivocal with regards to ethnicity. Hence, ethnicity is a variable of particular interest in this study to provide further evidence either supporting or refuting the descriptive value and usefulness of the OMEIS with diverse populations. It may be that this study will have to break the sample in a White and non-White group, as in previous research, depending on the ethnic composition of the sample. Taken together, these studies provided a

fairly significant amount of evidence with regards to the reliability and validity of the instrument and the underlying constructs it purported to measure.

Myers Briggs Typology Indicator (MBTI). As previously noted, form M of the MBTI was employed in this study as the personality instrument. The MBTI is a 93 item forced choice inventory that has a long tradition in being used with an emerging adult college-attending population. Written on an 8th grade level, it is appropriate for individuals from over 14 years old to adult and takes between 15 to 25 minutes to complete. It has been traditionally used with young adults and has been administered over 2 million times yearly (Myers et al., 1998).

It is based on Jungian theory of types, and like the OMEIS, the instrument has evolved while attempting to remain true to the theory from which it originated. It contains four subscale dichotomous continuums based on the Jungian theory of types. They are Extroversion-Introversion (E-I), Sensing-Intuition (S-N), Thinking-Feeling (T-F), and Perceiving-Judging (P-J). The E-I subscale measures an attitude orientation towards life. S-N represents the individual's preference in perceiving information, T-F represents the person's preference for making judgments, and the J-P scale reflects how the individual deals with the outer world (Lundberg, Osborne & Miner, 1997).

E-I is described as a more outward focus on the environment (E) or a more inward focus to internal concepts and ideas (I). S-N is described as an inclination to focus on the immediate, practical, and observable details (S), or conversely, a focus on future possibilities and implicit or symbolic meanings (N). T-F is referred to as decision making that emphasizes objective logic (T), or conversely, to making decisions based on feelings and subjective values (F). Lastly, the J-P continuum described how individuals deal with the outer world contrasting those who organize their lives in a more planned, expeditious way and decide more quickly (J), versus those who

adapt to life more spontaneously through continual information-seeking and questioning while maintaining open options (P) (Healy & Woodward, 1989).

Reliability. In looking at the previous version of the MBTI (Form F), over 20 studies from the manual and several more recent studies cite split-half and test-retest reliability coefficients that commonly exceeding .80 with more stable scores for older test takers (Carlson, 1985; Myers et al., 1998; Sundermeier, 1998). The most updated and revised Form M represents an improvement on the previous instruments with the incorporation of item response theory and the removal of separate weighted scores for males and females (Myers et al., 1998). Reliability and validity data for the updated measure came from a sample of 3200 individuals living in the United States that was weighted to represent an ethnicity breakdown from the 1990 Census. Logical and consecutive split-half reliabilities produced a small range of correlations ranging from .89 to .94 (Myers et al., 1998). These coefficients represent an improvement from the previous version of the form.

In terms of test-retest reliability, Form M reliabilities were also higher than the previous version of the instrument. A meta-analysis of all the studies in the previous manual (Myers & McCaulley, 1985) produced correlations between .59 and .70 for a four week interval and between .77 and .84 at greater than a nine months' time frame. Form M four week test-retest with a college-attending sample produced coefficients ranging from .83 to .94. Again this represented an improvement from the previous version of the MBTI.

With the same college-attending sample, agreement of all four dichotomies with a four week test-retest ranged from 84% to 88%. With this statistic, one should bear in mind that, as per typology theory, the least developed preferences may likely vacillate and individuals commonly have one primary and one auxiliary function and two less developed or less differentiated

preferences. Therefore, according to the theory underpinning the instrument a degree of oscillation would be expected and this would be more common with younger test takers who were in the process of developing their primary and secondary functions in the face of the more ambiguous decisions of adulthood. Myers et al. (1998) also pointed out that because the scales were scored separately it would require test-retest reliabilities of over 96% on each subscale individually to produce all four type test-retest reliability in the high 80s range.

Cronbach's alphas from the national sample divided by gender and by subscale also produced a range of coefficients from .88 to .93. The age groups of interest for this study (i.e., 18-25) produced alphas ranging from .89 to .94. In looking at the alphas from the college student who identified as minorities in the national sample ($n = 388$), they ranged from a low of .80 (African American S-N subscale) to a high of .96 (American Indian I-E) with a median coefficient of .88.

Construct validity. Thompson and Borrello's (1986, 1989) factor analyses robustly supported the hypothesized four factor structure underlying the instrument. Each of the two poles loaded on four separate factors. A number of other researchers have found similar results that support the four factor model (Harvey, Murry & Stamoulis, 1995; Tischler, 1994; Tzeng, Outlat, Boyer, Ware & Landis, 1984). Thompson and Borrello (1986), cite a number of articles in their review of the MBTI with internal stability reliability coefficients between .80 and .90. In a book chapter that summarized a number of articles on the MBTI's factor structure, Harvey (1996) cited several well-constructed, large sample sized exploratory studies that reproduced the four factor loading.

Predictive Validity. Carlson (1985) discussed over two dozen studies that support the underlying constructs of the MBTI when compared with other constructs and when compared to

behavioral measures both in research and treatment settings. The literature review of this study provided a number of results that supported the underlying MBTI constructs with regards to decision making and information processing that drew on studies with emerging adults as well as from the business management literature.

The manual also detailed the relationship between a number of well-established personality assessments and the MBTI (Myers et al., 1998). Of most direct relevance was the Millon Index of Personality Styles. The Millon's measure of Extraverting produced a $r = .67$ correlation with MBTI E and $r = -.71$ correlation with MBTI I. Millon's Introverting scale produced a $r = .64$ correlation with MBTI I and a $r = -.63$ correlation with E. Millon's measure of Sensing produced a $r = .75$ correlation with MBTI S and a $r = -.75$ correlations with MBTI N. Millon's measure of Intuiting produced a $r = .60$ correlation with MBTI I and a $r = -.60$ correlation with MBTI S.

Also predictably and in support of the parallel, but not identical, constructs, Millon's measure of Thinking was correlated $r = .62$ with MBTI T and $r = -.57$ with MBTI F. Millon's measure of Feeling was correlated $r = .64$ with MBTI F and $r = -.62$ with MBTI T. Millon's measure of Systematizing was correlated $r = .59$ with MBTI J and produced a $r = -.60$ correlation with MBTI P. The Millon's measure of Innovating correlated $r = .55$ with MBTI P and $r = -.51$ with MBTI J (Myers et al., 1998). Some other Millon correlations of interest were Nurturing, which correlated $r = .46$ with MBTI F and $r = -.47$ with MBTI T. Here one is reminded of the W. James' (1842-1910) tender-minded tough-minded dichotomy (James, 1907). Outgoing correlated $r = .65$ with E and $r = -.65$ with I. Agreeing correlated $r = -.57$ with T and $r = .57$ with F. Hesitating correlated $r = .60$ with I and $r = -.55$ with E. Conforming correlated $r = .41$ with J and $r = -.44$ with P (Myers et al., 1998). These all represented relatively strong correlations while

recognizing that, because of somewhat distinct operationalizations, they were not assessing the identical constructs.

The manual also detailed some significant and meaningful correlations between the California Psychological Inventory and the MBTI in accord with the description of the typology (Myers et al., 1998). These include Norm-Forming (strong + correlation with J, strong - correlation with P), Social Presence, Sociability and Dominance (moderate + correlation with E, moderate - correlation with I), Creativity (moderate + correlation with N and P, moderate - correlation with S and J), Internality (moderate + correlation with I, moderate - correlation with E), Achievement via Conformity (moderate + correlation with J, moderate - correlation with P), Flexibility (moderate + correlation with N and P, moderate - correlation with S and J). These correlations ranges from .39 to .54 with the vast number being in the high .4's and low .5's. The researchers also reviewed the NEO-PI and found moderate to strong positive correlations between Extraversion and MBTI E ($r = .69$ for males, $r = .74$ for females), Openness and MBTI N ($r = .69$ for males, $r = .72$ for females) and P ($r = .46$ for males, $r = .49$ for females), Agreeableness and MBTI F ($r = .44$ for males, $r = .46$ for females), and Conscientiousness and MBTI J ($r = .46$ for males, $r = .49$ for females).

The researchers reviewed the 16 Personality Factors Questionnaire (16 PF) and again there were correlations that were conceptually in accord with the underlying theory of typology. For instance with respect to the primary factors, Liveliness ($r = .48$ with E, $r = -.51$ with I), Self Reliance ($r = .42$ with I, $r = -.49$ with E), Abstractness ($r = .41$ with N, $r = -.41$ with S), Openness to Change ($r = .54$ with N, $r = -.59$ to S), Perfectionism ($r = .57$ with J, $r = -.53$ with P), Rule Consciousness ($r = .25$ with J, $r = -.37$ with P), Warmth ($r = .24$ with F, $r = -.32$ with T), and Apprehension ($r = .27$ with F and $r = -.33$ with T) (Myers et al., 1998).

The global factors of the 16 PF produced significant and meaningful correlations as well: Extraversion: $r = .68$ with E, $r = -.61$ with I, Tough Mindedness: $r = .56$ with S, $r = -.56$ with N, $r = .24$ with T, $r = -.26$ with F, Anxiety: $r = .23$ with I, $r = -.39$ with E, Independence: $r = .39$ with E, $r = -.35$ with I, and Self Control: $r = .54$ with J and $r = -.57$ with P (Myers et al., 1998). Lastly, the researchers also reviewed the less well known Fundamental Interpersonal Relation Orientation instrument (FIRO-B) which likewise produced a number of significant and meaningful correlations. Taking these correlations as a whole, the MBTI compared in an expected, consistent and predictable manner with these other well established instruments. Implications of the comparisons between these instruments and the MBTI helped to shape the hypotheses.

Summary of the MBTI. In considering the data and widespread use of the instrument in research, applied clinical settings and in the private sector, the newest version of the MBTI displayed improved psychometric properties while attempting to maintain true to the theory of typology roots. Employing more sophisticated item response theory improved the instrument by removing the necessity for separate norms for males and females in identifying questions that discriminate preference equally well across gender. In way of criticism, Carlson (1985) noted in his review that the instrument had been primarily validated on a traditional aged college population. Because of this study's exclusive focus on college-attending emerging adults, this criticism could be seen as a relative strength of the instrument compared to measures that tend to focus on samples of individuals who suffer from more severe mental illness.

This measures section was a review of the psychometric properties of these instruments. It should be noted that the MBTI and OMEIS have been cited in the literature thousands of times, and despite improvements to both instruments, detractors can be found amongst

researchers. As discussed earlier in the literature review, there is general acceptance in using the personality preferences as continuous variable both from within and outside the typology community (Carskadon, 2001; Myers et. al., 1998). Despite test-retest correlations in the high .80s, some researchers may criticize single subscale variations, but this phenomenon would be consistent with developmental theory regarding personality and maturation and the theory of type itself (Pittenger, 1993).

The instrument has continued to be revised and improved over the years in direct response to criticism and it stands up well with respects to convergent and divergent validity when compared with other well-established personality measures. Criticism may also be a function of Jung's marginal status in empirical research psychology, due to his being an analyst, and the instruments' early developers also worked outside the halls of academic or experimental psychology. Like any instrument context helped to determine its fit, and both of these measures have remained mainstays of assessments with college-attending emerging and young adults for decades.

Data Collection Procedures

Students in introductory psychology classes were offered an online administration of the MBTI and OMEIS for class credit. Alternative research and non-research oriented assignments of approximate equal durations were also provided to students for class credit as an alternative to participating in this, or any, research study. Participants signed into the encrypted Psychology department research portal in order to participate in the study. Participants were informed that the study examined, "the impact on personality preferences on identity development in college-attending young adults" and that the instruments generally take between 25-45 minutes to complete. Students were informed that their participation was voluntary and they could withdraw

their data at any time and they would still receive credit for the class assignment. Participants took the MBTI, and then clicked on a link that took them to the OMEIS and demographic questions. Age, gender, ethnicity and whether or not they were first generation college student were also collected as part of the online administration of the instruments. There was no charge for the administration. Contact information (i.e., email and work phone number) for the dissertation chair and Ph.D. candidate was provided to the participants in case they had any further questions about the study. They were also informed that they had access to free counseling and career services and were provided contact information for these services.

As part of informed consent, potential participants were informed that their personal information, as well as the data obtained from the OMEIS and MBTI, would remain confidential. The test data was de-identified with only the primary researcher maintaining the names and assigned ID numbers in a secure file. The websites used for administration were encrypted with a password needed to access those accounts. Students were given credit for participation via the university's secure research web portal as per protocol with all Psychology department studies. The researcher obtained permission from the participating university's institutional review board before collecting any data and a copy of this was on file at the participating institutions.

Chapter 4

Results

The purpose of the current study was to determine the predictive quality of demographic variables and personality preferences on the criterion variable of identity status with emerging adults early in their college careers. A total of 281 undergraduates at a large public Southern land grant university participated in the study completing both the Objective Measure of Ego Identity Status (OMEIS) and Myers-Briggs Typology Indicator (MBTI) as well as providing demographic information by online administration.

Demographic Information

The age distribution of the sample was as follows: (a) 181 participants (64% of the sample) were 18 years old, (b) 70 participants (24.9% of the sample) were 19 years old, (c) 19 participants (6.8% of the sample) were 20 years old, and (d) nine participants (3.2% of the sample) were 21 years old. There was one 22 and one 23 year old also included in the study (.4% each). The gender distribution was as follows: 163 participants (58%) were female and 118 (42%) identified as male. The ethnicity was as follows: (a) 190 (67.6%) identified as White, (b) 72 participants (25.6%) identified as African American, (c) 5 (1.8%) identified as Hispanic/Latino, (d) 5 (1.8%) identified as Multiracial, (e) 4 (1.4%) identified as Other, (f) 3 (1.1%) identified as Asian-American, and (g) 2 (.7%) identified as International. The total minority portion of the sample was 32.4% ($n = 91$) (see Table 1).

Eighty four individuals or 29.9% of the total sample ($N = 281$) indicated they were first generation college students while the remaining 70.1%, or 197 individuals, indicated they were not. With regards to class standing in college, 237 individuals (84.3%) were Freshman, 30 (10.7%) were Sophomores, 10 (3.5%) were Juniors and 4 (1.4%) identified as Seniors. The

independent variable of personality preference broke down as follows: 168 (59.8%) as Extraversion and 113 (40.2%) as Introversion, 189 (67.3%) as Sensing and 92 (32.7%) as intuition, 125 (44.5%) as Thinking and 156 (55.5%) as Feeling and 111 (39.5%) as Judging and 170 (60.5%) as Perceiving.

MBTI preferences comparison to norming samples. The national norming sample of the MBTI presented in the MBTI manual contained 882 college students from an undetermined number of different U.S. colleges, but the percentages of each preference were only reported for the entire national sample ($N = 3009$) and not separately for the participating college students (Myers et al., 1998). The researchers also did not report strength of preference with the norming sample. The national norming sample broke down as follows: (a) 49.3% Extraversion and 50.7% Introversion, (b) 73.3% Sensing and 26.7% Intuition, (c) 40.2% Thinking and 59.8% Feeling, (d) 54.1% Judging and 55.9% Perceiving. In the national norming sample for the MBTI, 511 of the 882 college students were reported to be Freshman (57.9% Freshman compared to 84.3% in this study's sample).

The manual's sample was an attempt to update two previous national samples that were reviewed by Hammer and Mitchell (1999). They make the case for an even distribution between Extraversion and Introversion with one sample slightly higher on Extraversion and the other slightly higher on Introversion. They uphold the contention that males more likely favor Thinking preference (approximately 60%-40%) and females more likely Feeling preference (approximately 60%-40%) and they note slightly higher rates of Sensing (compared to Intuition) and Judging (compared to Perceiving) in comparing the national samples. All of the samples attempted to be representative of most recent census data. They note that, in data collection, one

of the samples was broken down into U.S. regions, but they did not comment on any significant regional differences or report those differences.

The sample from this proposed study, which came from one university in the Southern United States, had higher rates of Extraversion compared to the most recent national sample (+ 10.5% difference in current study), fairly similar rates of Sensing (+ 6% difference in current study), similar rates of Thinking (+ 4.3% difference in current study), and lower rates of Judging (- 14.6% difference in current study). Because of the dichotomous natures of the preferences, this also means there were lower rates of Introversion (again 10.5% difference) and higher rates of Perceiving (again 14.6% difference) in the current study compared to the national norming sample (See Table 1). Likewise, the rates of Intuition and Feeling in this study's sample were similarly close to the representation in the national sample. The national samples are discussed because no research regarding regional differences in type representation across the United States could be found to compare to the representation of this proposed study's sample. While there are differences between the samples, individuals who endorsed each particular preference were included in each of the models and this should allay concerns regarding these differences. In only one model, Intuition, could an increased number of participants potentially have strengthened confidence in the findings. Here the underrepresentation of individuals who expression Intuition was noteworthy.

OMEIS identity status comparison to norming samples. The dependent variable of identity status, as measured by the OMEIS, broke down as such: 63 (22.4%) scored as Diffusion, 105 (37.4%) as Foreclosure, 32 (11.4%) as Moratorium and 81 (28.8%) as Achievement (see Table 1). The OMEIS manual that discussed the recent validation studies reported the norming sample as 1620 of the possible 2000 entering freshman (920 female, 700 male) at the University

of Guelph in Ontario, Canada. The demographic information was not reported, but the institution is 82% White and primarily middle class. The most recent revalidation study focused on the factor structure and predictive validity and did not report the percentages of students in each of the statuses for comparison to this proposed study's sample.

An earlier validation study in the 2010 manual which included 481 first year college students from across academic disciplines at the same university reported identity status rates as: (a) Diffusion ($n = 131$ or 25.8%), (b) Foreclosure ($n = 97$ or 19.0%), (c) Moratorium ($n = 157$ or 30.7%) and (d) Achievement ($n = 96$ or 18.8%). The average age of the norming sample was 18.8 years old, while the average age in this proposed study was 18.5 years old. Waterman (1999) noted that in general the findings in the literature showed a progression towards an achieved status, with the possibility of cycling back to less advanced statuses, as one matures. He particularly noticed this progression in comparing the identity development of college freshman to seniors.

The sample for this proposed study had very similar rates of Diffusion (22.4% in the proposed study compared to 25.8% in the norming sample) much higher rates of Foreclosure (37.4% compared to 19.0% in the norming sample), much lower rates of Moratorium status (11.4% compared to 30.7% in the norming sample) and higher rates of an Achieved status (28.8% compared to 18.8% in the norming sample). While rates of students who were avoiding exploration and commitment (i.e., Diffusion) were similar, the students who participated from the Southern land grant institution were more likely Foreclosed (+ 18.6%), less likely in a Moratorium status (- 19.3%) and more likely to be in an Achieved status (+ 10.0%) when compared to the norming sample.

In discussing the OMEIS norming sample, Adams (2010) noted that the rate of Diffusion seemed high for college attending students and that given the inherent discussion of ideas in a college environment, students would find a Foreclosed status uncomfortable and difficult to maintain. With the discrepancy between samples and in considering the possible impact of the cultural context, it appeared that in this current study Foreclosure may be a more tenable position while exploration without commitment (i.e., Moratorium status) may be a more challenging position to hold at a Southern institution. Admittedly, this could also be a function of the particular norming sample representing a wider representation of majors and focusing solely on first year students with only 9% of university being first generation college students in the norming sample. There would also likely be considerably different ethnic representation with the norming sample not reporting this information. With the proposed study focusing on an understudied geographic region in the U.S., it is difficult to determine how representative the sample is without additional samples to compare possible regional differences with the relative rates of ego identity development. The relatively higher rates of Foreclosure and Achieved status and lower rates of Moratorium are intriguing in considering the potential impact of the cultural context on the development process and how different personality preferences may be favored in different contexts. The next section includes the research questions, briefly restates the statistical analysis employed and then provides the results.

Research Questions

Research question 1. Do students who identify as ethnic minorities report significantly higher rates of Foreclosure compared to White students? The researcher conducted a multinomial logistic regression analysis to assess the relative odds of group membership in one of four categories of outcome (i.e., Diffusion, Foreclosure, Moratorium or Achievement) with

Achievement serving as the referent category (see Table 2). In the first model, ethnicity and age served as the predictor variables and no personality preference variables were included in the model. While the first analysis regarding ethnicity included all participants ($N = 281$), for each of the next separate analyses only students who indicated each preference were included. Therefore, the n for each model varied and is listed in each results section. In the model that analyzed the demographics, 32.4% of this sample (91 participants), identified as non-White. Of the students who identified as ethnic minorities, seventy two were African American. By percentage, these figures closely mirror the institution's demographic constitution, but the ethnically diverse sample was largely African-American. Implications of the demographic makeup will be discussed in the limitations section.

Table 1
Demographics and Variable Frequencies

Category	n (%)
Gender	
Female	163 (58)
Class Standing	
Freshman	237 (84.3)
Sophomore	30 (10.7)
Junior	10 (3.5)
Senior	4 (1.4)
Generation in College	
First	84 (29.9%)
Other	197 (70.1%)
Age [Mean(SD)]	[18.5(.83)]
18	181 (64)
19	70 (24.9)
20	19 (6.8)
21	9 (3.2)
22	1 (.4)
23	1 (.4)

Ethnicity		
African American	72	(25.6)
Asian American	3	(1.1)
Hispanic/Latino	5	(1.8)
International	2	(.7)
White	190	(67.6)
Other	4	(1.4)
Multiracial	5	(1.8)
Total Minority	91	(32.4)
Personality Preference		
Extraversion (E)	168	(59.8%)
Introversion (I)	113	(40.2%)
Sensing (S)	189	(67.3%)
Intuition (N)	92	(32.7%)
Thinking (T)	125	(44.5%)
Feeling (F)	156	(55.5%)
Judging (J)	111	(39.5%)
Perceiving (P)	170	(60.5%)
Identity Status		
Diffusion	63	(22.4%)
Foreclosure	105	(37.4%)
Moratorium	32	(11.4%)
Achievement	81	(28.8%)

The results were as follows. There was a good fit, compared to the intercept alone, via the Pearson criterion, χ^2 , (27), 30.49, $p = .08$, but on the basis of these two predictors alone, the overall model was non-significant, χ^2 , (6), 11.96, $p = .06$. In answering the research question, analysis of the data demonstrated that ethnically diverse students do not indicate increased rates of Foreclosure compared to Achievement. The statistical analysis generated two additional two-way comparisons (Diffusion vs. Achievement and Moratorium vs. Achievement with Achievement serving as the referent category for all comparisons).

Table 2

Multinomial Logistic Regression Results for Categorization of Identity Status by Age and Ethnicity Score (N = 281)

Category	Value	β (SE)	Wald	Df	Sig.	OR (95% CI)
Diffusion	Intercept	-.62 (3.81)	.03	1	.87	-----
	Age	.02 (.21)	.01	1	.93	1.02 (.68, 1.52)
	Minority	.16	.22	1	.642	1.18 (.60, 2.33)
	Status					
Foreclosure	Intercept	-.07 (3.36)	.00	1	.93	-----
	Age	.02 (.18)	.01	1	.91	.86 (.72, 1.46)
	Minority	-.54 (.31)	.24	1	.62	.87 (.47, 1.58)
	Status					
Moratorium	Intercept	-3.66 (4.48)	.67	1	.41	-----
	Age	.17 (.24)	.48	1	.49	1.81 (.74, 1.89)
	Minority	-1.70 (.65)	6.84	1	.01	.18 (.05, .65)
	Status					

Notes: Achievement is the referent category for identity status; White is the referent category for ethnic category. β (SE), Beta, standard error for Beta; OR, odds ratios; 95% CI: 95% confidence intervals; Overall model, χ^2 , (6), 11.96, $p = .06$; Goodness of fit, χ^2 , (27), 30.49, $p = .08$; All results controlled for age and ethnicity.

While the results from the data for the first research question were found to be non-significant, ethnically diverse students, compared to their White peers, reported significantly decreased rates of Moratorium as compared to Achievement while controlling for the influence of age. Compared to White students, Minority students were slightly less than 1/5th as likely to be Moratorium compared to Achievement (OR = .18, $p = .01$). Alternately stated, White students were over five times as likely to be in a Moratorium stage when compared to ethnically diverse students when controlling for the effects of age. Without the personality preferences in the model, age was not a significant predictor in the model for any of the outcome categories (i.e.,

Diffusion, Foreclosure, Moratorium, Achievement) and there were no interaction effects between age and ethnicity. Gender was not included in the model as per the previous discussion in the Methods section due to its non-significance in any of the models ($p > .05$).

Research question 2. Does an increase in the strength of the E preference predict significantly increased rates of Moratorium compared to an Achieved status while controlling for the effects of ethnicity and age? We conducted a separate multinomial logistic regression analysis with only E preference participants included to assess the relative odds of membership in one of four outcome categories (i.e., Diffusion, Foreclosure, Moratorium or Achievement) with Achievement serving as the referent category (see Table 3).

The 168 participants with an E preference were entered into a separate multinomial logistic regression while controlling for the effect of the demographic variables (i.e., ethnicity and age) (see Table 3). On the basis of these three predictors, the overall model was significant, χ^2 , (9), 22.381, $p = .008$, and there was a good fit, compared to the intercept alone, via the Pearson chi-square statistic, χ^2 , (453), 448.82, $p = .55$.

In answering the research question, analysis of the data demonstrated that a one unit increase in the strength of E preference predicted significantly *decreased* rates of Moratorium, compared to Achievement, while controlling for the influence of age and ethnicity category. As E preference increased, these individuals were less than 1/5th as likely to be in an Moratorium identity status compared to the Achievement status (OR = .17, $p = .004$). No other significant associations were found between the E preference and the outcome variable of the identity statuses (i.e., Diffusion, Foreclosure, Moratorium, or Achievement).

Table 3

Multinomial Logistic Regression Results for Categorization of Identity Status by Extroversion Score (N = 168)

Category	Value	β (SE)	Wald	df	Sig.	OR (95% CI)
Diffusion	Intercept	7.96 (6.24)	1.63	1	.20	-----
	Extroversion	-.61 (.41)	2.26	1	.13	.54 (.24, 1.2)
Foreclosure	Intercept	-1.62 (4.16)	.15	1	.70	-----
	Extroversion	-.61 (.34)	3.22	1	.07	.54 (.28, 1.05)
Moratorium	Intercept	-7.72(6.70)	1.33	1	.25	-----
	Extroversion	-1.76 (.62)	8.17	1	.004	.17 (.05, .58)

Notes: Achievement is the reference category for identity status; β (SE), Beta, standard error for Beta; OR, odds ratios; 95% CI: 95% confidence intervals; Overall model, χ^2 , (9), 22.381, $p = .008$; Goodness of fit, χ^2 , (453), 448.82, $p = .55$; All results controlled for age and ethnicity.

Research question 3. Does an increase in the strength of the I preference predict significantly increased rates of Diffusion compared to Achieved status while controlling for the effects of ethnicity and age? We conducted a separate multinomial logistic regression analysis to assess relative odds of membership in one of four categories of outcome (i.e., Diffusion, Foreclosure, Moratorium or Achievement) with achievement serving as the referent category (see Table 4). Participants with an I preference ($N = 113$) were entered into a multinomial logistic regression, and as with previous analyses, the influence of age and ethnic category was held constant (see Table 4). With the addition of the predictor variables, comparison of log-likelihood ratios did not show reliable improvement for the overall model, χ^2 , (9), 13.18, $p = .15$. Therefore, the overall model was not significant. In answering the research question, analysis of the data demonstrated that an increase in the strength of the I preference was not significantly related to increased rates of diffusion compared to achievement ($p = .26$). There were no other significant associations with respect to the predictor variable (I preference) on the criterion variable of identity status.

Table 4

Multinomial Logistic Regression Results for Categorization of Identity Status by Introversion Score (N = 113)

Category	Value	β (SE)	Wald	df	Sig.	OR (95% CI)
Diffusion	Intercept	-6.67 (5.92)	1.27	1	.26	-----
	Introversion	-.61 (.55)	1.25	1	.26	.54 (.19, 1.57)
Foreclosure	Intercept	2.11 (6.27)	.11	1	.74	-----
	Introversion	-.40 (.47)	.69	1	.41	.67 (.26, 1.73)
Moratorium	Intercept	-.52 (7.39)	.01	1	.94	-----
	Introversion	-.35 (.59)	.40	1	.53	.69 (.22, 2.19)

Notes: Achievement is the reference category for identity status; β (SE), Beta, standard error for Beta; OR, odds ratios; 95% CI: 95% confidence intervals; Overall model, χ^2 , (9), 13.18, $p = .15$; Goodness of fit, χ^2 , (315), 328.33, $p = .29$; All results controlled for age and ethnicity.

Research question 4. Does an increase in the strength of the S preference predict significantly increased rates of Foreclosure compared to an Achieved status while controlling for the effects of ethnicity and age? We conducted a separate multinomial logistic regression analysis to assess relative odds of membership in one of four categories of outcome (i.e., Diffusion, Foreclosure, Moratorium or Achievement) with Achievement serving as the referent category (see Table 5). While controlling for the effect of the demographic variables, 189 participants with an S preference were entered into a separate run of the multinomial logistic regression. There was a good model fit on the basis of the predictors (i.e., S preference, ethnicity, age) compared to the intercepts alone, χ^2 , (555), 556.95, $p = .47$, using a Pearson criterion, while the overall model was not significant, χ^2 , (9), 12.62, $p = .18$. In answering the research questions, it was not demonstrated that a relative increase in the strength of the S preference was significantly related to increased rates of Foreclosure compared to Achievement while controlling for the effects of age and ethnicity ($p = .59$). There were no other significant

associations with respect to the predictor variable (S preference) on the criterion variable of identity status.

Table 5

Multinomial Logistic Regression Results for Categorization of Identity Status by Sensing Score (N = 189)

Category	Value	β (SE)	Wald	df	Sig.	OR (95% CI)
Diffusion	Intercept	-3.64 (4.67)	.58	1	.46	-----
	Sensing	.12 (.45)	.07	1	.79	1.13 (.46, 2.74)
Foreclosure	Intercept	-2.39 (4.40)	2.95	1	.59	-----
	Sensing	.165 (.39)	.18	1	.67	1.18 (.55, 2.53)
Moratorium	Intercept	-6.12 (5.96)	1.05	1	.31	-----
	Sensing	-.41 (.60)	.48	1	.49	.66 (.21, 2.13)

Notes: Achievement is the reference category for identity status; β (SE), Beta, standard error for Beta; OR, odds ratios; 95% CI: 95% confidence intervals; Overall model, χ^2 , (9), 12.62, $p = .18$; Goodness of fit, χ^2 , (555), 556.95, $p = .47$; All results controlled for age and ethnicity.

Research question 5: Does an increase in the strength of the N preference predict significantly increased rates of Moratorium compared to the Achieved status while controlling for the effects of ethnicity and age? We conducted a separate multinomial logistic regression analysis to assess the relative odds of group membership in one of four categories of outcome (i.e., Diffusion, Foreclosure, Moratorium or Achievement) with achievement serving as the referent category (see Table 6). Ninety two participants with an N preference were entered into a separate run of the multinomial logistic regression while controlling for the effects of ethnicity and age. There was a good model fit on the basis of the predictors (i.e., N preference, ethnicity,

age) compared to the intercept alone, χ^2 , (258), 249.66, $p = .63$, using a Pearson criterion, while the overall model was significant, χ^2 , (12), 36.76, $p < .001$.

In answering the research question, analysis of the data demonstrated that an increase in the strength of the N preference was not significantly related to increased rates of Moratorium compared to Achievement ($p = .31$). While the data did not support the research hypothesis, there were significant findings for the impact of the strength of the N preference on both Foreclosure and Diffusion ($p = .001$ and $p = .005$, respectively).

Table 6

Multinomial Logistic Regression Results for Categorization of Identity Status by Intuition Score (N = 92)

Category	Value	β (SE)	Wald	Df	Sig.	OR (95% CI)
Diffusion	Intercept	31.91 (15.35)	4.32	1	.04	-----
	Intuition	-2.28 (.82)	7.74	1	.005	.10 (.02, .51)
Foreclosure	Intercept	8.28 (7.74)	1.14	1	.29	-----
	Intuition	-2.89 (.84)	11.88	1	.001	.06 (.01, .29)
Moratorium	Intercept	6.81 (8.80)	.60	1	.44	-----
	Intuition	-.83 (.81)	1.05	1	.31	.44 (.09, 2.14)

Notes: Achievement is the reference category for identity status; β (SE), Beta, standard error for Beta; OR, odds ratios; 95% CI: 95% confidence intervals; Overall model, χ^2 , (12), 36.76, $p = < .001$; Goodness of fit, χ^2 , (258), 249.66, $p = .63$; All results controlled for age and ethnicity.

Regarding these finding, an increase in the N preference predicted decreased rates of Foreclosure, compared to Achievement, while controlling the influence of age and ethnicity. Stronger preference N's were nearly 1/20th as likely to be Foreclosure compared to Achievement (OR = .06, $p = .001$). The model also produced a significant finding for N and Diffusion with an increase in N preference significantly decreasing rates of Diffusion compared to Achievement

(OR = .10, $p = .005$). As the relative strength of N increased, participants were 1/10th as likely to be Diffusion compared to Achievement.

Research question 6: Does an increase in the strength of the T preference predict significantly increased rates of Achievement compared to the other statuses (i.e., Diffusion, Foreclosure, Moratorium) while controlling for the effects of ethnicity and age? We conducted a separate multinomial logistic regression analysis to assess the relative odds of group membership in one of four categories of outcome (i.e., Diffusion, Foreclosure, Moratorium or Achievement) with Achievement serving as the referent category (see Table 7). T preference participants (N = 125) were entered into a separate run of the multinomial logistic regression while controlling for the effects of ethnicity and age. There was a good model fit on the basis of the predictors (i.e., T preference, ethnicity, age), χ^2 , (363), 329.073, $p = .899$, using a Pearson criterion, and the overall model was significant, χ^2 , (9), 17.74, $p = .038$.

Table 7

Multinomial Logistic Regression Results for Categorization of Identity Status by Thinking Score (N = 125)

Category	Value	β (SE)	Wald	df	Sig.	OR (95% CI)
Diffusion	Intercept	-2.693 (4.82)	.312	1	.58	-----
	Thinking	-.120 (.53)	.054	1	.82	.89 (.325, 2.42)
Foreclosure	Intercept	-.888 (4.84)	.034	1	.85	-----
	Thinking	-.38 (.51)	.559	1	.46	.69 (.252, 1.86)
Moratorium	Intercept	-.399 (7.00)	.003	1	.95	-----
	Thinking	-.765 (.75)	1.037	1	.31	.47 (.11, 2.03)

Notes: Achievement is the reference category for identity status; β (SE), Beta, standard error for Beta; OR, odds ratios; 95% CI: 95% confidence intervals; Overall model, χ^2 , (9), 17.74, $p = .038$; Goodness of fit, χ^2 , (363), 329.073, $p = .899$; All results controlled for age and ethnicity.

In answering the research question, analysis of the data did not demonstrate increased rates of Achievement compared to the other three identity statuses of Diffusion, Foreclosure or Moratorium ($p = .82, .46$ and $.31$ respectively) with a relative increase in the T preference. There were no other findings of significance for the T preference, the demographic variables and the criterion variable of identity status.

Research question 7: Does an increase in the strength of the F preference predict increased and statistically significant rates of Foreclosure compared to the Achieved status while controlling for the effects of ethnicity and age? We conducted a separate multinomial logistic regression analysis to assess relative odds of group membership in one of four categories of outcome (i.e., Diffusion, Foreclosure, Moratorium or Achievement) with Achievement serving as the referent category (see Table 8).

Table 8
Multinomial Logistic Regression Results for Categorization of Identity Status by Feeling Score (N = 156)

Category	Value	β (SE)	Wald	df	Sig.	OR (95% CI)
Diffusion	Intercept	4.38 (6.61)	.44	1	.51	-----
	Feeling	-.57 (.49)	1.34	1	.25	.57 (.22, 1.5)
Foreclosure	Intercept	1.24 (4.80)	.07	1	.78	-----
	Feeling	-.37 (.38)	1.06	1	.30	.68 (.32, .14)
Moratorium	Intercept	-6.06 (6.34)	.91	1	.34	-----
	Feeling	-.26 (.55)	.23	1	.63	.77 (.26, 2.3)

Notes: Achievement is the reference category for identity status; β (SE), Beta, standard error for Beta; OR, odds ratios; 95% CI: 95% confidence intervals; Overall model, χ^2 , (9), 5.24, $p = .81$; Goodness of fit, χ^2 , (429), 447.826, $p = .256$; All results controlled for age and ethnicity.

F preference participants ($N = 156$) were entered into a separate run of the multinomial logistic regression while controlling for the effects of ethnicity and age. On the basis of these three predictors, the overall model was not significant, χ^2 , (9), 5.24, $p = .81$. In answering the research questions, analysis of the data demonstrated that an increase in the strength of the F

preference was not significantly related to increased rates of Foreclosure, compared to Achievement, controlling for the influence of age and ethnicity ($p = .30$). Additionally, there were no other significant effects found in the model for the F preference and criterion variable of identity status.

Research question 8. Does an increase in the strength of the J preference predict increased and statistically significant rates of Foreclosure compared to the Achieved status controlling for the effects of ethnicity and age? We conducted a separate multinomial logistic regression analysis to assess relative odds of group membership in one of four categories of outcome (i.e., Diffusion, Foreclosure, Moratorium or Achievement) with Achievement serving as the referent category (see Table 9). J preference participants ($N = 111$) were entered into a separate run of the multinomial logistic regression while controlling for the effects of ethnicity and age. There was a good model fit on the basis of the predictors (i.e., J preference, ethnicity, age), χ^2 , (312), 293.596, $p = .77$, using a Pearson criterion, and the overall model was significant, χ^2 , (9), 18.927, $p = .026$.

In answering the research question, the analysis did not demonstrate that a relative increase in the strength of the J preference was found to be significantly related to increased rates of Foreclosure compared to Achievement while controlling for the effects of age and ethnicity ($p = .15$). The model did produce a separate finding. A relative increase in the J preference was predictive of significantly decreased rates of Diffusion compared to Achievement while controlling for the influence of age and ethnic category ($p = .026$). Increase in the strength of the J preference predicted a slightly less than 1/4th chance of being in the Diffusion identity status category compared to an Achievement status (OR = .24). The model produced no other

significant findings regarding effects between the J preference and the criterion variable of identity status.

Table 9

Multinomial Logistic Regression Results for Categorization of Identity Status by Judging Score (N = 111)

Category	Value	β (SE)	Wald	df	Sig.	OR (95% CI)
Diffusion	Intercept	-.17 (6.48)	.001	1	.98	-----
	Judging	-1.44 (.65)	4.93	1	.026	.24 (.07, .85)
Foreclosure	Intercept	2.40 (5.86)	.17	1	.68	-----
	Judging	-.68 (.48)	2.07	1	.15	.50 (.20, 1.28)
Moratorium	Intercept	-5.38 (7.18)	.56	1	.45	-----
	Judging	-.68 (.73)	.86	1	.35	.51 (.12, 2.19)

Notes: Achievement is the reference category for identity status; β (SE), Beta, standard error for Beta; OR, odds ratios; 95% CI: 95% confidence intervals; Overall model, χ^2 , (9), 18.927, $p = .026$; Goodness of fit, χ^2 , (312), 293.596, $p = .77$; All results controlled for age and ethnicity.

Research question 9: Does an increase in the strength of the P preference predict increased and statistically significant rates of Moratorium compared to the Achieved status while controlling for the effects of ethnicity and age? We conducted a separate multinomial logistic regression analysis to assess the relative odds of group membership in one of four categories of outcome (i.e., Diffusion, Foreclosure, Moratorium or Achievement) with Achievement serving as the referent category (see Table 10). P preference participants ($N = 170$) were entered into a separate run of the multinomial logistic regression while controlling for the effects of ethnicity and age. There was a good model fit on the basis of the predictors (i.e., P preference, ethnicity, age), χ^2 , (477), 489.126, $p = .341$, using a Pearson criterion, but the overall model was not significant, χ^2 , (9), 9.258, $p = .414$. In answering the research question, analysis of the data demonstrated that an increase in the strength of the P preference was not significantly related to increased rates of Moratorium compared to Achievement.

There was a result approached significance ($p = .053$) with respect to the P preference and rates of Foreclosure. With this finding, an increase in the strength of the P preference predicts decreased rates of Foreclosure compared to an Achieved status (nearly half as likely), but again this finding trended towards statistical significance so it should be considered with caution, if at all. There were no other significant results found in this model with regards to the personality preference of interest and the criterion variable of identity status while controlling for the effects of age and ethnicity.

Table 10
Multinomial Logistic Regression Results for Categorization of Identity Status by Perceiving Score (N = 170)

Category	Value	β (SE)	Wald	df	Sig.	OR (95% CI)
Diffusion	Intercept	2.38 (5.07)	.22	1	.64	-----
	Perceiving	-.50 (.38)	1.72	1	.19	.61 (.29, 1.28)
Foreclosure	Intercept	.25 (4.34)	.003	1	.95	-----
	Perceiving	-.68 (.35)	3.75	1	.053	.51 (.26, 1.01)
Moratorium	Intercept	-.24 (6.01)	.002	1	.97	-----
	Perceiving	-.55 (.47)	1.38	1	.24	.58 (.23, 1.45)

Notes: Achievement is the reference category for identity status; β (SE), Beta, standard error for Beta; OR, odds ratios; 95% CI: 95% confidence intervals; Overall model, χ^2 , (9), 9.26, $p = .41$; Goodness of fit, χ^2 , (477), 489.126, $p = .34$; All results controlled for age and ethnicity.

Summary of Results

While the specific research hypotheses may not have been statistically significant, and hence, garnered support from this study, due to the multiple comparisons offered by the statistical analysis there were still significant and potentially meaningful findings regarding the relationships between the personality preferences and the identity statuses with this sample of college-attending emerging adults who were attending a large public Southern PWI. There was also a finding regarding ethnicity in the model that examined the demographic variables. These

results highlight relationships between a foundational conceptualization of identity development and a personality instrument commonly employed with college-attending emerging adults.

There were several potentially noteworthy findings (see Table 11): 1) Students who identified as ethnic minorities, compared to White participants, appeared five times more likely to be in Achieved status compared to Moratorium status; 2) An increase in Extroversion preference predicted five times increased odds of being in Achieved compared to Moratorium status; 3) An increase in Intuition preference predicted increased rates of Achievement compared to Foreclosure and Diffusion (twenty times and ten times greater odds, respectively); 4) An increase in Judging preference predicted four times increased rates of Achieved status compared to Diffused status, and lastly; 5) An increase in Perceiving preference approached significance ($p = .053$) with two times increased rates of Achievement compared to Foreclosure status.

Table 11
Summary of Significant Multinomial Logistic Regression Results for Categorization of Identity Status

Category	Value	β (SE)	Wald	df	Sig.	OR (95% CI)
Moratorium	Minority	-1.70 (.65)	6.84	1	.01	.18 (.05, .65)
	Status					
Moratorium	Extroversion	-1.76 (.62)	8.17	1	.004	.17 (.05, .58)
Diffusion	Intuition	-2.28 (.82)	7.74	1	.005	.10 (.02, .51)
Foreclosure	Intuition	-2.89 (.84)	11.88	1	.001	.06 (.01, .29)
Diffusion	Judging	-1.44 (.65)	4.93	1	.026	.24 (.07, .85)
Foreclosure	Perceiving	-.68 (.35)	3.75	1	.053	.51 (.26, 1.01)

Notes: Achievement is the reference category for identity status; β (SE), Beta, standard error for Beta; OR, odds ratios; 95% CI: 95% confidence intervals; All results controlled for age and ethnicity.

The research question that examined the I, S, T, and F preferences were not supported and there were no additional significant findings for the models that included these preferences. Overall, in the model devoted to the demographics there was a significant finding regarding increased rates of Achieved status for ethnically diverse students and three of the eight models that examined the personality preferences (i.e., Extraversion, Intuition and Judging) produced statistically significant findings ($p < .05$) with one trending toward significance (i.e., Perceiving, $p = .053$). Interestingly in considering the research questions, the predictions suggested decreased rates of the less advanced statuses for the personality traits that were statistically significant as well as for the influence of ethnicity rather than increased rates of the less mature statuses (i.e., Diffusion or Foreclosure). Concerns regarding the novelty and the potential verity of these finding will be discussed in the final chapter. As discussed in the Methods section and suggested by the literature review, gender was not a significant predictor in any of the models. Therefore, it was removed from the analysis as a variable of interest. Further discussion of the findings and implications for research and practice will also be discussed in the following chapter.

Chapter 5

Discussion

The first research question focused on the predictive quality of ethnicity on the degree of exploration and timing of commitment to adult values, beliefs and career goals (i.e, ego identity development). The eight following research questions were proposed to examine the impact of the personality preferences on ego identity development (one question per personality preference). The first multinomial regression model included ethnicity and age and investigated their impact on the identity statuses. The next eight models investigated the impact of each of the personality preferences on the identity statuses while controlling for the effects of age and ethnicity. These research questions were informed by both the description of the personality traits and a literature review of the various personality features (see Chapter 2, pp. 106-108 for a list of the research questions). Participating students elected to take the study's online assessments for credit in their Introductory Psychology courses. The classes offered multiple research and non-research related options to fulfill the course requirement and to decrease any potential effects of coercion. Additionally, demographic information (i.e., age, gender, ethnicity, year on college, first generation college status) was collected for inclusion in analyses. The university does have a sizable African American population (21%) with another 9% of representation from various diverse cultural groups. The sample in the study closely mirrored these percentages (25.6% and 6.8% respectively) and appeared to be representative of the demographic makeup of the institution although the number of non-African American ethnic minorities within the participant pool was small.

For three of the eight personality preferences (i.e., Extraversion, Intuition, and Judging) the results suggested that the expression of an individual's preferences potentially predicted their

making commitments to adult values, beliefs and career goals after a period of exploring alternatives. These students showed decreased odds of reporting the less mature statuses. The Perceiving preference trended toward these same results. For the other four of the personality preferences (i.e, Introversion, Thinking, Sensing, and Feeling) there were no findings of significance regarding the impact of these personality preferences affecting the relative odds of any of the identity statuses.

The impact of students' ethnicity on ego identity development was also examined. It should be noted that these students were primarily African-American with small numbers identifying from other diverse ethnic backgrounds (see Table 1). These participants were less likely to spend extended periods of time exploring career choice or values when compared to their peers who identified as White. They also reported being more likely to make more independently commitments, without parental influence, after a period of exploring these values, beliefs and career alternatives. This work was largely exploratory and there are a number of reasons to interpret this study's results with caution. The geographical region where the study took place had not been explicitly sampled in previous identity development research and there were some findings that ran counter to previous research. These factors, and other study limitations, will be further addressed.

Brief Summary of Findings

The findings from this research differed from previously reported literature which had suggested students who identified with non-majority cultures may more quickly make decisions regarding their values and career goals compared to their White peers. Students who identify as minorities may also be more influenced by parents or authority figures in their decision making. Conversely, the participants in this study were more likely to make independent commitments

after a period of exploring alternative values, beliefs and career options. Compared to their peers who identified as White, they were also less likely to spend extended periods of time exploring career choice or values.

Not all of the personality preferences from the MBTI were found to impact ego identity development. The expression of the personality preferences of Extraversion, Intuition, Judging and Perceiving predicted fewer struggles in these students' developmental process. For instance, participants who favored the Extraversion preference indicated a tendency towards spending less time exploring their alternatives regarding their beliefs and career goals before making tentative commitments (i.e., Achievement). They did not decide prematurely (i.e., Foreclosure), nor did they report extended periods of exploration (i.e., Moratorium status). Individuals with a preference toward making non-linear connections and attuning to their felt sense and associations (i.e., Intuition preference) reported less likelihood of both giving up the explorative process and deciding prematurely based on parental influence (i.e., Diffusion or Foreclosure). Students who valued planning and closure (i.e., Judging preference) reported being less likely to abandon their exploration of values, beliefs and career goals without having made tentative commitments (i.e., Diffusion). While not significant ($p = .053$), participants who exhibited adaptability, flexibility, and openness to the future (i.e., Perceiving preference) reported being less likely to avoid premature decision making or to decide based on parental expectations (i.e., Foreclosure).

For students in the study who preferred Introversion, Sensing, and Feeling there did not appear to be significant differences regarding the time spent exploring aspects of adult identity or with the timing of commitments. This lack of significance was interesting in that there were reports in the literature that highlighted the potential challenges these individuals might encounter (Freedman, 2004; Hough, & Ogilvie, 2005; Robinson, et al., 2007). The less well

developed expression of Introversion, Sensing and Feeling was thought to negatively impact aspects of decision making or the management of authority influence. With these participants, favoring these preferences did not predict differences with their movement toward adult identifications. The final preference discussed, Thinking, also did not appear to impact time spent with exploration or timing of commitments. Here the expectation was that utilizing the objective and analytical decision making style typical of this preference would predict greater odds of having tentatively resolved the identity crisis of emerging adulthood. Conversely, it did not appear to impact ego identity developmental or the forging of commitments.

Individuals express four of the possible eight personality preferences, one from each of the four subscales, to varying degrees. According to typology theory, the combination of preferences affects their expression. The empirical backing for multiple combinations has been questioned with less variance being explained with each additional combination (e.g., single to dyad, dyad to triad, triad to quad) (Lloyd, 2008; Wild, 2011). According to the instrument developers and within a Journal solely devoted to the study of the personality preference, *The Journal of Psychology Type*, studying the impact of single traits is an accepted practice in research (Carskadon, 2001; Myers et al., 1998). This approach accounts for the most variance in terms of outcomes (Reynierse & Harker, 2001, 2008). In being an exploratory look at the relationships between the preference and the identity statuses, this proposed study may provide evidence as to which dyad preference combinations would make most sense to investigate first. Later research may help define which secondary preferences potentially differentiate participants at the identity status junctures that were found (e.g., Introversion-Judging vs. Extraverted-Judging with decreased rates of Diffusion). This possibility is further discussed in the implications section, but was beyond the scope of this study.

Discussion of Findings

The following section elaborates on the findings from this research and provides further discussion of the results. Limitations of the study, implications for research and implications for interventions follow the discussion of the findings.

Minority status influence on ego identity development. While the finding regarding ethnicity and identity status from this study is intriguing, it is discussed somewhat tentatively and with reference to supporting literature. Considering the novelty of the finding compared to earlier identity status research on ethnic minorities, the lack of identity research that has utilized samples in this region of the country and the mixed composition of the ethnic minority sample (32.4% total ethnic minority, with 25.6% African-American), it would be unwarranted to generalize from this one study. The results, while contributing to the literature are in need of replication.

The results from this current study regarding students from diverse cultural backgrounds differed from previous identity development research. Earlier identity status studies from the 1980s and 90s consistently reported that students who came from minority backgrounds made earlier commitment to adult values and were more influenced by parental authority than their peers who represented the majority culture (i.e., White) (Phinney, 1989). Without having been adequately explored, these commitments were seen as premature (Adams, 2010). However, the students in the current study appeared significantly more likely to make more independent commitments after a period of exploration. With decreased rates of Moratorium compared to their White peers, they still reported less time dedicated to exploring their values, beliefs and career goals.

Differences with what constitutes an ‘optimal’ time spent exploring values before making commitments, as well as the relative influence of family on that process, may at least in part be a function of differences in cultural values. For the minority participants in this study, there appeared to have been a subtle shift in the process and timing of their ego identity formation. Participants in this study who identified as ethnic minorities reported more expediently forging an ego identity, but they also decided about values, beliefs and career more independently. Admittedly, this snapshot does not explain how or why. This difference may be representative of the varied, but normative, experience of individuals who identify with non-majority culture.

The reported premature commitments to adult values made by emerging adults from minority background in the 80s and 90s are attributed to a number of factors. These included constrained choices due to socioeconomic status or lack of access to educational opportunities (Phinney, 1989; Streitmatter, 1988). The impact of economic constraints may still inhibit extended time to examine alternatives regarding career goals, and even, values and beliefs. This factor may be more present for first generation college students, who represented 46% of the ethnic minorities in the sample, compared to 28% of the students who were White (Stephens, Fryberg, Markus, Johnson, & Covarrubias, 2012). Cultural differences may also potentially be a function of privilege for non-minorities in the United States (Kendall, 2006). Erikson echoed the importance of this potential constraint and recognized the privilege implicit in a socially sanctioned moratorium for exploring aspects of identity (1959, 1968, 1975). Although socioeconomic status was not assessed with the students who participated in this study, economic realities would likely shape their abilities to extend their time exploring career alternatives and academic major. With fewer economic resources, this factor would likely push them to more expediently make adult commitments.

Differences in worldview between people of dominant and non-dominant cultures may also help explain the historical differences with identity status for students who identify as ethnic minorities compared to students who identify as White. A more collectivist world view that emphasizes group goals over individual goals, interdependence, and family influence in decision making across the lifespan may be more representative of ethnic minorities' experience (Allen & Bagozzi, 2001, Triandis, 1995). Conversely, the majority White culture is more individualistic emphasizing self-reliance and independence over group goals or values. What may have been interpreted, from an individualistic perspective, as a deficit with quicker parentally guided decision for ethnic minority emerging adults in earlier studies, may actually have been a culturally normative expression of a collectivist perspective. This difference in identity development may represent the impact of individuals' divergent life experiences, or different chosen and functional values (Rotheram-Borus & Wyche, 1994).

Considering these possible influences on the formation of an adult identity, allowing extended time for exploration may not feel appropriate, comfortable or possible for students from ethnically diverse backgrounds. These findings highlight the need for replication of this study to better understand possible shifting trends. More importantly, additional research could contribute to a better understanding of the experience of students of varied ethnic backgrounds who attend PWI's. Attention to cultural considerations and the unique needs of students of minority backgrounds who attend primarily White institutions may help them achieve valued goals and aid their personal growth (Branch, 2000; Chope & Consoli, 2006) even as they experience tension from competing cultural pulls.

It may be that the participants from non-majority cultures mirrored broader cultural shifts in moving from increased rates of Foreclosure, reported in earlier studies, to increased rates of

Achieved status, but this current study represented a single localized snapshot of their developmental process. There may also be greater awareness of potential barriers these students face in a university community or better services to address their unique needs that may also help explain this potential shift (e.g., need based university TRIO programs, faculty or peer mentoring programs, peer support groups, cultural diversity centers, and staff, faculty or clinicians who demonstrate improved cultural sensitivity or competence). The relative importance of parental authority may continue to be more culturally normative for these students, but hopefully, the shifting findings may also be signaling increased educational opportunities and successes. Only larger, more rigorous research efforts will be able to provide that information.

Discussion of preferences predicting more advanced identity development

Extraversion preference findings. People who show a preference toward Extraversion exhibit an external orientation to the world (Myers et al., 1998). They reportedly interact more openly and display higher degrees of external exploration as a function of this preference (Reed et al., 2004; Wang et al., 2006). Individuals who are extraverted feel more self-confident conversing with others and are more likely to share their thoughts and feelings with others in order to clarify them (Huitt, 1992; Loffredo, Opt, & Harrington, 2008). This outward orientation was seen as a potential protective factor against premature decision making regarding values, beliefs and career goals for this study's participants. This orientation may also spur exploration that leads to the examined commitments that runs counter to the less mature statuses (i.e., Diffusion and Foreclosure). Given this outward focus and attention to the external world, these students may enjoy and exhibit lengthier periods of exploring values, beliefs and career goals, and hence, they may delay making commitments. Increased exploration without making commitments was also thought to be more likely in considering the participants were primarily

early in their college careers. Therefore, they may not have had time to adequately examine alternatives en route to their making their tentative commitments.

Despite the tendencies described in the research that suggested increased time for exploration as a function of preference, these participants actually reported making adult identity commitments more expediently. While exploration is recognized as a healthy and normative aspect of development, its purpose is to ultimately lead towards adult commitments. Here, attention to the world of others appeared to aid the students' movement from necessary exploration to revisable commitments that constitute viable adult roles. As evidenced by the relative number who reported an Achieved status, it appeared that these participants may have more adeptly managed the identity crisis of emerging adulthood.

Erikson noted the importance of external connections between the individual and society as a significant aspect of healthy development in young adulthood (1968). He described the recognition of the young adult's emerging values by the community at large as a source of mutual validation for the individual, and likewise, for the society. Extraversion may aid this relational exchange. Students with an external orientation are more inclined to seek out feedback from mentors or external sources of information (e.g., career center services). They may also be more adept at garnering the support and attention of helpful others on their developmental journey. This willingness to reach out may positively shape their developmental trajectory and this quality may have been captured with their more expedient passage toward viable adult commitments.

Intuition preference findings. In looking at another preference, individuals who favor Intuition as a means of perceiving their reality grasp at meanings and relationships beyond conscious awareness and they attempt to account for a wide range of possibilities, patterns or

relationships with their perception of their world. This may help explain their tendency to try new strategies or adopt innovating solutions with problem solving (Myers et al., 1998).

Individuals with these leanings have been found to be present in greater numbers among undergraduates undecided on a college major (Kelley & Lee, 2005). Undergraduates are faced with expanded information and more challenging, higher stakes decision making when they enter college and emerge into adulthood (Arnett, 2004). In light of these factors, students relying on intuition may take more time to explore alternatives before settling on adult values, beliefs and career goals.

In contrast to expectations, these participants in this study actually appeared less likely to indicate the two least mature identity statuses (i.e., Foreclosure and Diffusion) compared to the most mature (i.e., Achievement). They reported a decreased tendency towards deciding prematurely on values, beliefs or career goals. These participants also communicated a decreased propensity for avoiding exploration and commitment entirely. A preference for Intuition may have served as a protective factor against several less mature several byways on the road to a viable, yet revisable, adult identity.

Judging preference findings. A focus on structure, planning and organizing is indicative of people who favor the Judging preference. These individuals seek closure and tend toward making prompt decisions (Myers et al., 1998). Moving to the more ambiguous developmental tasks of emerging adulthood may hasten their decision making process. In managing this reorganization of the self during the crisis of ego identity development, the influence of this preference may dispose them to forestall continued exploration in favor of decisions regarding aspects of the self. If their movement towards an adult identity temporarily

stalled, it was thought that these students may prematurely forge identity commitments earlier in the college experience without allowing for exploration of alternatives.

These students did not report increased rates of Foreclosure. Conversely, they actually appeared less likely to abandon exploring alternatives before having committed to values, beliefs and career goals (aka, Diffusion) compared to making their way to an achieved identity status. The inactivity characteristic of a non-exploring and non-decided state may have clashed with their innate emphasis on planning, organizing and decision making. Expression of this preference may help defend against defaulting to a temporary state of stasis on their developmental journey. Further study is needed to verify these findings and better understand how preferences may have shaped their developmental processes.

Perceiving preference findings. Flexibility, adaptiveness, and openness regarding change describe individuals who exhibit a well-defined Perceiving personality preference. They exhibit a curiosity about possible alternatives and attunement to future options (Myers et al., 1998). Those who favor perceiving have been overrepresented in a national norming sample of undecided students, (Kelly & Lee, 2005). Lengthier periods of exploration might be expected for these participants, but instead there was a trend ($p = .053$) toward an avoidance of premature commitments and foreshortened exploration (i.e., Foreclosure). These individuals did not exhibit increased time spent in exploration as was thought probable in reviewing the description of the preference and selected literature that focused on this preference.

Due to an interest in developing interventions that would aid normative identity development and despite the strength based nature of the MBTI which stresses the viability and worth of all the preferences, the research questions were framed to predict the ways students with well-defined preferences might struggle. The researcher hoped to identify particular

developmental challenges by preference. The predictions focused primarily on the temporary, but most likely, way stations students may experience as they face the developmental challenges of emerging adulthood. With the significant findings, participants in the study appeared to report decreased rates of the identity statuses that serve as transition points before viable adult identifications. Extraversion, Intuition, and Judging all appeared to predict decreased rates of the less advanced statuses en route to a stable ego identity while individuals who favored the Perceiving preference demonstrated a trend toward significance with decreased rates of Foreclosed status. These findings conceptually cohere with the respective descriptions of type. As will be discussed in greater detail in the recommendation for research section, further studies would be necessary to determine the validity of these initial findings. The particular ‘hows’ or ‘whys’ that influenced the various identity status outcomes remain unknown. They would likely differ by preference. Further study of individuals at these junctions (e.g., comparing the relatively fewer Foreclosed Perceivers vs. Achieved Perceivers) would help to explain what particular factors or variables influence the movement between these particular developmental choice points.

Introversion, Sensing and Feeling preferences. Compared to previous generations, college-attending emerging adults must confront more ambiguous choices and varied sources of data with their decision making in a rapidly changing world (Arnett, 2004). In facing these challenges, it was thought that individuals who exhibited the well-defined preferences of Introversion, Sensing and Feeling may more likely struggle with the challenges of forging viable adult identity commitment. Despite previous research findings that suggested potential difficulties for these three preferences, the process of exploration and commitment did not appear to be significantly impacted for the participants in this research project. They reported neither

higher nor lower rates of any of the statuses compared to the most mature status (i.e., Achievement). Further research is needed to determine what factors may have mediated these tendencies or if the lack of significant results may have been an artifact of the sample or geographic region.

Thinking preference. Adopting an impersonal and analytical decision making style (i.e., Thinking Preference), also did not impact the developmental process. It is discussed separately from the three previous preferences because, unlike Introversion, Sensing and Feeling where there was thought to be greater challenges with identity development, adopting a Thinking orientation was thought to aid students in facing the crisis of an evolving self. This approach to decision making improved the quality of decisions in a number of settings (Amir & Gati, 2006; Martinko, 1996), and these individuals were found more likely to employ objective career interest data and faculty advising (Nelson & Roberge, 1993). Despite evidence of a potential advantage for students who exhibit impersonal and logic driven analysis, in this current study this did not translate to increased relative rates of the more advanced statuses.

Summary of Conclusions

Emerging adults face the task of deciding upon values, beliefs and career goals en route to forging their adult identity. This study sampled that process and examined how ethnicity, and different aspects of personality, may impact choice points at the various developmental crossroads. In looking globally at the findings, personality preferences, age and ethnicity were all of interest to the researcher based on previous research that utilized the identity statuses as a measure of adult identity formation. The model that examined the impact of ethnicity on identity status was significant and three of the eight models that included a personality preference produced significant results.

The results from this current study are to be interpreted with caution. With the pairing of the Myer Briggs Typology Indicator and the Objective Measure of Ego Identity Status for data collection, this study was exploratory. The particular cultural context, a primarily White institution in the Deep South, has also been historically understudied in identity status research focusing on college-attending emerging adults. The novelty of the research findings, along with the limitations discussed next, qualify the results. Clearly personality could not tell the whole story regarding identity formation of emerging adults. This was not hypothesized to be the case at the outset. Rather, the researcher hoped to examine which preferences, when more strongly expressed, might impact the degree of exploration and commitment indicative of forming a viable adult identity. The researcher also looked to reexamine a previous finding with students who identified as ethnic minorities. The recommendations address the limitations of this study in order to improve replication of this current study. The suggestions for interventions could be developed if replication provides better supports for the findings from this study.

Limitations

The participants in this study were recruited to capture the demographics consistent with students who attend a Southern primarily White institution. Identity status research with emerging adults has not explicitly sampled this region. As such, the results may not generalize to students in other parts of the country. There would clearly be cross cultural, and presumably, U.S. regional differences as a function of variables that may differ and impact identity development (e.g., SES, ethnicity, college generation status, etc.). It should also be noted that while the sample demographics closely mirrored the institution as a whole with 32.4% total ($n = 91$) ethnic minority participants enrolled, African Americans represented the vast majority of the participants who were ethnic minorities (79%, $n = 72$). So the ethnically diverse sample, while

32.4% of the total 281 participants, is actually largely African-American with very small numbers of other ethnic minorities. The collapsing of ethnic categories has been a typical response to the challenge of enrollment at primarily White institutions, but it also confounds the findings. Contemporary research on ethnicity is currently teasing out more subtle between group differences. Therefore, there may be important differences between individuals who identify with different groups that were not captured in this research due to collapsing these students into a single category.

Admittedly this sampling procedure was also a function of access. This study was only offered to students who elected to enroll in Introductory Psychology classes at the participating university. While these courses are offered as part of general education requirements for all incoming students few majors are required to enroll in this particular class. This represents a common criticism against psychology research (Gallander Wintre, North, & Sugar, 2001; McCrae, Bailly, King, 2005). These participants were a convenience sample, but early career college students also represented the population of interest for this study. Admittedly, the lack of random assignment raises potential concerns related to internal validity because of the possible effect of uncontrolled nuisance variables. Conversely, the potential congruity between the population of interest (i.e., early college career emerging adults) and the sample population served to increase external validity and the potential generalizability of the findings. Nonetheless, an enrollment method which captured a broader early college career sample may have yielded slightly different results or been more generalizable in better representing the array of early college career students at a PWI (King, Bailly, & Moe, 2004). Additionally, the impact of receiving course credit for participation, even when an alternative is provided, may have acted

as an unexamined variable in the study (Korn, 1992). These issues typify previous identity development research, as well as psychology research more broadly (Foot & Sanford, 2004).

There were also a number of guidelines consulted regarding number of participants needed in the statistical analyses and one of the nine models fell short of the most stringent recommendation. Garson (2010), Peduzzi et al. (1996), Field (2005), Tabachnick and Fidell (2007) and Green (1991) were all referenced to determine adequate power. With a sample size of 92, the model that included Intuition satisfied all but Green's (1991) more conservative recommendation of a sample size that he suggested should range between 74-107. The Intuition model otherwise satisfied recommended diagnostics. All of the other eight models satisfied Green's more conservative guideline. Due to the varied guidelines offered by statisticians, the Intuition model's results should be interpreted with greater caution.

There are also several limitations regarding the instruments used in the study. This study employed a recently re-normed version of the identity status measure, the OMEIS, which had few validation studies apart from those undertaken by the instrument's developer (Adams, 2010). The changes to the instrument involved updating the wording of the questions. The relatively long history of the instrument's use, starting with the semi-structured interview in the 70s that was used to create the first Likert-type scale version in 1979, and the improved psychometric properties demonstrated in the validation studies should help allay concerns with these changes (Adams, 2010; Marcia, 2001). As the relevant sections indicated, the constructs of identity status and ethnicity are currently being reexamined by researchers. The APA defines ethnicity as an individual's self-identification or "the acceptance of the group mores and practices of one's culture of origin and the concomitant sense of belonging" (2003, p.378). Because of the evolving definition of ethnicity and increases subtlety regarding the understanding of this term within the

social sciences, the applicability of the instrument for individuals from diverse ethnic backgrounds remains an open question despite its continued use (Marcia, 2001). As noted previously, differences regarding ethnicity reflected by the Objective Measure of Ego Identity Status may be a function of varied life experience and values, rather than being interpreted as a deficit or lack of maturity. The discussion in the literature review regarding the evolving conceptualization of ethnicity was intended to contextualize the finding within the current debate about the status of this variable.

Lastly, while some psychology researchers question the theory that underpins the MBTI (Mischel, 2009; Reynierse & Harker, 2008), the inventory remains a mainstay of strength based assessment and intervention with college-attending young adults. To address concerns regarding the instrument's validity, the instrument's developers have shifted to a more contemporary measurement approach that operationalizes the eight personality preferences as continuous variables along four independent subscales. The latest iteration of the MBTI also employs item response theory which has improved the psychometric properties of the instrument (Harvey & Hammer, 1999). In the wake of an early 70s critique of personality theory, the Five Factor Model of McCrae and Costa set the precedent for improved test construction (2008). With the MBTI, a more empirically rigorous approach has been used alongside the more classical typology theory, which has generated controversy and not garnered consistent empirical support despite longstanding adherents (Carskadon, 2001; Reynierse & Harker, 2000; Wilde, 2011). Utilizing the MBTI preferences as separate subscales and continuous variables may run counter to classical typology theory that focuses on four letter whole-type combinations (Beebe, 2007a, 2007b), but there is a strong and growing precedence for this better empirically supported

practice in the literature (Edwards, Lanning, & Hooker, 2005; Filbeck, Hatfield, & Horvath, 2005; Harrington, & Loffredo, 2001).

The authors of the Myers Briggs Typology Indicator manual attempt to appeal to both classical typology theorists as well as to researchers who favor more contemporary measurement approaches. They retain the either/or dichotomous nature of the instrument's polarity (e.g. Introversion or Extroversion, Sensing or Intuition...) while better accounting for contemporary measurement strategies. In the manual, they stressed both the theoretical underpinning of typology, while also providing evidence for the use of single scales and continuous variables for research purposes (Myers et al., 1998). The testing corporation that provides online scoring of the instrument, the CPP Corp., provides a strength of preference Z score as a standard part of their data extraction. These measures allow single-scale continuous variable analyses. While classicists may be concerned with the displacement of Jungian theory, Lloyd (2008) has suggested the MBTI provides useful and meaningful data even if used atheoretically. The MBTI may always have detractors based on the instrument's early psychometric qualities or Jung's marginal status within academic research psychology, but its current iteration demonstrates improved validity and reliability. The instrument remains an often used assessment designed to promote self-awareness with late adolescents and emerging adults on college campuses. As discussed in the recommendations for further research, combinations of preferences may paint a more detailed picture regarding the MBTI and identity status, but single measures served as a starting point for this research. Preference dyad combinations informed by the literature (e.g., Introverted-Judging vs. Extroverted-Judging or Introverted-Perceiving vs. Extroverted Perceiving) could be examined next, but they were beyond the scope of this study.

Recommendations

Research

Considering the exploratory nature of this study, the first suggestion would be to replicate it while addressing its limitations. Improvements would include: sampling greater number of minorities of non-African American ethnic identity (e.g., Hispanic/Latino, Asian-American) focusing solely on first semester incoming freshman, recruiting beyond introductory psychology classes, and increasing the number of participants to further decrease threats to internal validity. Tightening the sampling procedure by only including incoming freshman and ethnic groups with adequate representation in the analyses would be primary recommendations. These modifications would improve generalizability.

With greater numbers of ethnic minorities participating, pairing this research with the variables of socioeconomic status, a measure of acculturation, or an ethnic identity development measure may highlight important within group differences that impact the expression of preference or ego identity development with ethnic minorities. Introducing a measure of ethnic or White identity development, alongside the more traditionally used measures of identity development, would contribute to understanding these constructs' under-examined relationships. Identifying meaningful, but latent, cognitive variables would also be of interest in examining students at different points of their ego identity development (i.e., those that have struggled vs. those who have responded more productively to the developmental task).

Considering that college students represent the vast majority of participants in emerging adult research, the research questions could also be asked outside of a four-year college setting (King, Bailly, & Moe, 2004). Sampling adolescents who do not attend college out of high school, enroll in community college, enter vocational training or enlist in the military would broaden our

understanding of personality and development (Zimmerman, 2001, regarding community college and personality preference). Replicating this study in different geographical regions of the country would also be warranted to better understand the relative adaptability of personality. Asking how context informs the variable adaptability of any particular preference would address Erikson's (1968) emphasis on the psycho-social interaction as well as Jung's discussion of the favoring of certain types in different historical and geographical contexts (1971). This focus would also better account for social psychology's critique of trait theory as decontextualized (Funder, 2008). Longitudinal studies that follow a cohort, and include preference as a variable, may also shed light on the potential cycling involved in the developmental process and shed light on the shifting nature or stability of identity.

There are a number of recommendations regarding additional research that would directly address and extend the current study's findings. Examining the particular developmental junctures found in the results could provide information to inform interventions. Further areas to investigate would include developing a better understanding of minority students' and extraverted individuals' more rapid movement towards adequately explored commitments. For these two groups the outcomes appear to be similar (i.e., increased rates of an Achieved status), but the mechanisms by which they formed their commitments would likely radically differ as a function of difference between the experience of ethnic minorities at primarily White institutions and the extroverts orientation to the external world. These processes warrant additional study. Additionally, studying how an individual's preference towards intuition predicted less likelihood of premature and more parentally driven commitments as well as less likelihood of halting exploration of alternatives would also be recommended. Understanding the experience of those who preferred intuition and were Foreclosed or Diffused would also be of interest in

understanding these less likely identity status choice points. Asking how a student's well-defined Judging preference predicted decreased odds of halting exploration and commitment warrants attention. Here as well researchers could focus attention on those individuals who did not appear to benefit from the protected factor their preference provided their peers (e.g., those who favored Judging preference and were diffused). Lastly, researching how an individual's well-defined Perceiving preference may predict decreased rates of premature commitment could also be explored. These areas of further inquiry directly address the identity status junctures identified from this current study.

There are also recommendations with regards to the research design and the particular referent category, namely the Achieved status, used in the study. The present study compared various levels of exploration and commitment to the most advanced identity status. This was seen as the most informative starting point for the research questions. In choosing this set of comparisons between the four identity statuses, each analysis contained three additional unexamined two-way comparisons (i.e., Foreclosure vs. Diffusion, Foreclosure vs. Moratorium and Moratorium vs. Diffusion). Analyzing these additional comparisons to identify any meaningful differences would more fully complete the developmental picture. While beyond the scope of this study, these comparisons could further delineate the predictive quality of well-defined personality preferences.

The developmental choice points found in this study could also be explored through other variables of interest to cognitive psychologists (e.g., schemas, coding, implicit processes, expectations or beliefs, decision making, self-regulation, affective reactivity). Comparing processes or other latent variables that differentiate how some individuals successfully navigated their developmental crisis, compared to individuals who struggle, by preference, would expand

these initial findings. Within-group differences may be identified with these processes and they would likely differ by preference. Also regarding research design, this data set could be reanalyzed using second-order combinations of preferences to determine their possible impact on the statuses. For instance, were there well-defined combinations that shifted the odds between the statuses (e.g., Extraverted-Judging vs. Intuition-Judging)? Certain combinations of preferences may better specify the developmental forks in the road found in this study.

Qualitative methodologies could identify factors that either support an individual's identity development or serve as obstacles to that process. An example from the current study would be to selectively sample students with a well-defined Extraversion preference who have temporarily abandoned their identity exploration without making commitments.

Phenomenological grounded interviews could identify unique barriers or strengths for students who orient their attention towards the outer world. It would seem likely that emerging adults may construe their normative crisis differently as a function of personality preference. A saturated description of their subjective experience, by preference, may highlight variations in their meaning making regarding how they experience the press towards adult commitments.

Qualitative findings could inform the development of an 'exploration issues' and 'commitment issues' taxonomy to attune clinicians to students' potential challenges by preference.

Lastly, this study produced no significant finding for participants who preferred using feelings to guide decision making (i.e., Feeling Preference), for individuals who were more attuned to their inner world (i.e., Introversion preference), for those who focused more on concrete details (i.e., Sensing preference), as well as for students who were more likely to make impersonal and logic driven decisions (i.e., Thinking preference). These students' experiences ran counter to a body of research that suggested unique challenges for three of these groups and

improved decision making for the last group. Replication is needed to determine if the results from this current study were an artifact of sampling or whether they more accurately represented how these preferences predict development. With this study being largely exploratory, there remain a number of avenues to pursue with additional research.

Interventions

The unique challenges faced by students who are minorities and attend primarily White institutions could be addressed. This approach starts with increasing clinicians' knowledge, awareness and skills to improve cultural competence (APA, 2003). This includes self-knowledge and awareness of one's own biases, cultural knowledge, facility with culturally appropriate techniques and comfort in discussing difference with students (Byars-Winston & Fouad, 2006). Specific suggestions for attending to the American Psychological Association's multicultural guidelines would include examining one's own cultural biases regarding the meaning of work, understanding the historical educational and career experiences of people of color, attending to cultural values during assessment and conceptualizing with attention to the client's cultural context (Flores, Lin, & Huang, 2005). These factors may help address the higher no show and attrition rates in therapy for individuals from diverse ethnic backgrounds, especially when there is a cultural mismatch between therapist and client (Owen, Imel, Adelson, & Rodolfa, 2012; Vasquez, 2007). When evaluating the appropriateness and effectiveness of interventions, Counseling Psychology produced guidelines for evidenced based practice that stressed varying levels of specificity, which include cultural differences (Wampold et al., 2002, 2005).

Generating dialogue about the particular challenges and perceived barriers typically faced by minorities at primarily White Institutions would be warranted in tailoring these interventions (Luzzo & McWhirter, 2001). Increased attention to the unique needs, client characteristics, and

the self of the therapist appears more necessary in work with students who identify as ethnic minorities. Any focus on ‘personality’ would likely need to be more heavily integrated into discussions of worldview and systemic challenges for students from diverse ethnic backgrounds. This balancing of perspectives is suggestive of Erikson’s emphasis on the psycho-social interaction involved in forging a viable adult identity.

With increased confidence in the findings from this study, information regarding the relationships between the preferences and the ego identity development could also be integrated into existing evidence based approaches. Interventions should focus on special populations when relevant (e.g., students who are ethnic minorities, student-athletes or first generation in college). As one matures, the expression of one’s personality preferences may evolve over the lifespan. Interventions that share how others of the same preference explore and successfully make examined commitments may be warranted. Students who learn ‘the how’s’ for each of the protective factors associated with their preferences discussed earlier in the chapter could better utilize the strengths of their dominant or secondary preferences. This increased awareness may also better equip them to avoid the more common challenges of their preference. This information could be included in preventative work, for example as part of an ‘exploring careers course’ for incoming freshman, or more remedially, included as part of career or individual counseling after a brief MBTI assessment. Educating struggling students about their chosen preference and the normative crisis of emerging adulthood may help mitigate the anxiety or guilt they may be experiencing regarding their struggles. The findings from this current study, if they are supported by later findings, could be integrated across treatment modalities.

As part of preventative work, the findings regarding each of the preferences or the developmental challenges of forming identity commitments could be included in

psychoeducational programming designed to foster healthy exploration. These more educationally oriented sessions would not require more highly trained mental health professionals, but rather, could be delivered by Masters level clinicians more widely and cost effectively. After a brief assessment to identify strength of preferences, this information could be presented workshop style in a high school setting, on a freshman dorm floor, in the career center, or online to decrease barriers to dissemination and to reach greater number of students.

In individual and group formats, there are a number of ways to specifically incorporate knowledge about preference. Using preference language or metaphors that speak to the well-defined preferences would be warranted. Identifying what types of information might be useful and what sources of information these individuals might be more inclined to seek out, or possibly overlook, by preference would also be helpful. Discussing and validating the increased ambiguity and perceived high stakes with decision making in college may be important as well as discussing the evolving nature of the developing aspects of self may also help spur exploration. Identifying and addressing cognitive distortions or identifying how feelings may negatively impact the use of one's primary preference would help remove obstacles to healthy type functioning. Lastly, discussing how employing the strengths of a well-defined secondary preference may be useful to consciously balance the 'go to' preference. Awareness of preference tendencies may empower students who feel stuck or overwhelmed by increasing their self-awareness.

Group interventions may also be warranted. The group modality, itself, imparts therapeutic factors that may be beneficial. While 'imparting information' might be the most obvious function of a group intervention that focuses on the developmental challenges of emerging adulthood, a skilled group therapist could activate the therapeutic factors of

universality, vicarious learning, imitative behavior, and existential factors as students address questions about their developing selves alongside their peers (Yalom & Leszcz, 2005).

Homogenous preference groups may increase cohesiveness, while more heterogeneous groups might enable greater cross-preference dialogue of the relative strengths, strategies, or growth edges by preference. As stated at the outset of the interventions section, these suggestions are offered tentatively and more research would be needed to better determine and justify including information regarding the relationships between the personality preferences and identity development in current interventions as well as to guide a more targeted use of that information.

Final Summary

This study offered a meaningful, but decidedly initial point of departure regarding the relationships between the MBTI personality preferences and identity formation with emerging adults. The researcher also attempted to examine a finding from previous studies that asked how ethnicity may impact the commitment to values, beliefs and career goals. While there were several significant findings, the data captured but a single snapshot of a dynamic process in a particular cultural context.

The limitations of the study, and novelty of many of the findings, should prompt caution with their acceptance. One would not generalize from this one study. In considering how this study could be expanded and made more useful to students and their colleges, assessing incoming freshman and retaining their results in a career counseling center as part of admission to the university would create a potential baseline by which to compare future assessments of career or identity development. University buy-in may also mitigate any effect of their being recruited through course credit. Ideally, if all incoming freshman completed the measures, or could elect to do so, and their results were retained in a career counseling file, students may see a

payoff in the time spent more directly serving their needs. They could opt in or out of their results being included in research much the same way university counseling centers provide this option with intake data through the Titanium software company (“Titanium Schedule,” 2013).

The primary critique with the study regards issues with sampling so further tightening the characteristics of the participants could reduce threats to internal validity. Focusing solely on incoming freshman across all majors and having the ability to examine ethnic groups separately, with greater representation, would impart more confidence in the findings. Including additional optional measures that assess ethnic identity development, White racial identity or measure ethnicity in ways other than self-report (e.g., acculturation) would further nuance these initial findings regarding ethnicity. SES may be another important variable to consider. With these improvements there would be greater confidence in these finding and a better case for incorporating them into interventions.

In considering the results, the students’ preferences in this study did not appear to significantly impact exploration and commitment in four of the eight models. As expected, the impact of personality is likely nuanced and differential with regard to how it impacts emerging adults’ experience of, and response to, the challenges faced during the crisis of ego identity development. This perspective coheres with the Jungian notion of the preferences being variably adaptive in different contexts. While recognizing the limitations in drawing conclusions from a single sample, it appeared that all of the significant findings pointed toward how the expression of preference facilitated explored commitments. The research hypotheses focused on how the expression of particular preferences may challenge the individual’s ego identity development, but the findings suggested how particular preferences aided students in making more independently explored and expedient commitment to values, beliefs and career choice. While

the researcher directed his attention to how ego identity development may go awry, the directionality of the significant findings pointed towards mature growth. This represented a meaningful pattern in the data.

The expression of Extraversion, Intuition, Judging and Perceiving all appeared to facilitate healthy identity development. Because every individual endorses a combination of these traits there may be an additive effect (e.g., ENJ). While for practical purposes the MBTI is built around four separate dyad subscales and often used this way in research, the theory of type makes a case for the dynamic interaction of preference based on Jungian theory. The Jungian dynamic theory of the self is decidedly more challenging to support empirically, but the tension between the classical typology theory and contemporary measurement camps remain. Despite this controversy particular combinations of preferences could be explored in further research. These hypotheses could either be more directly driven by Jungian theory of types or they could address combinations based on the empirical strength of the preferences depending on the leanings of the researcher. In considering how future hypothesis testing could be guided by Jungian theory of types, comparing the introverted vs. extroverted expression of each dominant preference (S, N, T or F) would represent a more Jungian-driven approach. This approach would employ the standardized or manualized method for determining which preference is dominant. This study offered a starting point in the discussion for generating further hypotheses based on either approach.

Due in part to psychology researchers' increased attention directed toward the experience of people of color, the unique influencing factors on their developmental processes across the lifespan are beginning to become better understood. Despite this growing emphasis, there remains much unknown about the subjective experience of individuals who identify as ethnic

minorities. The finding regarding the impact of ethnicity on the ego identity formation resonated with Erikson's early description of how being defined as other to the majority culture may differentially shape this psychosocial process. If the successful resolution of the identity crisis requires validation by, and for, society and that society is less accepting of particular groups or endorses different values, there would likely be unique presses on those students. Historically that has translated to increased rates of Foreclosure for emerging adults who identified as ethnic minorities, here the press appeared to accelerate their identity development. This study captured this difference, but further research that focused in more depth on students who identify as ethnic minorities would be needed to better understand what factors were responsible for uniquely shaping their identity development.

Apart from the explicitly asked research questions, the study benefited from the multitude of comparisons offered by the statistical methodology. The researcher primarily made predictions regarding how individuals may be delayed en route to forging a viable and stable adult self. Examining the relative tendencies among the statuses as outcomes supported a non-pathology focus. Throughout, the researcher wanted to affirm two humanistic truisms about self. First, all individuals can and do make their way through the challenges of emerging adulthood. Second, despite clear differences in personality no preference is, *de facto*, inherently better than any other. Each is part of the greater constellation of self and all selves are valued as part of the larger community Gestalt. There may be different strengths and growth edges and the gifts and journeys may differ, but the value of each preference was never in doubt.

To give the Social Psychology perspective and Erikson's initial identity theory their due, these research questions were necessarily framed by a particular geographical and cultural context that continually evolves. The answers we find today may vary regionally or change over

time; as Erikson noted the specific and shifting context shapes the developmental process. In response to the cognitive camp, this study employed constructs that are useful and accessible to practitioners right now rather than attempting to work with variables which often struggle to find practical application and remain journal bound. The theories and instruments that underpinned this study have a long and vibrant history in work with emerging adults. They also resonate with core Counseling Psychology tenets. Replication of the study, while addressing its limitations would be the primary recommendation.

The findings from this study suggest where to focus further research. Those efforts could focus on the processes or cognitions, the internal or external barriers or protective factors that shape students' passage through the forks in the developmental road. It could also address the experience of students who identify as ethnic minorities as their developmental trajectory appears influenced by unique factors. With verification, these future findings could inform interventions that focus on unique preference strengths or challenges in facing the developmental press of college and emerging adulthood. They could also more specifically address the unique perspectives, experiences and challenges faced by ethnic minorities who attend primarily White institutions. Preference served as the starting point. While these are initial findings and this study has limitations, it does suggest that personality and identity development are meaningfully related constructs worth further exploration.

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Appendix A

Dear Participant,

This cover letter is a request for you to take part in a dissertation research project to assess the relationship between personality preferences and identity development in college-attending young adults. I hope that you will participate in this research project, as it could be beneficial in informing career and personal counseling with college students. This project is being conducted by me, Chris Ruth, M.A. as part of my requirements for a doctorate in Counseling Psychology from West Virginia University. Your participation in this research project is greatly appreciated and will take approximately 25-45 minutes to fill out the two electronically linked surveys as well as providing some demographic information all online.

CONFIDENTIALITY:

Your involvement in this project will be kept as confidential as legally possible. All data will be reported in the aggregate which means you will not be identified individually in the research project and all electronic data is maintained on an encrypted site. After completion, your Psychology professor will be notified that you participated so that you may receive credit for your participation. You are free to discontinue participation at any time and your participation is completely voluntary, but you will not receive credit unless both surveys and the demographic information are completed. Your professor will not have access to any of your results apart from the fact that you participated so you will receive credit. You must be 18 years of age or older to participate. Mississippi State University's Institutional Review Board acknowledgement of this project is on file.

RISKS AND BENEFITS:

There are no anticipated risks should you participate in this study. If answering these questions does upset you, you may talk with the researcher about your feelings after finishing answering the questions, or you may stop answering the questions at any time. Additionally, as an enrolled student you have access to free and confidential personal and career counseling at MSU through the counseling and career center. They can be reached at (662) 325-2091. There is no cost to you or financial benefit for your participation in the study. You will receive no direct benefit from participation in this study apart from credit, but your participation may help us to develop interventions for college students struggling with their personal development and career choice. By Clicking "Done" you are clicking on the link to go to the surveys and completing the surveys represents your consent to be a participant in this study. Should you have any questions about this letter or the research project, please feel free to contact me, Chris Ruth, M.A., at 662-325-2091, or by e-mail at cr979@saffairs.msstate.edu

ACCEPTANCE:

I have read the information provided and all of my questions have been answered. I voluntarily agree to participate in this study. My completion of the surveys will serve as my consent. I may print a copy of this consent statement for future reference or request one from the contact information provided above. Thank you for your time and help with this project and good luck with your studies.

Sincerely,

Christopher Ruth

Click "Done" and you will be taken to the first survey.

Appendix B

Demographic Survey Questions

- 1) What is your age?: _____
- 2) What is your gender?: _____Male _____Female
- 3) Are you a first generation college student?: _____Yes _____No
- 4) What is your ethnicity? (Check all that apply):
 - _____African-American
 - _____Asian-American
 - _____Hispanic/Latino
 - _____International Student
 - _____Other
 - _____White

Appendix C

Directions: Read each item carefully and decide if you Disagree or Agree with it as it applies to you. Then select the level of disagreement or agreement from slightly, through moderately, to strongly agree. Mark it a 1 if you strongly disagree through 6 strongly agree.

	Disagree			Agree	
Strongly	Moderately	Slightly	Slightly	Moderately	Strongly
(1)	(2)	(3)	(4)	(5)	(6)

1. I haven't thought about politics and they aren't important to me.
2. I have thought a little about what a job means to me but I mostly follow whatever my parents believe or think.
3. When it comes to religion I haven't really looked for any belief or faith I want to follow.
4. My parents decided what occupation I should have and I'm following their plans for me.
5. There are so many different political parties and opinions; I can't decide which to follow until I figure it all out.
6. I don't give much thought to religion and it doesn't bother me.
7. I'm pretty much like my parent(s) when it comes to politics and I vote like they do.
8. I haven't chosen the occupation I really want to get into and I'm just getting along the best I can.
9. I've considered and reconsidered my faith and I know what I now believe.
10. It took me time to decide but now I know the career to pursue.
11. I don't have a firm stand one way or the other on politics.
12. I haven't made up my mind about religion because I'm not done exploring options.
13. I've thought about my political beliefs and know what I believe in now.
14. It took me time to figure it out, but now I know what I want for a career.
15. Religion is confusing to me and I keep searching for views on what is right and wrong for me.
16. I'm sure it will be pretty easy for me to change my occupational goals when something better comes along.
17. My folks have always had their own political and moral beliefs about issues like abortion or mercy killing and I've always gone along accepting what they believe.
18. I've gone through a serious questioning about faith and can now say I understand what I believe in as an individual.
19. I'm not sure about my political beliefs, but I'm trying to figure out what I can truly believe in.
20. I just can't decide how capable I am as a person and what job will be right for me.
21. I attend the same church as my family always attended and I've never questioned why.
22. I just can't decide what to do for an occupation, there are so many possibilities.
23. I've never questioned my religious belief, my parents know what is right for me.
24. I have thought about political issues and I have found my own viewpoints.

Appendix D: Permission to reprint MBTI

CPP Permission

Number _____

Sample Item Request Form

Date: 12/15/10

Name: Christopher Ruth

Address: 143 Lay Bridge Road Central, SC 29630

Telephone Number: 706-461-0617 Fax Number: 864-656-0760

Email Address: cruth71@hotmail.com

CPP Customer Number: 409154

Specific title, form, and edition of the instrument for which sample items are needed: Myers Briggs Type Indicator Form M

Sample items will be published in: **Dissertation**

Title of Project or Article or Publication: Crisis as Opportunity: Personality Constructs and Erikson Identity Development

Terms and Conditions for Research Use

If permission is granted by CPP, Inc. ("CPP") the following terms and conditions will apply:

1. CPP will issue pre-selected sample items for the assessment requested. Only these sample items may be used.
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I hereby request permission from CPP for sample items as described above and agree to the terms outlined above for such research use:

Christopher E. Ruth
Signature

12/15/10
Date

12/15/10

CPP, Inc., hereby extends you permission under the terms stated above for the sample items you have requested.

12/20/10

CPP Authorized Signature

12/20/10

Date

Appendix E: MBTI Sample Questions (Form M)

Sample Items

From the

Myers-Briggs Type Indicator Instrument® Form M

By Katharine C. Briggs and Isabel Briggs-Myers

Your answers will help show you how you like to look at things and how you like to go about deciding things. There are no “right” and “wrong” answers to these questions. Knowing your own preferences and learning about other people’s can help you understand what your strengths are, what kinds of work you might enjoy, and how people with different preferences can relate to one another and contribute to society.

Part I: Which answer comes closest to telling how you usually feel or act?

16. Are you inclined to
A. value sentiment more than logic, or
B. value logic more than sentiment?
20. Do you prefer to
A. arrange dates, parties, etc., well in advance,
or
B. be free to do whatever looks like fun when the time comes?

Part II: Which word in each pair appeals to you more? Think about what the words mean, not about how they look or sound.

36. A. systematic
B. casual
58. A. sensible
B. fascinating

Part III: Which answer comes closest to describing how you usually feel or act?

59. When you start a big project that is due in a week, do you
A. take time to list the separate things to be done and the order of doing them,
or
B. plunge right in?
67. At parties do you
A. do much of the talking, or
B. let others do most of the talking?

Part IV: Which word in each pair appeals to you more? Think about what words mean, not about how they look or how they sound.

- 79. A. imaginative
 B. realistic
- 91. A. devoted
 B. determined

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