THE INFLUENCE OF CULTURAL CONTEXT ON VOCATIONAL ASSESSMENT WITH
BICULTURAL LATINA/O COLLEGE STUDENTS

By

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A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE OF
DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

2011
ACKNOWLEDGEMENTS

I would like to express appreciation to all of my committee members for their guidance and patience. I would specifically like to thank Dr. Carlos Hernandez for his guidance with regard to doing research with the Latino/a population. I would like to thank Dr. Marty Heesacker for his support and encouragement. I would especially like to thank my chair, Dr. Ken Rice, for his patience, guidance, support, encouragement, and motivation.

I would also like thank my colleagues Dr. Elizabeth Maynard for helping me retain hope, Dr. Jennifer Sager for helping me gain perspective and offering a shoulder to cry on when things got rough, and especially Dr. Charles E. Byrd, who was also essential in helping me stay focused and invaluable in helping me with my statistics and who is one of my dearest friends. My research assistants Ashley Gonzalez, Aidee Garza, Fatima Morales, and Jesus Batista made this project possible through their assistance with data collection and data entry. It would have been impossible for me to have completed this project without the help of Gerardo Duque who assisted in nearly every capacity from consulting on specifics of the research design and translations to providing a cultural perspective in interpreting some of the data.

I have been greatly encouraged by my friends; it has helped knowing that people all across Texas were rooting for and believed in me. There is no way I could have accomplished this without my partner Ed Crain. He has been my rock and support system, creating opportunities for me to work on my project as well as acting as a task master at times. His love has carried me through this project. Finally, I’d like to thank the Monster Beverage Company for getting me through many long nights and difficult mornings.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>ACKNOWLEDGEMENTS</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>6</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>7</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>8</td>
</tr>
</tbody>
</table>

## CHAPTER

1. **INTRODUCTION** ................................................................. 10

2. **LITERATURE REVIEW** ........................................................ 19
   - Changing Workforce and Workplace ........................................... 20
     - The New Workforce .............................................................. 21
     - The New Workplace ............................................................. 27
   - Trait and Factor Theory .......................................................... 31
     - Development of Trait and Factor Theories ................................. 31
     - Holland’s Theory of Type and the Self-Directed Search ............... 34
     - NEO PI-R and the Five Factor Theory ....................................... 38
     - Contemporary Career Counseling Theories ................................. 41
   - The Effect of Situation, Culture, and Language on Personality .......... 46
     - Personality as a Mediator of Situational Behavior ...................... 47
     - The Sapir-Whorf Hypothesis ................................................... 53
     - Cultural Frame Switching ...................................................... 60
   - Cultural Priming and Saliency ................................................... 67
     - Priming ............................................................................... 67
     - Stereotype Threat .................................................................. 69
     - Cultural Icons ...................................................................... 71
   - Summary and Hypotheses........................................................... 73

3. **METHODS** ........................................................................ 75
   - Overview ............................................................................... 75
   - Participants .......................................................................... 75
   - Instruments .......................................................................... 77
     - Demographic Questionnaire .................................................... 77
     - Self-Directed Search .............................................................. 77
     - NEO PI-R ........................................................................... 79
     - Manipulation Check .............................................................. 80
   - Procedures ........................................................................... 80
     - Recruitment ........................................................................ 80
     - Administration ................................................................. 82
<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-1</td>
<td>Frequency and percentages of major and education level</td>
<td>85</td>
</tr>
<tr>
<td>3-2</td>
<td>Frequency and percentages of ethnicity and cultural heritage</td>
<td>86</td>
</tr>
<tr>
<td>3-3</td>
<td>Frequency and percentages international student status, generation in which family immigrated, and language preference</td>
<td>87</td>
</tr>
<tr>
<td>4-1</td>
<td>SDS means and standard deviations by gender at Time 1</td>
<td>99</td>
</tr>
<tr>
<td>4-2</td>
<td>NEO PI-R means and standard deviations by gender at Time 1</td>
<td>99</td>
</tr>
<tr>
<td>4-3</td>
<td>Levels of acculturation by condition</td>
<td>100</td>
</tr>
<tr>
<td>4-4</td>
<td>Manipulation check means and standard deviations by condition</td>
<td>100</td>
</tr>
<tr>
<td>4-5</td>
<td>SDS means and standard deviations by priming context</td>
<td>101</td>
</tr>
<tr>
<td>4-6</td>
<td>NEO PI-R means and standard deviations by condition</td>
<td>101</td>
</tr>
<tr>
<td>4-7</td>
<td>Test-retest correlations for the SDS and NEO PI-R across groups</td>
<td>102</td>
</tr>
<tr>
<td>4-8</td>
<td>Test-retest correlations for the SDS and NEO PI-R across conditions</td>
<td>102</td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>3-1</td>
<td>Administration sequences ...........................................................................</td>
<td>87</td>
</tr>
<tr>
<td>4-1</td>
<td>Investigative scores over time and by cultural context...............................</td>
<td>103</td>
</tr>
<tr>
<td>4-2</td>
<td>Social scores over time and by priming condition .......................................</td>
<td>104</td>
</tr>
<tr>
<td>4-3</td>
<td>Neuroticism scores over time and by cultural context ...................................</td>
<td>105</td>
</tr>
<tr>
<td>4-4</td>
<td>Agreeableness scores over time and by cultural context ..................................</td>
<td>106</td>
</tr>
<tr>
<td>4-5</td>
<td>Conscientiousness scores over time and by cultural context ...........................</td>
<td>107</td>
</tr>
</tbody>
</table>
THE INFLUENCE OF CULTURAL CONTEXT ON VOCATIONAL ASSESSMENT WITH BICULTURAL LATINA/O COLLEGE STUDENTS

By

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August 2011

Chair: Kenneth Rice
Major: Counseling Psychology

Trait and factor assessment of the person-environment fit has been a cornerstone of vocational psychology since its inception. However, like the origins of career counseling, trait and factor assessment was grounded in the experiences of White males. As multicultural aspects have become more central to counseling psychology, the trait and factor approach to career counseling has also been modified to incorporate this perspective. Meanwhile there is an ongoing debate about the interaction between individuals and their immediate situations in moderating the expression of personality. The American populous is becoming more multicultural and as more ethnic groups choose not to assimilate, the melting pot paradigm no longer applies. Many of the members of the emerging ethnic groups increasingly have the option to work in the culture of their ethnic group while living more generally in the Anglo-American culture and vice versa. However, the application of trait and factor assessment with individuals who maneuver between multiple cultural frameworks, who may alter their personalities in accordance with the particular cultural environment, has thus far received little attention.

This research was intended to explore how career assessment may need to be modified for bicultural clients with the option of working in differently-cultured environments. Eighty-
seven Latino/a college students completed the Self-Directed Search and the NEO PI-R in a mixed model research design in which they were either primed in consistent (Latino/a or Anglo-American) or inconsistent (once in a Latino/a and once in Anglo-American) contexts across two weeks. The scores for the Social scale on the SDS and the scores for the Neuroticism, Agreeableness, and Conscientiousness of the NEO PI-R demonstrated low absolute stability the inconsistent groups. Low relative stability was demonstrated for the Enterprising scale of the SDS and the Openness scale of the NEO PI-R across time for the inconsistent groups. The results of the study suggest that some aspects of personality expression of bicultural Latin/o/as are affected by cultural context and there may be a benefit to assessing multicultural clients in all of their available cultural contexts in order to account fully for the full breadth of their vocational options.
CHAPTER 1
INTRODUCTION

The purpose of this study was to assist counselors in working with bicultural clients making career decisions through improving our understanding of the role cultural saliency may play in vocational assessment. In order to explore the full range of options available to bicultural clients in today’s workplace, understanding how personality expression may differ depending on the cultural context in which one might work may be important. Vocational assessment and multicultural competence are at the core of the professional identity of Counseling Psychology.

The New American Population

The workforce and workplace of America is changing. Through both immigration and change in domestic birth rates, the ethnic composition of the workforce is becoming more diverse. U.S. census data across the last 50 years have consistently shown an increase in the proportion of the population that belongs to a racial or ethnic minority group.

Racial and ethnic minorities have collectively already surpassed the portion of the population that is White in some states. In New Mexico, 58.3% of the population is racial and ethnic minorities, while in California and Texas, the two most populous states, racial and ethnic minorities make up 57.7% and 52.7% of the states’ populations respectively (U.S. Bureau of the Census, 2008a). Not surprisingly, 75.1% of Hawaii’s population is made of racial and ethnic minorities. People frequently speak of the time when Whites will be a minority, even though Whites currently account for 79.9% of the total population. However, it is undeniable that the demographic face of America is changing. Births to White mothers accounted for only 57.1% of births in the United States in 2002 and the number of immigrants from Europe is declining, while the number from Asian and Spanish-speaking countries in North and South America is increasing (U.S. Bureau of the Census, 2006).
Not only is the composition of the workforce changing, but so is the character of the workforce. Many of the new immigrants are choosing to self-segregate into ethnic communities and assimilate less into the Anglo-culture of America. Of America’s twenty-five largest cities, thirteen of them have proportions that speak Spanish at higher rates than Hispanics in the national population and five have proportions that speak an Asian or Pacific Islander language at higher rates than would be predicted by their proportions of the national population would suggest. English is not the primary language of choice for 18.4% of the U.S. population (U.S. Bureau of the Census, 2006). Approximately 72% of Hispanics speak Spanish in their home, while approximately 58% of Asian Americans and Pacific Islanders speak their native language at home. Comparatively, approximately 3% of the White population speak a language other than English in their home (U.S. Bureau of the Census, 2006). Thriving in an ethnic enclave no longer just means living in a neighborhood in which one can speak a native language and engage in customs from his or her culture, but increasingly may also mean working in an environment which also expresses and embraces one’s culture of origin. These differences in the U.S. population warrant a re-evaluation of how career assessment is conducted in the United States.

**Vocational Psychology and Career Assessment**

Vocational psychology, a cornerstone of counseling psychology, is beginning to deal with the changing faces of the workforce and workplace. There is an increased emphasis on revising theories and approaches to be more cross-culturally applicable. Many of the vocational instruments in use today were developed on White male norm groups and the appropriateness of their use with other cultural groups has been questioned. Most of the cross-cultural validation work with career assessment instruments thus far has been conducted with monocultural persons.
from other countries, and not with the growing bicultural Hispanic and Asian American populations in America.

**Trait and Factor Approach**

Whether as an independent theory or as part of a larger theory, trait and factor theory—or person-environment fit—has been an approach at the base of career counseling since its beginning. Trait and factor theory is based on the premise that a person’s personality trait is or is not a good fit for a factor of a particular workplace. Within this context, a personality trait can be thought of as enduring behavioral disposition across a number of situations while a factor can be thought of as a demand of a workplace or an occupational position. For example, a person with the trait of being high in gregariousness would fit well with a job factor of frequent interpersonal interactions, but would not match well with a workplace factor of solitude. While trait and factor has been criticized for being too simplistic an approach, the theory is widely integrated into other, more complex theories. Although actual numbers are not known, trait and factor instruments are frequently used in career counseling, in fact Consulting Psychologists Press estimates that as many as two million MBTI’s are administered annually (Consulting Psychology Press, n.d.).

Holland’s (1997) theory of type, originally developed in 1959, is based on the premise that there are six true personality types (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional) that correspond to either an individual’s occupational interests or the demands of an occupational setting. His theory is the basis for the Self-Directed Search, the Strong Interest Inventory, and the Vocational Preference Inventory. The instruments associated with his theory are some of the most frequently administered vocational assessments today. Holland developed the Self-Directed Search (SDS) in 1970 in order to easily assess a person’s type
The SDS yields a three-letter code, based on Holland’s personality types, that reflects an individual’s occupational personality, which in turn can be compared to the personality of various occupational settings.

Costa and McCrae’s (1992a) five factor model is emerging as a force within the field of vocational psychology. The role that the NEO PI-R, based on Costa and McCrae’s five factor model, may play in career counseling has been explored by many researchers (e.g., Costa, McCrae, & Holland, 1984; Gottfredson, Jones, & Holland, 1993; Holland, Johnston, & Asama, 1994). In fact, two versions of the NEO PI-R, the NEO-4 and NEO Professional Development Report, have been developed specifically for use in workplace settings and career counseling. One of the earliest studies involving the NEO-PI involved comparisons with Holland’s types and an examination of whether the NEO-PI might have predictive validity as a career assessment (Costa, McCrae, & Holland, 1984).

Costa and McCrae’s five factor model was theoretically derived from empirical studies that consistently showed that the personality consisted of the five factors (e.g., Fiske, 1949; Norman, 1963; Tupes, 1957; Tupes & Christol, 1961). They initially identified the factors of Neuroticism, and Extraversion, followed by Openness to Experience, and subsequently filled out the model with Agreeableness and Conscientiousness (McCrae & Costa, 1985). The NEO PI-R was originally published in 1985 as the NEO Personality Inventory (NEO-PI) and revised in 1992 (Costa & McCrae, 1992a). The NEO PI-R has 30 facet scales, in addition to the five domain scales, which are intended to better explain an individual’s behaviors, thoughts and feelings.
Providing Context to the Trait and Factor Approach

Whereas neither of these theories tends to stand alone as career counseling approaches, both are regularly incorporated into other theories of career development. Some of the most popular theories in use today, Super’s (1953, 1977, 1990) life span theory, Mitchell and Krumboltz’s (1996) social learning theory, and social cognitive career theory (Betz, 1992; Brown & Lent, 1996; Lent & Brown 1996) all incorporate the use of interest inventories and personality tests. Although all of these theories are quite contemporary, the assessments were developed in an era when vocational guidance was primarily oriented toward White workers. Efforts have been made to make many of the assessments appropriate for international use. However, little effort has been applied toward validating use of these instruments in a way that explores all of the options available to bicultural workers.

Personality is an essential element in person-environment fit approaches to career counseling. However, personality is often thought of in terms of interpersonal interactions—how a person behaves in reference to or in the presence of others—and therefore may both affect and be affected by the social environment. Language and culture are integral aspects of our interpersonal interactions and the social environment that may affect personality expression. Therefore, the ways in which one’s personality is expressed, whether at home, in the workplace, or even on a personality assessment, may also be affected by the language and culture in which the personality is expressed. Beyond anecdotal evidence, a body of empirical evidence is cumulating that suggests that the environment affects the thinking and feeling processes (or personality) of bilingual, bicultural individuals (Wierzbicka, 1985a, 1985b). Thus environment becomes more than just one of the factors involved in the fit relationship; environment may additionally act as an influence on the other factor of personality.
Rethinking Personality

The Role of Language in Personality Expression

Many personality theorists, such as Mischel (1968), Rotter (1982), and Bandura (1986), have argued that personality, or behavior, is mediated by the cognitive assessment of one’s context. Benjamin Whorf presented a theory that stated that language affects cognitive processing. In his theory, he claims that non-linguistic behavioral differences across cultures are the result of linguistic differences. His theory was well supported until 1969, but in the 1970s many studies were published that challenged the theory (Kay & Kempton, 1984). Subsequently, the Whorfian Hypothesis has been the subject of controversy. Hardin and Banaji (1993) argued that, while there is contradictory evidence, this did not completely discount the confirmatory evidence. They further argued that what effect language does have on cognition, and in what ways, is what should be debated and studied and that the theory should not be rejected in whole.

Numerous researchers have argued for a direct relationship between language and culture. This relationship has been shown to be both grammatical as well as semantic. Hadley (1997) has argued that a culture’s lexicon represents a culture’s worldview and cognitive structures. Ervin (1964) has likewise argued that the social context in which language is learned determines the topics which will be available for discussion within a culture. Social interactionists and social constructivists additionally argue that the language—and its meanings—available to us determine our understanding of the world.

The effect of language on bilingual, bicultural individuals may be the most noteworthy. The experience of having a separate personality within each linguist culture is commonly reported by people who are bicultural and bilingual. A number of studies have also shown a
difference in personality expression on assessments when administered in different languages (Dinges & Hull, 1992; Ervin, 1964).

Although an instrument may have been validated with numerous samples from various cultures, the degree to which the instrument is appropriate to use with bicultural individuals is unknown. Okazaki, Kallivayalil, and Sue (2002) have pointed out that a linguistic translation of an instrument might not be a linguistically equivalent instrument. They explain that even while a concept can be translated, the meaning or implications of that concept might differ cross-culturally and that the degree of deviation from the mean may additionally mean different things within different cultures. Therefore, the saliency of one’s cultural identity over another at the time of the administration may affect the ways in which one thinks about concepts in question, and in turn may affect the way in which a person responds to situation or an assessment.

**The Role of Priming in Personality Expression**

Priming has frequently been used in experimental and social psychology to promote the saliency of one’s thoughts or feelings, and ethnic identification. Priming involves triggering well-established associations between ideas and experiences and results in automatically activated thoughts, emotions, and behaviors. Stereotypes, both about oneself as well as others, have been a popular topic in priming research within social psychology and counseling research.

Stereotype threat is a field of research in which stereotypes about one’s own cultural groups are the subject of priming. Stereotype threat research examines the effect of one’s own cultural salience and the associated stereotypes on performance of a task. Though the majority of this research concerns performance, the priming methods are applicable to assessing the effect of one’s own cultural salience in situations in which there is no judgment on the quality of responses.
Research on cultural frame switching is one of the areas in which priming for one’s own cultural salience in non-judgmental ways has been used. Cultural frame switching is concerned with how bicultural individuals switch their form of behaving or attitude within one cultural context to a different form of behaving or attitude within a different cultural context. Personality expression, values expression, and attributional style are all phenomena that have been studied within cultural frame switching research.

Although much of this research has been based in laboratory settings, the salience of one’s cultural identity or affiliation may be primed for by relevant cues within the real world as well. Many bicultural individuals report this occurrence specifically. It follows then, that one’s cultural salience is likely to be primed within a workplace setting.

Examining the role of cultural saliency in vocational assessment may assist counselors in working with bicultural clients in making career decisions. If personality expression differs depending on the cultural context, then culturally relevant assessment may be necessary in order to explore the full range of options available to bicultural clients. Furthermore, what specific effects culture does have on personality, as expressed on vocational assessments, may also be relevant in career counseling.

The current study explored what role cultural context and cultural saliency have on personality expression, and, in turn, vocational assessment and career counseling. Specifically, this study explored the absolute and relative stability of personality scores for bicultural, biliterate Latino/a college students across time relative to the consistency of cultural context. The contexts of the administrations were manipulated to trigger either a mainstream American identity or a Hispanic identity prior to completion of the instruments with some participants completing the instruments in the same context across time and other participants completing the
instruments in differing contexts across time. I expected that there would be less consistency in personality expression when assessed across different cultural contexts than when personality was assessed across time within the same cultural context.
CHAPTER 2
LITERATURE REVIEW

An understanding of the ways in which the U.S. population has changed and is changing can help give a sense of the ways in which career assessment may need to adjust to emerging needs of career clients. Similarly, in order to understand the role that trait and factor assessment has played in career counseling and how this role may need to be altered, it will be helpful to review the history of career counseling and assessment theory. This is followed by a review of literature about how personality expression can be affected by context and language. The role of how cultural priming and saliency is related to personality expression is highlighted and then hypotheses regarding the absolute and relative stability of personality with regard to cultural context are proposed.

Counseling psychology can trace its roots back to the early vocational guidance movement. Throughout the history of the field, vocational psychology has been a major focus, and continues to be today. Cross-cultural counseling, or multicultural psychology, has emerged as another defining characteristic of counseling psychology in the last 40 years. Consequently, there have been attempts to revise vocational psychology theory and career counseling practice to incorporate this new perspective (e.g. Arbona 1995; Betz & Hackett, 1981; Casas & Arbona, 1992; Fukuyama, 1992; Leong, 1995). Despite this growing literature, the conditions in which it is appropriate to apply different vocational theories to multicultural clients and the ways these theories may need to be modified is still largely unknown. Incorporating cross-cultural concerns into career theory and career counseling is becoming increasingly more important as the world of work changes.
Changing Workforce and Workplace

The human landscape of the United States has changed dramatically during the past few decades. Immigration into the United States has shifted dramatically from being predominantly European-oriented to increasingly Asian and Central and South American-oriented (U.S. Bureau of the Census, 2006). However, not only is the make-up of the population changing, but so is its character and degree of acculturation of those that make up the workforce. While both the composition and the nature of the workforce change, the workplace itself is changing its character in order to adapt to the current workforce. Some of these changes are reflected in changes in the way in which the population is categorized. Ethnic designation, particularly Hispanic, has emerged as a classification equally important as race in understanding the current characteristic of the American workforce.

Racial and Ethnic Categorization in the U.S.

The designation of Hispanic or Latino/a has become increasingly important in American culture across the last 40 years as this multi-racial ethnic group has emerged with a distinct identity, which crosses nationalities but is held together through a common language and common customs. The term Hispanic, or Latino/a, refers to people from Spanish speaking countries in South and North America. This designation is not considered a racial category, but rather a cross-racial category designating people of a shared cultural heritage and may contain people of Black, White, and Native American descent. Conversely, White is a racial category including both Hispanic and non-Hispanic cultural heritage. White will be used here to designate non-Hispanic Whites to distinguish between those descendent from a predominantly European culture and those Whites who identify with Hispanic culture. Similarly, Black is a racial category which includes both non-Hispanic and Hispanic persons. Throughout this paper the term Black is
used to designate persons who are racially Black and ethnically non-Hispanic, whenever this distinction is made in the original population statistical data. Likewise, Native American is a racial category that may or may not include Hispanics and is used throughout to designate those in the racial category, exclusive of Hispanics, again, whenever original population statistical data allow for the distinction. Asian and Pacific Islander is another racial category and does not distinguish Hispanic or non-Hispanic ethnicity within the racial category. Though there are undoubtedly persons of Asian or Pacific Islander race that would also identify as Hispanic—particularly given the history of immigration and discrimination Asian and Pacific Islanders in North and South America and the cultural heritage of the Philippines (Chan, 1991)—these persons are typically categorized as Hispanic White or Asian and Pacific Islander. An emerging racial category is that of mixed race or multiple race, which indicates that a person is descended from multiple racial categories, for which the U.S. government does not currently typically include a Hispanic or non-Hispanic designation. Clearly, the racial and ethnic make-up of the US population is varied, and the way in which we conceptualize the demographics of the population are changing along with the changes in the population itself.

The New Workforce

Both immigration and birth rates are affecting changes in the demographics in America. Birth rates for White women in America in 2002 were 56.5 per 1000 women. The birth rates for the same year for Asian and Pacific Islander women was 55.4 per 1000 women and 82.0 per 1000 Hispanic women (U.S. Bureau of the Census, 2003). In other words, White and Asian and Pacific Islander women have equivalent birth rates, while the birth rate for Hispanic women is substantially higher. These relative rates were expected to remain fairly stable or slightly increase for Hispanics into the year 2010 (U.S. Bureau of the Census, 2006). In 2002, births to
Hispanic mothers accounted for 21.8% of births in the United States, while births to African-American mothers accounted for 14.8%, births to Asian and Pacific Islander mothers accounted for 5.2%, births to Native American mothers accounted for 1%. Births to White mothers accounted for 57.2%, despite Whites accounting for nearly 68% of the population. While more Hispanic babies are born in the United States, the number of immigrants from Spanish speaking countries in North and South America is also increasing.

Between 1981 and 1990, immigrants from Spanish speaking countries in North and South America accounted for 40.2% of all legal immigrants, while immigrants from Asian countries accounted for 38.4% of all legal immigrants (U.S. Bureau of the Census, 2006). During the same years, European immigrants accounted for only 9.6% of all legal immigrants. Following the fall of communism in Europe, there was a surge in immigration from Europe, in which European immigration rose to account for 14.4% of all legal immigration between the years 1991 and 2000. Immigrants from former communist countries accounted for 60.5% of these immigrants (U.S. Bureau of the Census, 2006). As Eastern European countries have become more stable, immigration from Europe has decreased from an average rate of 150,100 persons per year between 2001 and 2003, to 127,700 persons in 2004. Meanwhile, immigration from Asia has steadily increased over the last two and a half decades. An average of 281,740 persons legally emigrated from Asian countries to the United States each year between 1981 and 1990, increasing to an average of 289,200 between the years 1991-2000, and continued to rise, reaching 330,000 in 2004 (U.S. Bureau of the Census, 2006). Although the Philippines, China, Vietnam, India, and Korea accounted for the majority of immigrants from Asia, immigration from across Asia is increasing, especially from Bangladesh, Thailand, and Cambodia. Immigration from Spanish speaking countries in North and South America also rose, with an
average of 337,230 immigrants per year between 2000 and 2003, increasing to 346,800 immigrants in 2004 (U.S. Bureau of the Census, 2006). Of the 1,052,415 people who attained legal residence in the U.S. in 2007, 34.4% emigrated from an Asian or Pacific Island nation, and 31.6% emigrated from Spanish-speaking countries in North and South America. Immigrants from Mexico alone account for 13.6% of the people who attained legal permanent residence in 2007, compared with the 11.5% of persons from all of Europe who did (U.S. Department of Homeland Security, 2008a). While immigrants from Spanish speaking countries in North and South America continue to account for a large proportion of all legal immigrants, they also account for the largest overall number of illegal immigrants.

In addition to the large number of legal immigrants in the United States, persons from Spanish speaking countries in North and South America account for the vast majority of the illegal immigrants in the United States. It is estimated that approximately 1.3 million Hispanics illegally immigrated into the United States between 1980 and 1986 (Cattan, 1993). The Department of Homeland Security estimates that there were 11.8 million unauthorized immigrants in the U.S. in 2007, of which 7.0 million (59%) were from Mexico. Between 2000 and 2007 there was a 49% increase in the number of unauthorized immigrants from Mexico. This number is likely to increase in response to the escalation of drug-related violence in Mexico recently. The countries with the next highest number of unauthorized immigrants in 2007 were El Salvador (540,000), and Guatemala (500,000), followed by the Philippine and China (each with 290,000; U.S. Department of Homeland Security, 2008b). The border states of Texas, New Mexico, Arizona, and California are often associated with unauthorized immigration, but states like North Carolina and Georgia are seeing notable increases in the unauthorized immigration
populations, 45% and 120% respectively, with the geographic dispersion of unauthorized immigrants mimicking shifts in the national population.

These factors are truly changing the face of America. In 1990, Whites accounted for 83.9% of the U.S. population. Asian and Pacific Islanders accounted for 3%, Hispanics accounted for 9%, and African-Americans accounted for 12.3% (U.S. Bureau of the Census, 2001). By 2000, most racial-ethnic groups increased in proportion of the total U.S. population for which they accounted, with Asian and Pacific Islanders accounting for 4.6%, Hispanics accounting for 12.5%, African-Americans accounting for 13.2% (U.S. Bureau of the Census, 2006). All of these racial-ethnic groups continue to grow. African-Americans accounted for 13.4% of the population in 2004, with a slight increase to an estimated 13.5% in 2008, while Asian and Pacific Islanders accounted for 5.1% of the population in 2004 and an estimated 5.5% in 2008, and Hispanics became the largest racial-ethnic minority in the United States, accounting for 14.9% of the population in 2004 and an estimated 15.4% in 2008 (U.S. Bureau of the Census, 2006; U.S. Bureau of the Census, 2009). Native Americans appear to be a stable proportion of the U.S. population, accounting for 1.5% in both 2000 and 2004 (U.S. Bureau of the Census, 2006), increasing slightly to 1.8% in 2008. There are 4 states that as of 2004 had Hispanic populations that accounted for greater than 25% of that states’ population: New Mexico (43.2%), California (34.7%), Texas (34.6%), and Arizona (28.0%). In total, eight states have Hispanic population that exceed the national percentage (Nevada, Colorado, Florida, and New York in addition to those previously mentioned; U.S. Bureau of the Census, 2006). Two states currently have White populations which are smaller than a single other ethnic group, Hawaii (in which Whites account for 24.9% of the population and Asian and Pacific Islanders account for 47.1%)
and New Mexico (in which non-Hispanic Whites account for 41.7% population and Hispanics account for 44.9%; U.S. Bureau of the Census, 2008a).

Of the 38.1 million people living in the U.S. who were born in another country, 12 million were born in Mexico. Over a quarter of Californians (27.4%) were foreign born. Within California, the city of Los Angeles has the second highest percentage of foreign-born residents (34.9%) and the highest percentage of the population that speaks a language other than English at home (53.6%). New York (21.8%), New Jersey (19.9%), Nevada (19.4%), and Florida (18.9%) were the states with the next highest percentages of foreign-born residents, with Florida’s largest metropolitan area having the highest percentage of foreign-born residents (37.0%) and the second highest percentage of people who speak a language other than English at home (49.1%) in the U.S. (U.S. Bureau of the Census, 2008b).

Besides becoming an increasingly large portion of the overall U.S. population, Hispanics are becoming an increasing portion of the U.S. workforce. In 2000 Hispanics accounted for 12.3% of the working age population; this proportion increased to 13.8% in 2005. Furthermore, estimates were that Hispanics would currently account for 15.2% of the working age population in the United States (U.S. Bureau of the Census, 2006). At the same time, Asian and Pacific Islanders are expected to rise from 4.3% of the working age population in 2000 to 4.7% in 2010, while African-Americans are expected to rise from 12.5% in 2000 to 13.2% in 2010. Thus, projected estimates were that nearly 20% of the current American workforce will come from a foreign language culture. The White and Hispanic populations in the United States had the greatest proportions of their respective populations in the labor force in 1980, each with 64%. By 2004, the Hispanic population had 68.6% of its population in the labor force, compared to 66.3% for Whites, 65.9% for Asian and Pacific Islanders, and 63.8% for African Americans (U.S.)
Bureau of the Census, 2006). Significantly larger portions of Asian Americans and Pacific Islanders are entering the workforce for the first time than Whites. They additionally are highly educated, with 49.2% of those over 25 years of age having a bachelor’s degree or higher (compared with 29.9% of Whites; Humphreys, 2008). Thus, while the Hispanic and Asian and Pacific Islander population in the United States grows, so does the proportion of those communities that is in the labor force.

Not only is the number of ethnic and racial minorities in the workforce increasing, the nature of those ethnic and racial groups is changing. Immigrants from Europe have traditionally assimilated into the U.S. culture and used the language more quickly than immigrants from Asia or Central and South America are currently doing. These ethnic groups congregate in greater concentration in selected neighborhoods and cities, somewhat following a tradition imposed on them in the 1800s (Chan, 1991). Many large cities on both coasts of the country have areas known as “Chinatown” “Japantown” or “Koreatown.” Union City, NJ and Miami, FL have prominent Cuban Communities, while New York City has a substantial Puerto Rican population. The small city of Langley Park, MD, a suburb of Washington, DC, is well known in El Salvador and Nicaragua because of the large Central American population there. In contrast, the famous “Little Italy” of New York City is gradually being enveloped into the adjacent “Chinatown.” The number of new Italian immigrants has decreased and those new immigrants more readily situate themselves into Anglo-“White” neighborhoods than did previous Italian immigrants. At the same time, an increasing number of Asian immigrants settle in New York’s Chinatown.

Americans who speak a language other than English in the home has risen from 17.9% of the population in 2000, to 18.4% in 2003 (U.S. Bureau of the Census, 2001; U.S. Bureau of the Census, 2006). Of this 18.4%, 61.4% speak Spanish and 15.2% speak an Asian and Pacific
Islander language. All European languages combined, other than English and Spanish, account for 13.6% of the languages spoken in the home. Of foreign-born persons that speak an Indo-European language other than English, 82.4% say they speak English “well” or “very well.” Comparatively, of foreign-born persons who speak Spanish as their other language, only 52.0% say they speak English “well” or “very well,” while among persons who speak an Asian or Pacific Island language as their other language, 73.8% say they speak English “well” or “very well” (U.S. Bureau of the Census, 2001). In 2007, about 19.7% of the population five years or older spoke a language other than English in the home (U.S. Bureau of the Census, 2008b). Younger children (ages five to nine) accounted for a greater proportion of the population that spoke English with difficulty than older children (ages 10-17). This may indicate an age-related level of exposure to English outside the home, or this may indicate an increased use of a language other than English across the generation. Children born in the U.S. accounted for 77.9% of the children who speak a language other than English at home. Children from Hispanic cultures accounted for 64.6% of those that spoke a language other than English at home, while children from Asian and Pacific Island cultures (excluding Middle Eastern countries) accounted for 12.7% of these children, whereas children who were identified as White accounted for 16.9% (U.S. Bureau of the Census, 2004). In 2007 four states (Arizona, California, New Mexico, and Texas) had populations in which at least 20% spoke a language other than English in the home. Nationwide, approximately 12.3% of the population, or 39 million, spoke Spanish at home (U.S. Bureau of the Census, 2008b).

**The New Workplace**

The marketplace and workplace of America is, in turn, changing to reflect this change in demographics. With the proportion of Americans grounded in their home cultures and languages
increasing, so does their demand for culturally-based goods and services. With their demand for goods and services growing, so does the need for a workforce that can provide them. The pressure on the labor force to be multicultural comes from both domestic and foreign forces. The American marketplace and workplace are becoming more multicultural through the expansion of the global marketplace and through the outsourcing of American jobs. However, the intra-national stress seems to be even more substantial.

There are many examples of workplaces within the American media industry that have a predominantly Hispanic culture. _Univision, Telefutura, and Telemundo_ are nationally broadcast Spanish Language networks. Few news stands in this country do not carry _People En Espanol_, one of many Spanish language magazines where the articles are not just translated into Spanish, but rather are written by and for a Hispanic population. _VH1, MTV, CNN, Fox Sports, the Cartoon Network, and the Discovery Channel_ all offer Spanish language versions. However, Latinos are not the only community in the United States that have developed their own media. There are a number of local broadcast stations that broadcast in Chinese or Korean. Comcast Cable features networks in Korean, Chinese, Vietnamese, Arabic, Russian, French, Italian, and two in Hindi.

In less glamorous businesses there are also numerous examples of workplaces where English language and American culture are not necessarily the norm. Estimates of the U.S. construction force are that nearly two-thirds do not speak English as their native language. Palazzo Foods of Collingswood, NJ, a producer of specialty bread products, has had a multilingual staff since its inception and all instructions are posted in both Spanish and English (Owens, 2005). Some have suggested that communicating in one’s native tongue in the workplace may help relieve anxiety and is part of the emotional experience of the workplace.
Managers in some companies are encouraged to learn the language of their employees as much as the employees are encouraged to learn English (Dutton, 1998). Ten percent of the corporate officers and 8% of the board of directors are Hispanic at Abbott Laboratories in Abbott Park, IL (Rodriguez, 2004). Even in states that are not known for a large Hispanic population, such as Delaware, businesses are beginning to specifically look for bilingual employees, particularly in sales, marketing, and management (Harlow, 2006). Clearly, work environments in which English and an American culture are not dominant are becoming more common in the United States.

There is an increasing pressure to develop ethnically-oriented market places and work places as the buying power (cumulative personal after-tax income) of minorities increases. Since 1990, the combined buying power of African Americans, Asian Americans, and Native Americans has tripled to $1.5 trillion. In 2007 the buying power of African Americans ($913 billion) and Latino/as ($951 billion) in the United States each surpassed all but only thirteen countries (Humphreys, 2008). Of the states with the ten greatest increases in buying power between 1990 and 2008, six are states with notable Hispanic populations: Nevada (349% increase in buying power and 25.7% Hispanic population), Arizona, (255% increase in buying power and 29.8% Hispanic population), Colorado (225% increase in buying power and 20.0% Hispanic population), Texas (220% increase in buying power and 36.5% Hispanic population), New Mexico (190% increase in buying power and 44.9% Hispanic population), and Florida (188% increase in buying power and 21.0% Hispanic population; Humphreys, 2008; U.S. Bureau of the Census, 2008a).

Hispanics have the largest buying power of any minority group in the US, with $951 billion, and is estimated to reach $1.4 trillion by 2013 (Humphreys, 2008). The percentage of total U.S. buying power for which Hispanics account has changed from 5% in 1990 to 8.9% in
2008. The impact of the Hispanic buying power is already starting to have an effect on the American economy, in that the spending patterns of Hispanics under the age 18 already determine the success or failure of many youth-oriented services and products (Humphreys, 2008). Major companies have begun targeting the Hispanic market as well. Best Buy and Home Depot have on-line stores catering specifically to Hispanics, and Wal-Mart has launched Supermercado de Wal-Marts in Arizona and Texas, which specialize in Hispanic products and are completely bilingual (Birchall, 2009). Wal-Mart’s Supermercado de Wal-Mart joins Publix Sabor in Florida and Fiesta Markets and HEB’s Mi Tienda in Texas, which are all grocery stores catering specifically to Latino/as. With more Hispanics gaining capital, they are beginning to open their businesses as well; in fact, between 1997 and 2002 the number of Hispanic firms grew by 31%, compared to a 10% increase for overall number of U.S. firms (Humphreys, 2008). Wal-Mart has also recognized this by opening the first Más, a Mexican bodega warehouse megastore featuring products from Latin America and bright signage in Spanish with English subtitles and offering 500 items by-the-pallet, targeting small business owners (Bustillo, 2009).

What we once thought about work environments may not apply as broadly anymore. Given that trait and factor theory is based on the interaction of the person and the environment, this raises the question of how well our assessment instruments which address the appropriateness of fit apply to a changing workforce, but also to a changing workplace. These demographic changes might not fit in with the standard model used in the matching of persons and work environments. We do not know if a predominantly Hispanic advertising agency or a Latino/a advertising executive have the same characteristics as a dominantly-cultured advertising agency or account executive. Consequently, the process of determining person-environment approaches to career counseling is worth reviewing.
Trait and Factor Theory

Trait and factor theory has been at the core of career counseling for a century. Parsons (1909) introduced the idea in his book *Choosing a Vocation*. In this book, he developed the essential elements that formed the basis of trait and factor theory. Trait and factor theories have come under criticism for their static nature and their inability to account for changes in a person’s vocational orientation. Alongside this criticism, career counseling has grown, such that developmental (e.g., Super, 1953; 1977; 1990) and social learning theories (Mitchell & Krumboltz, 1996) now dominate the field. Despite this change in paradigm in career counseling, the basic premise of person-environment fit has not gone away, but rather evolved and frequently has been incorporated into other theories. Trait and factor theory continues to be a powerful career counseling tool. Following a review of the history of trait and factor theories, two theories that are currently prominent in the field will be discussed in depth.

Development of Trait and Factor Theories

Parsons (1909) proposed that vocational guidance should be based on the three elements. The first is a clear understanding of the individual and her or his abilities, values, interests, ambitions, resources, and personality. For Parsons, this information was typically secured through a clinical interview. The second element is knowledge of the world of work. This includes knowledge of the advantages and disadvantages, compensation, opportunities, and requirements of each occupation. The third essential aspect to trait and factor theory is a rational relationship between the first two elements. By relating an individual’s traits to the factors of the occupation, one may make logical decisions about the appropriateness or likely satisfaction of the person within that vocational position.
Although trait and factor theory was largely developed on clinical interviews and observations, the approach established itself during the 1930s and 1940s with the onset of the psychometric movement. During World War II psychology established itself as a practical discipline through assisting the military in testing and placing recruits. A number of formal assessment instruments that could be administered en masse were developed during this time which would allow the military to assign recruits to ideal positions based on their inclinations and abilities. Following World War II, the psychometric movement continued to gain strength and many more tests of vocational aptitude and personality were developed. *Tests in Print* (Murphy, Plake, & Spies, 2006) lists over 3,000 psychological tests, of which 244 are intelligence or aptitude tests, 693 are vocational assessments, and 764 are personality assessments. Career centers rely on formal assessment instruments in their counseling. This association between career counseling and formal assessment can be seen in the number of career centers that also include “testing center” in their titles (e.g., Miami University--Ohio, University of Missouri--Kansas City, Western Michigan University).

Even though vocational assessment is a staple of career counseling, the approach is also roundly criticized. Prediger (1974) has argued that many career counselors use a “square peg” approach in which people are inserted into career paths that appear to fit for them without incorporating other aspects of the client. He points out, however, that this is the fault of the counselor and not trait-and-factor instruments themselves. Zunker (1998) has argued that trait and factor theory is too static. Trait and factor instruments take a snapshot of the individual, frozen in place and time. Developmental theories claim that the individual changes over time as she or he matures and experiences different things. Likewise, social constructivists assert that a person changes across environments and the instruments measure a person’s interest or
personality in a particular context only. Many of these criticisms assume the absence of a counseling relationship through which the results can be interpreted and, indeed, many counselors do interpret trait and factor results without the aid of the counseling relationship.

Despite this criticism, trait and factor based assessments continue to be useful in career counseling. Hansen and Swanson (1983) found that the Strong-Campbell Interest Inventory (SCII; now the Strong Interest Inventory, SII) to be a valid predictor of college majors. Gottfredson and Holland (1975) found the Self-Directed Search (SDS) to be a moderately efficient predictor of vocational choice. Willis and Ham (1988) found that the Myers-Briggs Type Indicator (MBTI) was useful in helping clients organize career information. Wholeben (1988) found that the Personal Career Development Profile (PCDP), based on Cattell’s 16 personality factors, is useful in assisting college students and adults increase career awareness.

Krell (2005) reported that personality assessments are seeing a resurgence in the workplace. Rather than simply being used to decide whether or not to hire an employee, they are now being used more frequently for recruitment and placement; a person’s profile may be used to determine his or her fit with the corporate culture or the work group or even department to which a new employee is assigned. Directly addressing the complaints of the static nature of personality assessment, they are now being used more throughout an employee’s career, for aspects such as conflict resolution, leadership development, coaching, and in helping employees adjust to structural changes in the workplace.

Two personality theories have become or are becoming dominant forces in the trait and factor paradigm, Holland’s RIASEC codes and the five factor model. Holland’s (1997) theory of type is a classic example of the trait and factor, environment-person fit model. Holland’s theory has been incorporated into numerous vocational assessment instruments (Nauta, 2010).
Holland’s six-letter codes have become a standard model in vocational guidance, and are included in the U.S. Department of Labor’s Occupational Information Network (O*NET) occupational descriptions and ACT’s World-of- Work Map (Swaney, 1995) and DISCOVER program (ACT, 1995). Meanwhile, the five factor model has emerged as a theory frequently applied to career counseling and assessment approaches. Though there are a number of conceptualizations of the five factor model, Costa and McCrae’s (1985; 1992a) model has become the predominant model and their Revised NEO Personality Inventory (NEO PI-R; 1992a) has become the foremost instrument for assessment of personality along these dimensions. Though utilized as a theory in career development later than Holland’s, a number of studies have demonstrated a relationship between the five factor model and work variables (Barrick, & Mount, 1991; Barrick, Stewart, Neubert, & Mount, 1998; Hurtz, & Donovan, 2000; Judge, Martocchio, & Thoresen, 1997; Matthews, & Stanton, 1994)

**Holland’s Theory of Type and the Self-Directed Search**

Holland’s (1997) theory of type, originally developed in 1959, derived from his observations as a classification interviewer with the army, and is based on the premise that there are six true personality types. These true types occur only rarely, with most people being a combination of these types. These combinations are represented by a three-letter code representing the three dominant types within a person. The six types are: Realistic (R; prefers working with objects rather than people and appreciates straightforward systems), Investigative (I; prefers analytical work and the systematic process of discovery), Artistic (A; prefers self expression—their own or others—and shuns traditional approaches), Social (S; prefers working with people rather than objects and enjoys enhancing others’ lives), Enterprising (E; prefers interacting and influencing others and sharing ideas), and Conventional (C; prefers systematic
and predictable work). These personality types represent the individual’s interests. Additionally, according to his theory, each occupation or occupational environment also has a personality that can be depicted by a three-letter code, which represents the demands of the occupation (similarly, there are few true occupational types). According to this theory, the congruence between a person’s typology and the occupational typology determines one’s occupational behavior and predicts overall job performance and satisfaction. Overall, Holland’s theory has received a great amount of empirical support (Gottfredson & Holland, 1975; Holland, Gottfredson, & Baker, 1990; Noeth, 1983). Meta-analyses have revealed a modest relationship between person-environment congruency and job satisfaction and performance (Assouline, & Meir, 1987; Spokane, Meir, & Catalano, 2000; Tsabari, Tziner, & Meir, 2005). Holland created the Self-Directed Search in 1970, and, according to the Self-Directed Search website, it has been used by over 30 million people worldwide and has been translated into more than 25 languages (Par Inc., n.d.).

At the core of Holland’s theory is the hexagonal structure which explains how the six types are related to each other. He proposed that the types (R, I, A, S, E, and C) have specific relations with each other that could be represented by their distance from each other within the hexagon. The relationship of these types, in turn, predicts the level of satisfaction that individuals will have working in a particular type of environment relative to his or her type, called congruence. Each of the types is theorized to fit spatially on a hexagon such that each type would sit equidistant from its adjacent types (e.g., R would be equal distance from I as from C), and equidistant from the type two points away (e.g., R would be equal distance from A as from E), with the greatest distance between types that were three away from each other (i.e., R and S, I and E, C and A). This distance represents the amount of similarity, or dissimilarity, between the
types. In other words, a person who has a type of AIS would be most satisfied in a work environment that is congruent with her or his type, that is a work environment that is AIS or some combination of those types. However, a person with an AIS type would be dissatisfied working in a CER environment, which would be an incongruent environment. The further away within the hexagon an occupation type is from one’s own type, the greater the level of dissatisfaction that would be predicted within this model.

Whereas the typology of Holland’s theory is well supported empirically, the structural integrity of the hexagon has not been fully supported. That a person with an “A” type personality is more like a person with an “I” type personality than a person with a “C” type personality has been supported across a number of studies (e.g., Cole & Hanson, 1971; Cole, 1973; Crabtree & Hales, 1974). Although there has been empirical support for the order of the six types, the hexagonal structure with regard to distance between types has not held (Nauta, 2010). Dawis (1992) and Chartrand (1992) have suggested reconceptualizations of the hexagon model, while others have taken to referring to the model as a “circumplex,” rather than a hexagon (Nauta, 2010). Prediger and Vansickle (1992) have argued that Holland’s hexagon does not need to be perfect to be useful. Holland has acknowledged the imperfection of the hexagon model, referring to real world data resulting in “misshapen polygons” (Holland, Fritzsche, & Powell, 1997, p. 4), but he stated that the concept is nonetheless still useful. Further criticism of Holland’s structure also comes from research suggesting that there are more than six interest factors (Rounds, 1995). Holland (1997) acknowledged the possibility of more factors, but defended his structure as being more useful and accessible in practice with only the six factors.

Though the order of the types appears to be cross-culturally valid, the relational distance between the types does not. (Fouad & Dancer, 1992; Prediger & Vansickle, 1992; Swanson,
Adopting the circumplex model, researchers have found that the model largely holds for gender, race or ethnicity, and for socioeconomic status (Darcy & Tracey, 2007; Ryan, Tracey, & Rounds, 1996). However, how well the circumplex fits across nationalities is unclear (Nauta, 2010) and Subich (1992) suggests caution when applying the congruence aspect of Holland’s to culturally different populations. Overall, these studies indicate an applicability of Holland’s theory cross-culturally, but simultaneously imply that the theory may not apply equally cross-culturally.

Holland’s personality types were derived by reviewing results from the Strong Vocational Interest Blank, initially developed with White male students at Stanford, and the observations of others concerning trends that they saw in occupational choice. In developing his original six personality types (Motoric, Intellectual, Supportive, Conforming, Persuasive, and Esthetic), he drew from Horney’s, Fromm’s, and Weinstein’s personality theories (Holland, 1959). Although not specifically based on these theories, he grounded his descriptions of his personality types in the terms of these psychodynamic theories. Little effort was made initially to incorporate culturally diverse persons in the original theory or the theories upon which his theory was developed. Subsequently, there has been support for the cross-cultural application of Holland’s theory. While there have been some inconsistent results regarding the appropriateness of the hexagonal structure of the six personality types as applied to ethnic minorities, generally the theory seems to apply cross-culturally (Fouad & Dancer, 1992; Swanson, 1992).

The Self-Directed Search (SDS) was developed to make career assessment more directly accessible by simplifying the process and the results (Nauta, 2010). The instrument is self-administered and consists of two booklets: the Assessment Booklet and the Occupations Finder. The Assessment Booklet consists of 228 items, broken down into Activities, Competencies,
Occupations, and Self-Estimates. The Occupations Finder lists 1,300 occupations according to types and subtypes and is further organized by level of general educational required by each occupation. The Self-Directed Search was first published in 1971 and employed five graphs in its scoring scheme. In 1977 a new edition was published with a simplified scoring system, a few revised items, and included additional jobs in the Occupations Finder. In order to improve validity, a new version was created in 1985. The changes to this version were intended to address differences in gender and age, increase the ease of understanding and completion of the instrument, and more than doubled the number of occupations in the Occupations Finder. Changes to the 1994 edition included an update of the occupations included and of the wording of some items and yielded increased internal consistency while maintaining the concurrent validity (Holland et al., 1997).

**NEO PI-R and the Five Factor Theory**

The five factor model has grown out of empirical investigation throughout the last 75 years. That personality could be described by five general traits was first proposed by Thurstone in 1934 (Thurstone, 1934). Shortly thereafter Cattell (1948, 1956) discovered sixteen primary-order factors and eight second order factors to describe personality, while Eysenck (Eysenck and Eysenck, 1968) supported a three factor model. Support for the five factor model has consistently been found (e.g., Fiske, 1949; Norman, 1963; Tupes, 1957; Tupes & Christol, 1961), and the five factor model has received wide acceptance (O’Connor, 2002). Norman (1963) provided labels for the factors (Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Culture), which persist in some version today.

However, there continues to be criticism about five factors adequately accounting for all of personality. Boyle (2008) has argued that the five factor model may be an inaccurate
representation of trait structure and that the optimal number of traits is as yet unclear. Some have argued that the factors are not independent and that personality may be reduced to fewer traits (Digman, 1997; Saucer, 2002). Costa and McCrae have not acknowledged an overlap among their factors; however, but they have claimed that some overlap between facets is to be expected because the traits are derived from the same source, namely the same genetics (Costa and McCrae, 2008). Others have argued that there are important traits that are not incorporated into the five factor model (Paunonan, & Jackson, 2000), and Boyle (2008) has claimed that the five factor model has been shown to account for less than 60% of variance amongst personality traits. Boyle (2008) further points out that lower stratum factors, such as those represented in the 16PF (Russell, & Karol, 2002), account for a greater level of predictive validity than do higher stratum factors, such as the five factor model. Consequently, Costa and McCrae (1992a) recognized the inability of the five factor model to accurately describe one personality and developed 30 facet scales, which may be seen as primary stratum level factors, equivalent to Cattell’s 16 personality factors.

In developing their theory based on the five factor model, the five factor theory, Costa and McCrae initially recognized two higher-order traits, Neuroticism (degree of emotional ability or adjustment) and Extraversion (degree of sociality, stimulus seeking, and positive disposition; Costa & McCrae, 1992a). They eventually recognized a third factor, which they called Openness (degree of curiosity and receptiveness to new ideas and inner experiences; Costa & McCrae, 1976; 1978). With empirical evidence for a five factor model growing, they added Conscientiousness (degree of purposefulness, impulsivity, and orderliness) and Agreeableness (degree of altruism and cooperativeness) as factors to complete their model (McCrae & Costa, 1985).
They have emphasized that their theory extends beyond a model in that the five factor model organizes traits, but says little about how these traits lead one to function in daily life, understand himself or herself, or adapt to his or her culture (McCrae, & Costa, 2008). Their theory incorporates the five factor model into a larger context as biologically-based dispositions that interact with external influences, such as cultural norms, to produce characteristic adaptations. In other words, the specific manifestation of a trait—the behavior—may be culturally bound, while the trait itself is not.

The NEO Personality Inventory was first publish in 1985 and measured all five personality domains, but only the facets for N, E, and O (Costa and McCrae, 1985). Facet scales for A and C were added in the 1992 revision, the NEO PI-R (Costa and McCrae, 1992a). Its publication has spurred increased use of personality assessments within vocational contexts (Goodstein & Lanyon, 1999; Kroeck & Brown, 2004) and two versions designed specifically for use in vocational and career counseling settings have been published, the NEO Professional Development Report (NEO PDR) and the NEO-4. Tenopyr (1993) has argued that there is a direct relationship between factors in the five factor theory and job satisfaction and work adjustment that make use of the five factor theory appropriate in examining occupational variables.

A number of researchers have mapped career constructs onto the five factor model. Matthews and Stanton (1994) found that many of the thirty one scales of the Occupational Personality Questionnaire matched with the five factor model. Barrick and Mount (1991) determined that the five factor model can be useful in personnel selection. Specific traits within the five factor model appear to be correlated with different aspects of performance, such as Extraversion and training (Barrick & Mount, 1991; Hurtz & Donovan 2000), Conscientiousness
and Extraversion with absenteeism (Judge et al., 1997), a positive correlation between Conscientiousness, Agreeableness, and Neuroticism and team effectiveness (Barrick et al., 1998), a curvilinear relationship between Extraversion and team performance (Barry & Stewart, 1997), and Extraversion and Openness with leadership (Polyhart, Lim, & Chan, 2001).

As Brown (2003) points out, these instruments were not meant to be used alone in career counseling, but rather as one tool in career counseling. The clinical interview of Parsons’ era is still an integral part of the career counseling process. The counselor is responsible for interpreting the meaning of any tests’ results with the client within the full context of the client’s worldview and developmental stage. While use of the instrument independently of a larger counseling context does occur, the majority of administrations and interpretations occur within the context of a larger career counseling theory. Whereas trait and factor has waned as an independent theory, the approach has been widely incorporated into other career counseling theories.

**Contemporary Career Counseling Theories**

Developmental and social learning theories have ascended as dominant career theories used in career counseling today, superseding basic trait and factor theories. These theories incorporate the dynamic aspects of personality and the relationship between personality and job satisfaction. However, these theories have not simply replaced trait and factor theory, instead they have incorporated a trait and factor approach within a more comprehensive theory.

The earliest major developmental theory was proposed by Ginzberg and his colleagues (Ginzberg, Ginsburg, Axelrod, & Herma, 1951) and consisted of three major stages. The first stage of their theory is the fantasy stage, which consists of play and imagination as it relates to the world of work. From this stage children develop into the tentative stage, in which they
recognize their interests, abilities, and values. During the tentative stage children shift from thinking about idealized occupations to occupations that would actually be a good fit for them. During the final stage, the realistic stage, children begin making actual occupation choices. Ginzberg (1984) claimed that occupational choice was based on consideration of one’s desires, needs, and constraints, in comparison to occupational opportunities and has been supported by research (Trice, Hughes, Odom Woods, & McClellan, 1995).

Super (1953, 1977, 1990) developed his life span, life space theory upon Ginzberg’s theory and is one of the most popular theories within career counseling today. In his theory, the self concept is the cornerstone of vocational choice. He has described an arch to explain his theory. At the center of his arch is the self concept, held up by two columns. One column consists of social or environmental influences, such as family, social policy, and the community. The other pillar represents the individual, which consists of values, interests, and personality. According to his theory, the self-concept is based on how the person sees herself or himself and sees her or his situation and changes as these perceptions change. Thus, one’s self concept changes across the life span, and particularly as one’s role changes throughout life. As such, he argued that career choice was not an event, but a process.

Super (1990) presented a number of propositions upon which his theory was based, a number of which related to personality. He claimed that people differ in their abilities, interests, and personalities and the configuration of these abilities, interests, and personality qualified each person for a range of occupations. He further explained that each occupation called for a specific set of abilities, interests, and personality traits which is wide enough to allow for a variety of individuals to be competent and satisfied in each occupation. Consequently, a number of occupations were available to each individual’s particular constellation of abilities, interests, and
personality. This is consistent with Holland’s theory of type. Super acknowledged that the individual’s constellation changes as her or his self-concept changes across time. To provide for the implementation of his theory into practice, he and his colleagues designed the Career Development Assessment and Counseling model (C-DAC; Niles, 2001; Super, Osbourne, Walsh, Brown, & Niles, 1992). The third phase of this model involves assessing abilities, interests, and personality, following trait and factor methodology (Super, Savickas, & Super, 1996). Thus trait and factor theory has been subsumed into career developmental theories.

Social learning career theories, developed as an alternative to trait and factor theories and are grounded in Bandura’s (1986) social learning theory, have also become a prominent approach to career counseling. These theories incorporate interests as part of their theories, but with more of an emphasis on the process by which interest are developed. Mitchell and Krumboltz’s (1996) social learning theory is primarily concerned with how operant and classical conditioning influence the career decision process. They proposed that the career decision process is largely influenced by seeing what in our own behavior or in the behavior of others receives reinforcement. In practice, social learning theory is concerned with helping clients further develop skills, interests, and values. Krumboltz (1996) perceived the trait and factor approach as diagnostic, but criticized this approach as not aiding clients in adapting to changes in their experiences. However, within their theory, interest inventories can be useful in determining the general interests individuals have derived from their learning experiences and providing guidance in helping clients see opportunities (Sharf, 2002).

Social cognitive career theory (Lent, Brown, and Hackett, 1996) is also grounded in Bandura’s (1986) theory, but instead emphasizes the role of self-efficacy and stresses the role of self-regulatory cognitive processes in the career decision process. The process by which interests
are developed is also central in this theory of the career decision process. According to their theory, interests are the result of activities at which the individual has succeeded, such that individuals become more interested in doing things about which they have a sense of self-efficacy. In practice, discrepancies between measured abilities and interests help counselors understand clients’ self-efficacies and may help them adjust their outcome expectations in order to broaden clients’ options (Sharf, 2002). The Campbell Interest and Skills Inventory (Campbell, Hyne, & Nilsen, 1992) includes a skills self-assessment that is incorporated into the interpretive data such that level of interest and level of perceived skill indicate recommendations. For example, when a client endorses high interest and low skills and interpretation of “Develop” is issued, suggesting that the client may want to experiment with building skills in that area. The Skills Confidence Inventory (Betz, Borgen, & Harmon, 1996) was developed specifically to assess self-efficacy in terms of Holland’s six GOTs. Many of the interest inventories have likewise integrated self-efficacy measures as well, such as the Personality Style Scales of the Strong Interest Inventory. Holland (1985) has likewise suggested that the self-estimates section of the SDS can be used to assess a client’s self-efficacy of the GOTs. So, although formal assessment takes a decreased role within contemporary theories of career counseling, the trait and factor approach of the person-environment fit dimension still plays an important role in understanding the client’s experience.

Although many of the criticisms of the trait and factor theory are alleviated through the inclusion of this approach into a larger counseling relationship or career development theory, the instruments are still criticized for not being culturally sensitive. Brown (2003) suggested caution in using the Strong Interest Inventory and Self-Directed Search with non-Eurocentric clients because research on the usefulness of them with these populations has been less conclusive.
Fouad, Harmon, and Borgen (1997) found that the overall relationship between the letters of Holland’s typology fit for women and ethnically diverse males, but the predicted congruence relationships did not. Gysbers, Heppner, and Johnston (2003) pointed out that the original vocational guidance movement, including the Self-Directed Search, was largely developed for a population descended from Western Europe. As previously noted, these people had both a greater orientation toward acculturation and more cultural similarities with Anglo-American culture compared to the majority of those descended from the more collectivist cultures of Asian and Latin America.

Through revisions, efforts have been made to make these instruments more inclusive of a multicultural norm group and alternative language versions have been published. Nonetheless, these instruments are still based in a particular cultural context. As Fouad (1993) has pointed out, culture is a major contributing factor in vocational assessment. Okazaki, Kallivayalil, and Sue (2002) described multiple levels of equivalence of instrument translation. They explained that though a translated instrument can have “translation equivalence,” in which the words or concepts survive translation, this does not mean that the translated versions have conceptual equivalence. They elaborated that while two languages or cultures can have a shared concept, this does not mean that the concept has the same functional aspects among the cultures. They use the example of being a “good decision maker” and how in Western cultures this means thinking independently without undue influence, while in Eastern cultures the same phrase means making a decision that is best for everyone; the basis upon which one is judged a good decision maker are not conceptually equivalent even while the term “good decision maker” is a concept that has translational equivalence. The failure of translation to capture the cultural influence of language has been a widely studied concept in the social sciences over the last fifty years. Meanwhile,
Yansen and Shulman (1996) have suggested that bilingual clients be assessed in both of their languages to counter the problems with translated instruments. However, much of the work done on applying vocational assessments cross culturally has been conducted with regard to applicability to monocultural individuals in various countries, and not on bicultural individuals who may alternate between cultural identities.

For clients that alternate between cultures, test items might not have conceptual equivalence among those cultures, whereas the context in which one is functioning may affect the interpretation of words. Many researchers have explored the affect of context on both language and personality, as well as the interaction between language and personality. This relationship becomes particularly important with regard to an assessment process grounded in language that is attempting to match personality with other characteristics.

**The Effect of Situation, Culture, and Language on Personality**

The effect of situation or context on the expression of personality first gained widespread attention in the 1930s and continues today. Gordon Allport (1937) suggested the personality was malleable across situations, while maintaining a central core. Walter Mischel (1968) expanded on this idea, proposing that personality consisted of behavioral patterns that shifted in specific ways across situations. Around the same time that Allport was presenting his theory, Benjamin Whorf was developing a theory that linguistic context affected behavior, and consequently personality. He published his theory around the same time that postmodern structuralists were promoting the idea that all thought and behavior was influenced by specific words that shape a context, grounded in the idea that behavioral and linguistic meaning was socially constructed. The exploration of culture’s influence on behaviors and attitudes continues today through research on cultural frame switching.
Personality as a Mediator of Situational Behavior

The argument that an individual’s behavior is inconsistent across situations is an easy argument to make. Anyone who has either taught or been a student has seen how differently many students behave in and out of the classroom. A student who is demure in the classroom may be rather animated when given the opportunity to discuss ideas with a professor on a one-to-one basis. Everyone, likewise, is aware of how their own behavior changes between the workplace and when with family or friends. The idea that one’s current situation may affect the expression of personality is not a new one and a number of researchers and theorists have explored and proposed explanation for the differences in human behavior across different situations.

Allport: Gordon Allport (1937) described personality as a “dynamic organization” (p 48) in which personality consists of a stable core that is constantly changing. He later expanded on this concept of personality as situationally adaptive, in that people not only react to their environments, but also act upon their environments to modify it (Allport, 1961).

Allport (1961) suggested that personality was structured around various levels of characteristics. He described cardinal traits that were so extreme as to become traits that defined the person. He expressed that few people actually had these traits. On the other the end of the spectrum are common traits, according to his theory, which he described as traits that were common to all people and could be compared across individuals. The five factor model or Holland’s RIASEC code might represent this level of traits. The intermediate level, which he calls personal dispositions, is the level with which he was most concerned, which he defined as the five to ten characteristics that are core to each individual, are consistent, and distinguishes each person as an individual.
Allport (1961) argued that personality is not just something, but that personality also “does something” and explained that personal dispositions moderated the unique aspects of environmental stimuli resulting in the specific behaviors exhibited in each situation (p. 29). He explained that the differences of behavior that are seen in individuals across situations are various manifestations of each person’s personal dispositions and that the difference was a result of the specific ways that the environment interacted with one’s personal dispositions. In other words, given a personal disposition of politeness, one may behave very graciously in one context in which expressions of appreciation would be considered polite and behave very quietly and subservient in a context in which deference was expected. Thus, he argued that personality expression could be inconsistent across situations--with regard to the behavior exhibited--while simultaneously maintaining a consistent personality.

**Cognitive social learning theories.** Malloy and Kenny (1986) have argued that personality is a phenomenon entrenched in the social context. The concept of personality as an interaction between the person and the environment, rather than simply residing in the person alone, gained popularity during the late 1960s and early 1970s, particularly with the work of Julian Rotter, Walter Mischel, and Albert Bandura. Although each theory focuses on different aspect of the interaction, all three emphasize the importance of cognitive-affective assessment of the situation in determining the behavioral expression of personality. Central to each theory is the idea that people evaluate their environments and themselves and deliberately act—or refrain from acting—in accordance with their appraisals. These interactionist theories are similar to behaviorist theories in that each focuses on behavior, but differ in that interactionist theories emphasizes human agency.
Mischel’s (1968) initial objection to the trait approach to personality was that the approach attempted to compare what people are like, as opposed to what they do. He argued that because behavior was obviously not consistent across situations, then the comparison of global traits outside of any context was an inappropriate way to measure personality. Similarly, Bandura (1986) proposed that personality and behavior are not independent, and, furthermore, that neither is independent of the environment. Thus, according to Bandura, behavior is not just a manifestation of personality, but rather that personality is the lens through which individuals filter their environment to determine their own behavior. In the same vein, Mischel (1999) claimed that the pattern by which one filters the environment is a person’s behavioral signature of personality. In other words, the consistency within the variability—the predictable ways in which one assesses a situation and the corresponding way in which behavior will vary—is what constitutes personality. Within the interactionist perspective, personality can be thought of as the set of a person’s cognitive-affective appraisal processes.

These theorists developed a variety of terms to describe the cognitive-affective assessment processes, but there are a number of common elements. Central to each theory is the role that one’s appraisal of his or her action will have an effect upon the environment. That behavior is goal directed is assumed within all three theories. Whether outcome expectancies of specific acts (Bandura, 1986), or analyzing consequences and importance (Mischel, 1973; Rotter, 1982), or behavioral options, each theory contains an assessment process for deciding whether to act or not and the amount of effort that should be made. Essential to this assessment process is the situation in which the action may occur.

Many of the interactionists have been criticized for discounting personality as an enduring attribute or set of attributes. However, this is contrary to the actual claims of
interactionists. Rotter (1982) has argued that personality is relatively stable and that people make consistent evaluations of their situations. In Mischel’s landmark 1973 paper he asserted that continuity in people is recognizable and that behavior can be predicted by how one has behaved in similar situations. He further explained that the particular class of the event or situation is what allows for the predictability or consistency of the behavior for each person. He has also argued that the degree to which the environment is structured influences the degree of variability in personality. Returning to the example of how a student’s behavior differs inside and outside of the classroom, a student’s behavior may similarly vary within the classroom based upon the rigidity or leniency of the classroom environment, but within a more narrow range of behaviors of what would be appropriate in a classroom setting. The degree to which one perceives possible responses as appropriate, inappropriate, or neutral determines the behavior within the specific situation.

Mischel (1973) suggested that psychologists should focus on what people do and think, rather than what people are like. Mischel’s main point was to reject the notion of “typical” behavior while accounting for differences as “error,” but instead to measure behavior as situational (Cervone, Shoda, Downey, 2007). Mischel expressed that behavior was predictable and consistent at the situational level, and explained inconsistency within the consistent patterns as an inability to accurately predict the elements of situations (Mischel, 1990).

Mischel (2007) described global traits, such as the five factor model and Holland’s codes, as averages across situations and suggested that they are poor predictors of any singular situation. However, he also acknowledged the usefulness of global traits in specific circumstances as well. He explained that the rank ordering of global traits tends to change dramatically across situations, while emphasizing that the changes in rank ordering were
predictable, such that the pattern of change is what matters. He suggested that the consistency of personality could be seen in “if…then” statements, such that if given a particular class of a situation, then a specific set of behaviors could be predicted or observed for each individual and that the task of psychologists is to determine an individual’s “if…then” statements.

Whereas Mischel primarily focuses the differences in personality expression across situations, he also acknowledged that culture in itself may be a mediating situation. Agreeing with Allport’s idiographic approach to personality, Mischel (1973) suggested that situation-behavior cues were determined by the individual’s personal and idiosyncratic learning history. However, he also states that many of the situation-behavior cues are likely to be widely shared by members of a common culture. He elaborated that an adequate understanding of the individual would require a rule system for the individual as well as a rule system for the “shared ‘sign’ grammar of the culture and the transcultural lexicon structure” (Mischel, 1973, p. 271).

Recent research has explored more specifically what factors or situations affect, or destabilize, the different forms of consistency of personality. Costa and his colleagues (Costa, Herbst, McCrae, & Siegler, 2000) found that job status and marital status each affected various factors and facets on the NEO PI-R. Neyer and Asendorpf (2001) likewise showed that beginning a dating relationship could affect Neuroticism, Extraversion, and Conscientiousness. Roberts, Helson, and Klohnen (2002) additionally reported major life events, such as divorce or work force participation, appeared to affect consistency of personality for women. Schooler (1999) reported that personality change and consistency were affected by lifestyle and complex environments.

Two measures have become popular for the assessment of change in personality across time, mean-level change and rank-order consistencies. Mean-level change refers to the degree to
which a group of people changes on a trait dimension over time. Roberts, Walton, and Viechtbauer (2006) described mean-level change as normative, in that it represents a pattern of change that can be applied to a broad group of people. Rank-order consistencies refer to the degree to which people within a group change ordinal position on trait dimension within the group over time. Rank order consistency and mean-level change can co-exist and can act independently of one another (Roberts et al., 2006). If the individuals in the group move equally along a trait dimension then there could be rank order consistency and mean-level change. Conversely, if the members of a group were to shift equally in contradictory directions, then there could be little or no mean-level change, but notable loss in rank-order consistency.

In the last 15 to 20 years there has been a shift in interest in the stability of personality with regard to time, rather than situation. McCrae and Costa (1990) argue that personality is stable after age 30. Others have argued that personality continues to change at least into middle age. Roberts and Del Vecchio (2000) conducted a meta-analysis of 152 longitudinal rank-order studies and discovered a stepwise development of the consistency of personality across time such that the greatest changes appear to occur in the pre-school years, in young adulthood, and then again in middle age, after which consistency levels off at around 75. In a follow-up meta-analysis of 92 longitudinal mean-level change studies, Roberts discovered a similar pattern in which normative changes occur across the life span (Roberts et al., 2006). He claimed that during childhood personality change was largely affected by genetics, whereas personality change in adulthood was primarily affected by the environment. He proposed that adolescence was perhaps “a period of personality trait moratorium” (p. 19). He explained that age-graded social roles provided the greatest pressure for personality change and that role expectations provide a guide by which one learns appropriate and acceptable ways of being.
Roberts and Del Vecchio (2000) suggested that the degree of consistency of personality is influenced by the goodness of fit of person-environment transactions. Using Caspi’s (1998) model of person-environment transactions, they explained that personality expression, or behavior, is determined by the ways in which one attempts to reconcile her or his self-concept with the situation in which one is acting. They explained that the extent to which an individual is successful in her or his person-environment transactions will affect the degree to which personality is consistent.

Post-modern theorists, focusing on the role of language and its contextualized meaning, argue that the environment always has an impact on the person. They are less concerned with the consistency of personality than with the way in which one’s language shapes the way one thinks. The cultural context formed by language is one of the major influences in the way in which one’s thinking, and subsequently personality, is formed. This link between the influence of culture, through language, on thinking and personality is at the crux of the Sapir-Whorf Hypothesis.

The Sapir-Whorf Hypothesis

In the early 1950s, Benjamin Whorf proposed his linguistic principle of relativity. He developed this theory while working with Edward Sapir during the 1920s and 1930s studying Native American tribes’ culture and language. Based on the ideas of Boas, Sapir, German Romantic philosophers, and Herodotus, the theory has become known as the Whorfian Hypothesis or the Sapir-Whorf Hypothesis (Hunt & Agnoli, 1991).

The Sapir-Whorf hypothesis has two basic components. The first, referred to as linguistic relativity, states that structural differences between language systems will, in general, be paralleled by nonlinguistic cognitive differences (Whorf, 1956). In other words, even behaviors that are not specifically communicative will differ between cultures as a function of their
language differences, and in fact caused by differences in the linguistic structures of the languages of those cultures. The second component, referred to as linguistic determinism, draws a direct link from the differences in non-communicative behavior among differently-languaged cultures to differences in cognitive processing of the individuals within the different language communities. Furthermore, differences in cognitive processing are thought to result from differences in linguistic structure. In other words, his theory suggests that the differences in language result in differences in cognitive processing, which in turn result in different behaviors, including non-communicative behaviors. The first component of this theory refers simply to behavioral differences, while the second component argues that cognitive differences also occur across cultures and that these specifically, or partially, result from language differences; the first component concerns behaving, while the second concerns thinking.

Early investigations of the Sapir-Whorf Hypothesis were largely centered on color recognition. These studies yielded mixed results, and, along with the emergence of Chomsky’s theory and the associated emphasis on language universals, the Sapir-Whorf Hypothesis was dismissed by cognitive psychologists by the mid 1970s. However, as Lee (1997) pointed out, Whorf’s theory is not in contradiction to Chomsky’s theory. Both theories share the idea that languages differ in systematic ways and, in fact, Chomsky’s theory can be used to support Whorf’s theory. The 1980s and early 1990s saw a re-emergence of interest in the Sapir-Whorf Hypothesis as part of an increased interest in cross-cultural psychology, particularly within the field of social psychology and the study of personality.

The degree to which Whorf was proposing that language controls cognition has been of some debate. More interest has been paid to the second postulate, linguistic determinism. Foss and Hakes (1978) offered that linguistic determinism has two versions. They suggested that the
strong version claims that cognitive processes are fully determined by language and that a weak version suggests that cognitions are largely influenced by linguistic structure. They further claimed that the strong version was proven false shortly after the theory was proposed and that the weak version is not interesting. Foss and Hakes are among a number of researchers who have dismissed the Sapir-Whorf Hypothesis, based on what they see as failure of the strong version. Hardin and Banaji (1993) noted that among experimental psychologists one cannot mention the Sapir-Whorf Hypothesis without also discussing its refutation. However, Hardin and Banaji (1993) pointed out that although a “fully determine” claim could have—and was—easily dispatched, social psychologists rarely expect a dependent variable to be linked with a single independent variable. Thus they proposed that the Whorfian Hypothesis does not need to be rejected in total. They argued that, although some contradictory evidence has been found, there is additionally much confirmatory evidence, and that, given the totality of research, the investigation should not be put to rest. They claimed that what should be studied is the ways (mechanism and magnitude) in which language might affect cognition.

There are a number of ways in which language may affect one’s cognitive processes. Chomsky’s (1957) theory suggests that language acquisition consists of the establishment of a variety of “on/off” switches regarding linguistic aspects ranging from phonemes to syntax. Because thinking is largely done through language, which syntactic options are coded as “on” or “off” for a language may affect the way one conceptualizes or analyzes information in the world. In European-based languages, transfer verbs such as “give” are associated with three noun phrases (from whom, to whom, and the object to be transferred), whereas in certain Pacific Islander languages, transfer verbs only have two associated noun phrases. These limits on noun phrase and verb phrase associations could possibly influence the way one conceptualizes
possible object and action interactions. Similarly, the terminology regarding social and kinship relationships or spatial and geographic and climatic relationships may also influence a person’s cognitive processes. Culture and language determine acceptable forms of expression and the importance of certain concerns over others, so these latter aspects, in particular, may be relevant to personality expression and occupational satisfaction.

**Empirical investigations.** Many of the original color naming experiments used to study the Sapir-Whorf Hypothesis in fact confirmed the hypothesis. Lenneberg (1953) found that monolingual speakers of the Zuni language, which does not have separate words for yellow and orange, had difficulty recognizing yellow and orange color samples that they had previously seen from among an array. Brown and Lenneberg (1954) likewise found that American college students had a harder time recognizing colors they had previously seen from an array if they had difficulty naming the color. Furthermore, Brown and Lenneberg (1954) found that when they compared the yellow-orange color recognition ability of their sample with that of the Lenneberg (1953) study, they found that the bilingual—Zuni and English—subjects had an easier time recognizing this range of colors than the monolingual Zuni, yet less success in color recognition than the American college students. Conklin (1955) found that among the Hanunoo in the Philippines red and green also mean dryness and wetness, respectively. In other words, he found that that there was a specific relationship between a color word and cognitive interpretation of the word.

Subsequent research was less consistent. Heider and Oliver (1972) showed that the Dani of New Guinea were as able as North American Whites to recognize color chips they had previously seen and argued that perceptual salience and not language caused the differences in color memorization. Based on this study and a few others that found perceptual equivalence
across language communities, Brown (1976) declared that the Sapir-Whorf Hypothesis was incorrect. However, Lucy and Shweder (1979) replicated Heider and Oliver’s study using a less biased color array and, though they found similar results, they also found an independent relationship between color recognition and color codability, supporting linguistic relativity. Additionally, Kay and Kempton (1984) found differences between English speakers and Tarahumara speakers in their recognition of blues and greens such that English speakers exaggerated the differences between the two colors compared to Tarahumara speakers, who do not have words to distinguish between blue and green. Thus even within the field of color perception, which had been claimed to reject the hypothesis, there is evidence in support of the Sapir-Whorf Hypothesis.

An area of cognition that has provided some of the stronger evidence in support of the Sapir-Whorf Hypothesis comes from studies of task completion or problem solving. One of the earliest studies of the theory was conducted by Carroll and Casagrande (1958). They studied the object categorization behaviors of Navajo and English dominant children. The Navajo language has a system of verb forms such that the shape of the object to which action is being done (picked up, thrown) is indicated. In their study they found that Navajo children categorized objects by shape more than English-dominant children did. They further found that low-income African American children who, like the Navajo children, had not been exposed to similar objects previously, categorized the objects in the same way as the English dominant children, with whom they shared a language, in the original study. In a study on problem solving Bloom (1981) found a difference in the ability to utilize counterfactuals [impossible “what if” statements, such as “if you were (somebody else)”] in problem solving between Chinese and English speakers. The Chinese language does not typically use counterfactuals. Au (1983), using
different counterfactuals, found the opposite results with bilingual Chinese-English speakers. Au argued that Bloom used idioms that would be more appropriate for English speakers in his counterfactuals and claimed that all cultures use counterfactuals as the basis of hope and regret. Bloom countered that Au’s findings are less conclusive because her use of bilingual participants makes for a less distinctive cultural-linguistic difference. The influence linguistic structure has on problem solving approaches remains an open question.

**Culture and lexical structure.** The Sapir-Whorf Hypothesis is at the center of the debate about whether bilingual, bicultural individuals think differently in their different languages. Lee (1997) reported the anecdotal evidence of linguistic relativity’s appeal to bilinguals who claim that they do think differently in each language. Wierzbicka (1985a) reported that many Polish-English speakers feel embarrassment when they have to speak to each other in Polish after having only spoken to each other in English because they do not know what form of address to use. Hunt and Agnoli (1991) wondered if the need to choose an honorific affects the speaker’s perception of a social situation. This idea of linguistic choice affecting perception is supported by anthropology. Hadley (1997) stated that a culture’s particular world view is conveyed through the available lexical choices. He further suggested that a society’s words reveal the cognitive structure of the culture. This is in line with Lyons (1977) claim that semantic and lexical fields are uniquely configured between cultures. Hunt and Agnoli (1991) argued that certain languages are better able to transmit certain information and suggested that the cost of converting between languages may sometimes appear too high; this could, at least partially, explain the phenomenon of “Spanglish” (the process in which a speaker switches between English and Spanish within the same sentence). Lee (1997) suggested that the frustration that bilingual children sometimes experience may arise, not so much because they are unfamiliar with a language, but rather
because the language which they are currently speaking does not offer the full context of the idea they are trying to communicate, while the other language does.

The Sapir-Whorf Hypothesis has often been taken to mean that as a language’s grammar differs, the cognitive processes will also differ. However, many researchers have argued that differences in lexical structure can be as meaningful as differences in semantic structure in affecting cognitive differences (Hardin & Banaji, 1993; Lee, 1997). Some of Whorf’s own examples were lexical differences (such as the Aztec absence of words for degrees of coldness; Whorf, 1956). Hardin and Banaji (1993) stated that the availability of certain words in one language but not present in another “predisposes certain choices of interpretation” for events and further argued that this is as strong of evidence as differences in the grammatical structure of languages (p. 285). Fishman (1960) has suggested that the lexical or semantic structure of a language may in fact be a more important factor. He pointed out that within certain cultures words have particular nuances, which he refers to as codifiability, that cue awareness to different aspects of the environment as well as instructing people how to communicate about events. Ervin (1964) agreed, explaining that language is learned in a social context which includes rewards for speaking in certain ways and about certain topics. She added that speakers in different languages consequently communicate about different things and that the process of learning a language includes learning its content. This lexical difference in language is parallel to Okazaki, Kallivayalil, and Sue’s (2002) concern about the conceptual equivalence of assessment translations.

Expanding on this idea of codifiability, Lee (1997) pointed out that even when equivalent words can be found between two languages, the constellation of semantic connections with those words will differ between linguistic cultures. Carter (1992) supported this view, highlighting that
words do not exist in isolation, but rather as part of a network of related meanings called the mental lexicon, consisting of both lexical and semantic fields. Lee pointed out the difference in the meaning of “try” between English and Yolngu speakers of Australia; in English “try” means to give your best effort and to act deliberately while in Yolngu, the equivalent word means simply to make an attempt but de-emphasizes the purposefulness of the actor. She also pointed out how languages with articles such as a/the “atomize” the world, separating individual objects, whereas in languages without such articles there seems to be a greater sense of connectedness between objects—a sense of universality. Reflecting the findings of Carroll and Casagrande (1958), Lee reminded of the effect naming patterns can have on what we attend to in the environment.

Within psychology more generally, the influence of language on perceptions and cognitive processes is not new or uncommon. This is also the basis of many postmodern theories. Social interactionists and social constructivists argue that language’s meaning is constructed within the interaction of social milieu. Post-structuralists argue that there is no objective reality, but rather that our understanding of our world is determined by the language we have available to us. Postmodern personality theory proposes that each of us consists of multiple situationally-determined selves (Gergen, 1971). Whereas these more contemporary theories emphasize the social context of language, the Sapir-Whorf Hypothesis emphasizes a cultural context of language.

**Cultural Frame Switching**

The difference in codifiability among languages and the interaction of language and culture relates directly to what is important, prioritized, valued, and attended to within each language’s culture. LaFromboise and her colleagues (LaFromboise, Coleman, & Gerton, 1993)
claimed that people may function fully in two different cultures, altering their behavior to fit the particular social context. Ogbu (1993) argued that people operate in different cultures and languages, depending on their purpose, by alternating their behaviors. Ramirez (1984) expanded this idea, claiming that individuals may use different coping, interpersonal, communication, and problem solving techniques given different demands of the social context. Sodowsky and Carey (1988) found support that cultural context can affect preferences in that their research, in that first-generation Americans of Asian Indian descent preferred different activities depending on the context in which they were functioning, such that at home they preferred Indian food and dress, but preferred American dress and food outside of the home.

Matsumoto (1994) explained that when immigrants learn two languages, they often do so in two different cultures and he suggested that each language may access a different set of cultural values. Ralston, Cunniff, and Gustafson (1995) elaborated that cultural accommodation requires that individuals respond to the cultural expectations associated with a language. Yang and Bond (1980) suggested that in the process of mastering a second language, individuals become incidentally acculturated into the culture of the second language and that the cultural associations of the second language can later be activated by being in the presence of the second language. Chiu, Kim, and Wan (2008) have argued that culture affects personality in that cultural meaning is encoding within language and that when people use language to express their thoughts their “thoughts and behaviors will be colored by the implicit cultural meanings embedded in their language” (p. 131).

Hong and her colleagues explained that frame switching results from cues and symbols, such as language, which are “psychologically associated with one culture or the other” (Hong, Morris, Chiu, & Benet-Martinez, 2000, p. 710). Benet-Martinez expanded on this in suggesting
that individuals have learned associative networks, including language, that are shared within a
culture and partially shape the individuals affect, cognitions, and behavior (Benet-Martinez, Leu,
Lee, & Morris, 2002). She further argued that people have multiple culturally-based associative
networks and that they switch between culturally-appropriate behaviors based on the salience of
the particular cultures. Guttfreund (1990) demonstrated that Spanish-English bilinguals are more
emotionally expressive in Spanish, regardless of which language was the mother tongue, and
explained that qualities specific to the language influence affect. Shih, Pittinsky, and Ambady
(1999) found that when U.S.-born Asian women were primed to think of themselves in terms of
gender, they did worse on math tasks; conversely, they did better on math tasks when primed to
think of themselves ethnically. Depending on which non-diametric cultural framework that was
triggered, the participants adopted a behavior associated with that framework. Cultural frame
switching has been demonstrated across a number of social cognitive constructs.

Attributional style is an area in which research has shown that culture and language
salience appears to have a consistent impact. Hong and her associates (Hong et al., 2000) studied
the attributional style of bicultural westernized Hong Kong and China-born Californian students
using a variety of methods. Following being primed to think in terms of either their Chinese or
American culture, students were shown a picture of a fish swimming in front of other fish and
asked to rate an explanation for the behavior. Students primed in the western-American condition
more strongly endorsed individualistic explanations (e.g., the fish is a leader) while students in
the Chinese primed condition more strongly endorsed situational explanations (e.g., the fish is
being chased). In a similar experiment using a different group of westernized Hong Kong and
China-born Californian students, the participants were primed with pictures of either American
or Chinese cultural icons and then asked to write about those icons in culturally congruent terms
and then shown the ambiguous fish picture and asked to write the reason for the fish to be swimming in front of the other fish. The students offered explanations consistent with the cultural framework in which they were primed. Benet-Martinez and her colleagues (Benet-Martinez et al., 2002) studied the attributional style of bicultural China-born students at an American university, who either felt a compatible relationship between their two cultures or felt a conflict between their two cultures, which she labeled their degree of bicultural identity integration (BII). When participants who felt a compatible relationship between their cultures (high BII) were primed with East Asian cues they expressed a stronger situational attributional style, while other participants with high BII were primed with American cues expressed a stronger personal attributional style. Conversely, those participants that felt conflict between their two cultures (low BII) expressed an attributional style opposite to their primed condition. Whether or not the participants felt conflict between their identities, the degree to which they endorsed either a situational or personal attributional style still appeared to be affected by the cultural priming.

Hong and her colleagues (Hong, Ip, Chui, Morris, & Menon, 2001) examined the role of cultural salience with regard to value expression using students at an English language university in Hong Kong and at an American university. When the participants’ cultural identity was activated the Chinese participants used more duties to describe themselves, whereas American participants used more rights to describe themselves. However, when cultural identity was not activated, no such difference was found. Ralston, Cunniff, and Gustafson (1995) found a difference in value endorsement of Chinese bilingual managers in Hong Kong. In their study the managers more strongly endorsed the five Western values when given the assessment in English and the three Eastern values when administered the instrument in Chinese. Similar to the Benet-
Martinez and her colleagues’ (Benet-Martinez et al., 2002) study on attribution, Yang and Bond (1980) found a similar phenomenon with values. They tested the values of bilingual students at a Chinese language university in Hong Kong and found that their participants responded in a more traditionally “Chinese” way when presented the questionnaire in English. This was in direct contrast with what Earle (1969) found when testing the values of bilingual students at an English language university in Hong Kong; in Earle’s study the bilingual students presented stronger western values when tested in English than in Chinese. Yang and Bond explained the difference in that students at the Chinese language university tend to be more resistant to Western values and likely reacted to the English version by expressing greater Chinese-ness, while the students at the English language university tend to embrace Western values and would more likely to endorse English values when primed. Again, whether or not the participants felt compatibility or conflict between their two cultures, the participants appeared to be affected by the cultural priming resulting from the language of the assessment.

Wierzbicka (1985b) stated that she is a different person in Polish than in English. She explained that the language she is using affects her attitudes and interpersonal behavior. Given this, one may easily imagine that a Latino may feel a stronger pull toward more stereotypically masculine endeavors (such as mechanical activities) while speaking Spanish, and have more freedom to engage in less stereotypically masculine activities (such as artistic activities) when speaking English—given the less gender-rigid culture of Anglo-America.

A number of researchers have examined the expression of personality in different linguistic contexts for bilingual individuals. Ervin (1964) tested the difference in value-orientation with French-English bilingual Canadians using the Thematic Apperception Test (TAT). She found differences in the themes when she had respondents describe the pictures in
one language and then latter describe them in another language. She speculated that because language is a social function, the shift in themes may represent differences in social roles and emotional attitudes. Subsequently, Hoffman, Lau, and Johnson (1986) had Chinese-English bilinguals read character descriptions of two personality types. Each description represented a personality that could be described in one word in one language but not the other. They found that the participants had more congruent impressions of the character representative of the single word description of the language they were using at the time.

Dinges and Hull (1992) administered the California Psychological Inventory (CPI) to Chinese-English and Korean-English bilinguals and found that their participants presented different personality profiles depending on whether they were responding in English or their native language. Hull (1996) tested bilingual Mexican, Chinese, and Korean immigrants using the CPI in both their native language and English and found significant within-group, between language differences in the ways in which the participants expressed their personality on the different language versions of the test, such that the results for the English versions tended to have higher endorsements of American cultural values for all groups than in their alternate language.

Ramirez-Esparza and her colleagues (Ramirez-Esparza, Gosling, Benet-Martinez, Potter, & Pennebaker, 2006) examined whether bicultural Mexicans and Americans expressed their personality differently in terms of the five factor model of personality using the Big Five Inventory (BFI). They determined that Spanish-speakers in Mexico had a different general profile than did English-speakers in the U.S. and from there they attempted to predict differences when bilingual English-Spanish speakers were administered the BFI in either English or Spanish. Through a number of studies with different samples they found that when bilinguals completed
the instrument in English they were higher on Extraversion, Agreeableness, and Conscientiousness than when bilinguals completed the instrument in Spanish with effect sizes ranging from 0.25 to 0.51. However, contrary to what Mischel would predict, the rank ordering of these global traits did not change, but rather the entire group shifted in the same direction.

Matsumoto (1994) has suggested two alternative explanations for differences in personality within specific cultural contexts. The first possible explanation he offers is the “cultural affiliation hypothesis,” which is the idea that persons affiliate with the cultural beliefs and values associated with the language they are speaking. In other words, the language one speaks inherently presses one to think along the lines of the associated culture. The second option is what Matsumoto calls the “minority group-affiliation hypothesis” in which individuals adopt a group identity and act in accordance with the behavioral stereotypes of that group. This is the process that appears to frequently be demonstrated in stereotype threat and appears to be the mediating factor in Shih, Pittinsky, and Ambady’s (1999) findings that Asian American women’s math performance is affected by the salience of their particular cultural identity. Regardless of the specific mechanism, how salient each culture or set of cultural values is may affect the way in which a bilingual, bicultural person’s personality is affected by the cultural context signals.

Emphasizing the interaction between the person and the environment, Watson, Duarte, and Glavin (2005) suggested that career assessments be considered psychosocial instruments, rather than psychological instruments, because of the important role that social factors play in career assessment. Given the difference in personality expression, the role of cultural context, and the dominance of trait and factor theory in career counseling, how cultural context may affect the personality or interests expressed on a vocational assessment instrument becomes
relevant. Translation has, until recently, been the frontier in determining the cultural appropriateness for vocational assessment, and many assessments that have been translated may only have translation equivalency, and not conceptual equivalency. Neither the cultural context of the testing environment nor the practical environment for which the assessment is authorized has been examined in terms of validity for cross-cultural use. As yet, no trait and factor instruments have been researched with bicultural individuals to see if the cultural context in which the instrument is taken affects the personality expression on them. With the emerging multicultural and multilingual workforce and workplace—as well as globalization of the marketplace—career counselors will see an increasing number of clients that have the option of working in culturally-different work environments that may differ in their press for personality and interest expression.

If elements within one’s context can trigger cultural identity, and in turn trigger particular aspects of one’s personality, then the cultural context in which an instrument is administered becomes a relevant consideration within the career assessment process. There is a large body of research demonstrating how elements of the environment can affect behavior and attitudes. Much of this literature has looked at the role of cultural context cues in particular.

Cultural Priming and Saliency

Priming

Bargh, Chen, and Burrows (1996) defined priming as “the incidental activation of knowledge structures, such as trait concepts and stereotypes, by the current situational context” (p. 230). They further explained that the mere presence of relevant objects and events can activate automatic thoughts, emotions, and behaviors. Priming has been used broadly in psychology, from word and color priming in cognitive psychology to self-esteem and attitude
priming in social psychology. Self-concept has been shown to be automatically activated in the presence of self-relevant stimuli as well (Bargh, 1982; Bargh & Tota, 1988; Higgins, 1987; Strauman & Higgins, 1987).

Devine (1989) described the automatic activation process as involving “the unintentional or spontaneous activation of some well-learned set of associations or responses that have been developed through repeated activation in memory” (p. 6). Greenwald and Banaji (1995) explained that priming and context effects involve the interaction of prior events and a response to the current stimuli. Bargh and his colleagues (Bargh et al., 1996) further elaborated that automatic activation may only occur for a thought, emotion, or behavior that already exists within the individual. In other words, automatic activation does not promote a new response to the contextual situation, but rather only releases a reaction that is part of the person’s prior experiences. Gilbert and Hixon (1991) further delimited the effects of priming by clarifying that the mere presence of the relevant stimulus is not enough, but that the person must also be cognitively distracted somehow, such that she or he is unable to consciously cognitively process the stimuli independently.

Within social psychology, the effect of automatic activation of thoughts and behaviors has been widely studied with regard to the activation of stereotypes. Dijksterhuis, van Knippenberg, and Kruglanski (1996) examined the effect of priming on performance of a knowledge task, Trivial Pursuit. In their experiment they demonstrated that persons primed to think of a college professor outperformed a group primed to think of a secretary. Likewise, using the same task, their group primed to think of a secretary outperformed a group primed to think of soccer hooligans. In their study simply thinking of a person from a particular class—which was
not self-referential—was able to affect the participants’ performance. However, the majority of priming studies use self-referential priming, frequently using culturally-relevant stimuli.

**Stereotype Threat**

Stereotype threat is one area of research in which a large body of literature has been accumulated concerning the effect of stereotypes of one’s self-identified group and the affect on behavior resulting from culturally self-relevant cues. Stereotype threat has been defined as “the discomfort targets feel when they are at risk of fulfilling a negative stereotype about their group; the apprehension that they could behave in such a way as to confirm the stereotype—in the eyes of others, in their own eyes, or both at the same time” (Aronson, Quinn, & Spencer, 1998, pp. 85-86). Research on stereotype threat has focused on the effect of stereotype activation and cultural saliency on performance. The basic design for studies within this literature typically involves comparing performance by a cultural minority group with the performance of a cultural majority group after they have been primed to think of their cultural status. The findings have consistently shown that activation of one’s self-identity with the target group affects behavior.

Steele and Aronson (1995) conducted the first study of stereotype threat with African American students at Stanford. In their study they divided participants into two groups. Both groups were given a demographics questionnaire prior to completing difficult items from the Graduate Record Examination. In one condition the questionnaire had a question about race whereas the other did not. Those participants with the race question did poorer than those that did not have the question. Additionally, participants with the race question did poorer than White participants, while those without the question did equivalently well as White participants. Thus even simple racial priming was able to trigger an important aspect of participants’ self-concepts.
Stereotype activation affects both cultural minority and cultural majority performance. Stone, Lynch, Sjomeling, and Darley (1999) tested African American and White students on their ability to play miniature golf. In one condition the students were told the game was one of athletic ability and in the other they were told the game was one of strategy. In the condition in which participants were told the activity was a game of athletic ability, African American participants did worse, while when the activity was described as a game of strategy and intelligence, the White participants did worse. The researchers suggested that the pressure on the African American participants was greater during the athletic ability condition due to the stereotype of African Americans being athletically inclined, while the White participants experienced similar stress resulting from the stereotype of Whites being more intelligent. Further evidence that stereotype affects cultural majority members as well comes from Aronson and his colleagues (Aronson, Lustina, & Good, 1999). They tested the math ability of White males and found that when White participants were led to believe that their answers would be compared to Asian participants they performed worse than White males who were not told their results would be compared to Asian males. This shows that the performance of a group can be affected by a stereotype about one’s group relative to another group. Thus, salience of cultural group membership can affect performance quality—regardless of whether the stereotype defines your group as more favorable or less favorable.

With regard to gender, Spencer, Steele, and Quinn (1999) and Walsh, Hickey and Duffy (1999) found that women’s math performance could be affected by making gender salient. In Spenser, Steele, and Quinn’s study women performed more poorly on a math test when told that the problems could detect gender differences. Walsh, Hickey, and Duffy found that the assignment of a particular math problem as gendered affected participant’s performance on that
item. Students who perceived themselves as having lower math ability performed better on problems labeled “female-oriented” and students who perceived themselves as having high math ability did better on problems labeled “male-oriented.” These findings are consistent with Shih, Pittinsky, and Ambady’s (1999) study with Asian American females’ math performance relative to what aspect of the self-concept was primed, gender or ethnicity. In their study participants completed math problems from the Graduate Record Exam following completion of a demographics questionnaire which included a question that subtly primed for either the participant’s race or gender. Here the saliency of the participants’ identity was increased relative to a non-competing identity (one can be both Asian American and female at the same time) such that ethnic identity salience improved performance while gender identity salience worsened performance. Throughout the stereotype literature, techniques such as demographic questions have been able to trigger differences in performances. Hong and her associates (Hong et al., 2000) suggest that the cognitive processes involved in processing stereotypes may engage one’s knowledge structures associated with cultural theories.

Cultural Icons

Within the cultural frame switching literature, cultural icons, rather than stereotypes, are frequently used to prime the saliency of one’s cultural identity. Betsky (1997) has called icons “magnets of meaning,” in that they attract an array of cultural significance. Ortner (1973) explained that icons become icons specifically because of their power to elicit a reaction from those that observe them. Hong and her associates (Hong et al., 2000) proposed that cultural symbols generate a strong self-identification with one’s culture. McGuire and his colleagues (McGuire, McGuire, Child, & Fujioka, 1978) claimed that as one’s cultural affiliation becomes more highlighted within the social context, the person’s cultural identity becomes a more
prominent part of the person’s self-concept. Yang and Bond (1980) suggested that a multicultural setting in itself might be enough to prime one’s cultural identity. Benet-Martinez and her colleagues (Benet-Martinez et al., 2002) claimed that multicultural individuals possess meaning systems for each of their cultures and that these systems get activated by cultural icons.

Hong, Chui, and Kung (1997) found that exposure to Chinese icons such as a Chinese dragon, folk figures, famous people, and landmarks such as the Great Wall influenced Chinese students to more strongly endorse Chinese values. Similarly, Kemmelmeier and Winter (1998) found that exposing Americans to the American flag led them to endorse independence values at an increased level. Hong, Morris, and Benet-Martinez and their colleagues (Morris & Peng, 1994; Hong et al., 2000; Benet-Martinez et al., 2002) have successfully used images of buildings and historical and popular figures to affect bicultural participants’ attributional style.

Language alone has operated as a notable cultural prime for a variety of constructs including values (Bond, 1983; Marin, Triandis, Betancourt, & Kashima, 1983), emotional expression (Matsumoto & Assar, 1992), and self-concept (Tranfimow, Silverman, Fan, & Law, 1997) and may act as a noteworthy cultural icon in itself. The effect cultural salience has on individuals’ behavior is well documented. In all of these studies the participants' behavior was affected by increased salience of cultural status.

A number of researchers have suggested a relationship between a language and the social context in which the language is used (Ervin, 1964; Hardin & Banaji, 1993; Lambert, Havelka, & Crosby, 1958). Matsumoto (1994) has suggested that the language of one’s culture affects the cultural values from which one operates. Saliency about one’s culture, derived from a variety of social contexts, beyond language, appears to also influence behavior in additional ways. Both the language used as well as the social context in which one is functioning may affect the way in
which words are interpreted. Just as the language in which a person is conversing (or thinking) may affect interpretation of the social and physical environment, simple cues in the environment in which a person is can affect cognitive processes and self-concept.

It seems plausible that if people’s behaviors, emotions, thoughts, and self-concepts can be affected by the environment in a laboratory setting, then these same features can be affected by the cultural environment of the workplace. With a workforce that is increasingly culturally conservative and an increasing number of workplaces in which Anglo-American culture does not predominate, workers are likely to be culturally primed to respond in ways that are congruent with their non-American culture. The trait and factor approach needs to adapt to this changing situation in which the environments to which counselors are trying to match clients are becoming more culturally varied.

**Summary and Hypotheses**

This review has examined the way in which the contemporary workplace is becoming more multicultural, how language and cultural context can affect personality expression, and two models of career counseling that are based on personality. The relationship between the influence of cultural context and personality expression, and the subsequent relationship to vocational counseling has also been discussed. This study uses cultural priming to address the appropriateness of using traditional personality-based trait and factor methods in career assessment or the need to modify this approach.

More Americans are choosing to live and work primarily outside of the dominant English language and Anglican culture of this country. Prominent theories of vocational assessment have not addressed the full range of options available today to the multicultural workforce. The impact of language and social and cultural context on one's work personality may be an important factor
in utilizing vocational assessment with bicultural workers in a trait and factor paradigm. Based on the strength of cultural saliency in the presence of even minor cues and the influence of cultural saliency on personality expression, I expected that when bicultural individuals completed a vocational assessment in different contexts—with each making a different cultural identity more salient—the personality expressed in the results would differ across contexts.

Personality can be considered both in terms of absolute and relative stability. The absolute stability of personality, or lack thereof, refers to the mean differences within a group over time or under different circumstances. The relative stability of personality refers to how personality changes for individuals in one group relative to individuals in another group, such that the rank ordering of the individuals would change over time or under different circumstances. Consistency of presentation across time is the variable of most interest, and thus, although sequence will be varied for those assigned to the inconsistent presentations, there are no sequence-specific hypotheses.

As such, the following hypotheses were proposed:

1) There would be a high level of absolute stability of personality expressed by bicultural Latino-Americans primed in either an Anglo-American or Hispanic context and subsequently tested within the same context

2) There would be a low level of absolute stability of personality expressed by bicultural Latino-Americans initially primed in an Anglo-American context and subsequently primed in a Hispanic context, and vice versa

3) There would be less relative stability when cultural priming context is changed across administrations compared to administrations in which cultural context priming does not change
CHAPTER 3
METHODS

Overview

The experimental design consisted of a 2 x 2 mixed model design with a two-level between-subjects factor (consistency and inconsistency of prime) and a two-level within-subjects factor (Time 1 and Time 2). Initially, participants were randomly assigned to one of four priming sequences. In the first sequence, group 1, participants were primed for an Anglo-American cultural identity saliency at both administrations. In the second sequence, group 2, participants were primed for a Latino/a cultural identity saliency at both administrations. In group 3, participants were primed for an Anglo-American cultural identity saliency during the first administration and a Latino/a cultural identity saliency during the second administration. In group 4, participants were primed for a Latino/a cultural identity saliency during the first administration and an Anglo-American cultural identity saliency during the second administration (Figure 3-1). The sequences in which the condition was repeated for both administrations, Anglo-American to Anglo-American and Hispanic to Hispanic, were coded as consistent and the two sequences in which the conditions differed for each administration, Anglo-American to Hispanic and Hispanic to Anglo-American, were coded as inconsistent.

Participants

A total of 97 participants were recruited from a small private Catholic university and a large state university in the southwest. Ten participants completed the first administration but failed to return for the second administration. The final study sample consisted of 71 female (81.61%) and 16 male (18.39%) bicultural, bi-literate Latino/a college students. There was not a significant difference in gender among the four groups, $\chi^2 (3, N = 87) = 0.29$, $p > 0.05$. These participants ranged from 18 to 55 years of age, with a mean age of 20.68 (SD = 4.65). The
women had a mean age of 20.82 years (SD = 5.10) and ranged age from 18-55 years, while the men had a mean age of 20.06 years (SD = 1.53) and range of 18-23 years. Similar to gender, there was not a significant difference in age across the groups, $F(3, 83) = 0.75, p > 0.05$.

Participants represented a variety of majors, of which psychology (40.23%), biology (10.34%), and business (9.20%) were the most frequently represented. An additional 10.34% of the participants designated themselves as undecided. Although participants were spread out across years of school, most were in their first or second year of college: 39.08% in their freshman year, 24.14% in their sophomore year, 18.39% in their junior year, and 10.34% in their senior year. Additionally, three participants (3.45%) were in a masters degree program and four (4.60%) did not indicate year in school (Table 3-1).

All but two participants identified their ethnicity as Hispanic, Latino/a, or Mexican. One participant identified as Lebanese, but identified as having Mexican heritage and listed her nationality as Mexican (consultation with a research assistant from Venezuela whose family emigrated from Trinidad suggested that her cultural identity in the United States would be Latina, while her Lebanese identity would be more salient than her Latina identity within her country of origin, Mexico). The other exception identified her ethnicity as White, but also indicated having Venezuelan heritage and a Venezuelan nationality (again, consultation with my Venezuelan research assistant suggested that she was equating ethnicity with race, which would be a more salient question in her culture of origin). Scores for each of these participants were consistent with other participants. Approximately 60% of the participants identified their Hispanic culture as Mexican (57.47%) or Chicano (3.45%), of which one participant identified as mixed Mexican and Cuban heritage and two indentified as mixed Mexican and Salvadorian
heritage. The remaining participants were spread across a number of Hispanic cultures, each representing less than 10% of the total sample (Table 3-2).

Twenty-one percent of the participants identified as international students, representing Columbia (6.90%), Mexico (4.60%), Venezuela (4.60%), El Salvador (2.30%), Belize (1.15%), and Costa Rica (1.15%). An additional 4.60% indicated a foreign nationality, but did not identify as an international student. Of all of the participants, 90.81% indicated that either they (44.83%) or their parents (45.98%) immigrated to the United States. One participant indicated that her family was residing in the area prior to the land being incorporated into the United States and two participants did not indicate their generation in which their family immigrated. With regard to preferred language, 47.13% indicated a preference for English and 41.38% indicated a preference for Spanish, while 10.34% indicated they were equally comfortable with both languages and 1.15% did not indicate a language preference (Table 3-3).

**Instruments**

**Demographic Questionnaire**

A demographics questionnaire was completed first. Participants reported their gender, age, and racial/ethnic background. The demographic questionnaire was also used in determining the cultural affiliation of participants, nationality, language preference, and generation of family’s immigration. Additionally, the form was used to assess academic statistics, such as major, year in school, and status as an international student (Appendix A).

**Self-Directed Search**

The Self-Directed Search (SDS; Holland et al., 1997) was used to measure participants’ Holland codes. A broad array of occupational and leisure activities are assessed on 228 items using a variety of scales (open-ended responding, forced-choice, and Likert) measuring interests,
aspirations, and competencies. Results yield a ranking of the six Holland types (RIASEC) in a three-letter summary code.

The normative sample for the SDS consisted of 2,602 students and working adults from 25 states and Washington, DC. The sample included both genders and a variety of ethnic groups, though females (61.5%) and Whites (75%) were disproportionately over-represented. The SDS showed strong internal consistency, with KR-20 coefficients ranging from 0.72 to 0.92 for the Activities, Competencies, and Occupations scales and 0.90 to 0.94 for the summary scale. Test-retest reliability analyses were run on 73 individuals, ranging from 4 to 12 weeks and yielded correlations ranging from 0.76 to 0.89 (Holland et al., 1997). The instrument is used primarily to help people make career decisions, but is also used by businesses to improve staffing. Concurrent validity studies showed hit rates ranging from 35.50% (high school females and vocational aspiration) to 60.10% (college females and college major), with an overall hit rate of 54.7% (Holland et al., 1997). The percentage of hit rates represents the percent of the sample for whom the first letter of their code types agreed with the criterion measure. Hit rates for interest inventories with a six-category scheme typically have hit rates in the 40%-55% range (Holland & Rayman, 1986). Cronbach’s alpha for the six general occupational themes on the SDS with current sample ranged from 0.66 to 0.86 (R = 0.70, I = 0.80, A = 0.86, S = 0.67, E =0.82, and C = 0.78) for the first administration, indication acceptable to good reliability for each of the scales. For the second administration Cronbach’s alphas ranged and from 0.52 to 0.85 (R = 0.81, I = 0.85, A = 0.77, S = 0.52, E =0.83, and C = 0.82), indicating acceptable to good reliability for all of the scales, except for Social. Schmitt (1996) has suggested that a low Cronbach’s alpha may still may be useful in interpreting relationships, but that one needs to use additional caution in doing so.
NEO PI-R

The NEO PI-R (Costa & McCrae, 1992a) Form S was used to measure participant’s five factors of personality. A broad array of personality traits is assessed by responding to 240 self-statements using a 5-point Likert scale. Item responses are anchored by “strongly disagree” and “strongly agree.” Results are reported for the five global scales (Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness). The five global scales each consist of six facet scales, which are scored independently. The global factors will be the focus of this study.

Normative data for the NEO PI-R were drawn from a sub-sample of 2,273 individuals drawn from a variety of settings and consisted of 500 men and 500 women (Costa, & McCrae, 1992a). The racial make-up of the normative sample very closely matches the 1995 U.S. Census population estimates, however does not consider ethnicity separate from race, so there are no data on Hispanics. Internal consistency analyses of the domain scales yielded coefficient alphas ranging from 0.86 to 0.95 (Costa & McCrae, 1992a). Stability over three-to-six years has been impressive with the NEO PI-R scores, with correlations ranging from 0.63 to 0.83 for the five dimensions (Costa & McCrae, 1988; Costa & McCrae, 1992b). The five global factors on the NEO PI-R with current sample had Cronbach’s alpha ranging from 0.75 to 0.85 (N = 0.83, E = 0.84, O = 0.80, A = 0.75, and C = 0.85) for the first administration and from 0.60 to 0.83 (N = 0.83, E = 0.75, O = 0.82, A = 0.60, and C = 0.83) for the second administration indicating acceptable to good reliability for each of the scales for both administrations. The instrument is used to assist in employment selection, management development, outplacement, team building and development, as well as career counseling, and research. A number of studies have shown a relationship between the facet scales and the factor scales and other predictors of career choice.
and success (e.g., Costa et al., 1984; McCrae & Costa, 1989; Seibert & Kraimer, 2001; see also Walsh & Eggerth, 2005).

**Manipulation Check**

The manipulation check consisted of Likert-type three questions embedded in the demographics questionnaire. The questions inquired as to how oriented toward one culture or another the participants were following the priming exercise. The question “Please indicate on the scale below what best fits how you see yourself right now” was anchored with “American” and “Latino/a.” The questions “Please indicate on the scale below how strongly you identify with your Latino/a Culture right now,” and “Please indicate on the scale below how strongly you identify with your American Culture right now” were anchored by or “Greatly” and “Little” (Appendix A).

**Procedures**

I secured Institutional Review Board approval from the two universities at which data were collected and the university at which I was enrolled (Appendix B). The final sample was collected in three rounds of data collection that were completed at an urban, southwestern, small, private Catholic university and at an urban, southwestern, large state university. Because of the complexity of the study design and selectivity of the sample (bilingual, biliterate, Hispanic), two years of data collection were necessary to complete the study.

**Recruitment**

The research was presented as a study of new ways to do career assessment with Latinos and Latinas. Students were told that I was researching ways that counselors can improve counseling and assessment with bicultural college students and I am looking for Latinos and Latinas who can speak and read both Spanish and English. They were informed that the research
would consist of 2 sessions, which each lasting up to 2 hours. They were told they would be asked to perform a simple task of self-expression, designed so that anyone can perform it, and to complete a number of personality questionnaires. I explained that there would be food and music, so the assessment should be fun. They were informed that they you may either receive extra credit in the appropriate course or $25 for their complete participation. Finally, they were offered the opportunity to sign-up for data collection times and an opportunity to ask questions.

Students from the small Catholic university were recruited through two routes. They were either recruited through in-person requests made in their psychology courses or through flyers posted around campus and at tables set up in the student center and a heavily trafficked outdoor area. Students were offered either extra credit in their psychology course or $25 for their participation.

Students at the large state university were also recruited through General Psychology classes, as well as Family Development classes through a joint subject pool. Additionally, participants were recruited through flyers posted around campus and tables in the student center. Flyers were also posted at a satellite campus of the large state university. Recruitment was also conducted through e-mails to Hispanic student organization at both the main campus and the satellite campus. Subjects recruited through the subject pool were either offered credit toward completion of course requirements (General Psychology) or extra credit toward their course (Family Development). Participants recruited through flyers, e-mails, and at the student center were offered $25 as compensation. Across both universities, the number of participants choosing to receive credit toward their course (46) was similar to the number of students who chose to receive the monetary compensation (41).
Administration

Administration sequence. Each condition consisted of two administrations, approximately 14 days apart. At the beginning of the first administration participants entered the room and signed in, completed an informed consent form, and were assigned a code (Appendix B). They were informed that the study was attempting to examine alternative ways of doing career assessment with bicultural students and directed to engage in the priming activities. Following completion of the priming activities, participants were given packets containing the demographic form and assessment instruments. Within the packet, the demographics form was on top, followed by the NEO PI-R and the SDS, in alternating order. Following completion of the instruments, participants were reminded that they were to return in two weeks and dismissed.

Participants received a blind CC reminder e-mail the evening before they were to return for the second round of data collection (Appendix C). Upon arriving at the second administration, participants were given an assessment packet based on the code assigned to them at the previous administration so that no names were associated with the data. At the end of the second round of data collection participants were given a debriefing form explaining the intended purpose of the study and asking them not to discuss the research with others.

Priming. Priming of the data collection administrations was completed in a number of ways. Administrations were conducted in either English or Spanish and all forms (informed consent and demographics) and standardized instruments were in the matching language. Culturally appropriate music was played throughout each administration. In the Anglo-American context “Now that’s What I Call Music 27” was played, while in the Hispanic context “Now Esto Es Música Latino 3” was played.
Data were collected in classrooms which had been decorated with 8½ x 11 and 11 x 17 images of cultural icons relevant to each culture posted around the room prior to the participants entering. Images for the Anglo-American context included the Washington Monument, the Golden Gate Bridge, the Statue of Liberty, Mount Rushmore, a print of Grant Wood’s *American Gothic*, a print of John Trumbull’s *Signing of the Declaration of Independence*, a copy of the U.S. Constitution, a copy of the Declaration of the Independence, and a map of the United States. The images for the Hispanic context included Mayan pyramids, Fort San Juan, a large colonial church in Mexico City, the capital building in Lima, Peru, a picture of a street market in Peru, a picture of a fruit stand in Mexico, a picture of Guatemalan children in traditional clothing, a print of Frida Kahlo’s *Self-portrait with Monkeys*, a print of Fernando Botero’s *Monsignor*, and a map of Latin America. These images were chosen based on discussions with research assistants of Mexican, Columbian, and Venezuelan heritage.

The primary priming task in which participants engaged was the construction of a collage. In the Anglo-American context the participants were directed to construct a collage along the theme of “My American Experience” or “My American Dream.” In the Hispanic context the participants were directed to construct a collage along the theme of “My Latino/a Experience” or “My Latino/a Heritage.” Participants were offered construction paper, markers, glue sticks, and scissors, along with a selection of magazines for each administration. In the Anglo-American context the magazines available included various issues of: *GQ, InStyle, Men’s Health, People, Cosmopolitan, Sports Illustrated, Details, Maxim, Vogue, Newsweek*, and *Interview*. In the Hispanic context the magazines available included various issues of: *GQ España, Estylo, Men’s Health En Espanol, People En Espanol, Latina, ESPN En Espanol, Gatopardo, Maxim En Espanol, Vogue Latino America, Newsweek En Espanol*, and *Semana*. 
While working on the collages participants were encouraged to partake of culturally appropriate food and beverages. In the Anglo-American conditions the food consisted either of pizza, potato chips, and Coca-Cola® products for lunch-time and evening administrations or bagels and juice for morning administrations. In the Hispanic administrations the food consisted of tamales, corn chips, and Latin American sodas for the lunch-time and evening sessions and sweetbreads and milk for the morning sessions. Administrators observed that all participants at least drank the beverages and most ate some of the food in both conditions.

Participants sat around either a large conference table or a collection of desks that were drawn together in the center of the room. Food was placed at one end of the table and collage materials were laid out in the center. Participants were spaced around the table such that they had plenty of area to work, yet were in speaking distance of each other.

Participants were additionally encouraged to interact with each other in the culturally appropriate language. Administrators were directed to engage participants in conversations about popular cultural figures when the participants did not engage in conversations on their own. Administrators were also directed to encourage people to converse in the appropriate language (though they reported that none of the participants appeared to stray from the intended language of each administration). In order for the priming effect of the conversation to be equivalent across situations, data sessions consisted of between four and eight people.

Participants were encouraged to complete the collages in approximately 30 minutes, but the food and music continued to be available throughout the administration. A total of 120 minutes were available to complete each administration, but participants typically completed the study in approximately 90 minutes.
Table 3-1. Frequency and percentages of major and education level

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Table 3-2. Frequency and percentages of ethnicity and cultural heritage

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Table 3-3. Frequency and percentages international student status, generation in which family immigrated, and language preference

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Figure 3-1. Administration sequences

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<th>Group Anglo-Latino/a Inconsistent</th>
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CHAPTER 4
RESULTS

Preliminary Analyses

Means and standard deviations on the Self-Directed Search (SDS) in relation to gender for the current sample at Time 1 and the Hispanic norm group are provided in Table 4-1. Holland and his associates (Holland et al., 1997) found equivalency among ethnic groups on the SDS, but noted significant differences between genders for each ethnic group with regard to the General Occupational Themes (GOT). In comparison to the normative sample, some of the gender differences persisted in the current sample, while others seemed to disappear.

Both the current sample \( t = 5.22, p < 0.001, d = 1.44 \) and the normative Hispanic sample \( t = 7.55, p < 0.001, d = 1.17 \) exhibited a significant difference with regard to gender on the R scale. There was not a significant difference between either the women in the current sample and the normative Hispanic sample \( t = 0.48, p > 0.05 \) or the men in the current sample and normative Hispanic sample \( t = 0.81, p > 0.05 \).

For the I scale score, although there was a significant gender difference within the normative sample between Hispanic men and women, there was no such significant difference within the study sample \( t = 0.85, p > 0.05 \). This can be explained by the difference between the women’s scores in the current sample, which were significantly higher, and the women in the normative Hispanic sample \( t = 3.55, p < 0.01, d = 0.54 \), while the men in the current sample’s scores were not significantly different than normative Hispanic sample \( t = 0.61, p > 0.05 \), bringing the women’s score more in line with the men’s scores.

There was not a significant difference in the current sample \( t = 0.54, p > 0.05 \) with regard to gender on the A scale, similar to the normative Hispanic sample, which also did not have a significant difference \( t = 0.34, p > 0.05 \). Both the women \( t = 4.43, p < 0.001 \) and the
men (t = 2.23, p < 0.05) in the current study had significantly higher Artistic interest scores than the normative Hispanic sample. The women (d = 0.67) and the men (d = 0.61) had similar differences in their A scale scores, which allowed for the maintenance of the similarity of scores across gender, even though both genders’ scores were significantly different from the normative Hispanic sample.

The scores on the S scale were significantly higher for both the men (t = 3.37, p < 0.01) and the women (t = 2.46, p < 0.01) in the current study than the men and women in the normative Hispanic sample. However, the change in the men’s score (d = 0.99) was more than twice as large as the difference in the women’s score (d = 0.38). Consequently, the difference between the genders with regard to social interests present in the normative Hispanic sample disappeared in the current sample.

For the E scale, the significant difference found in the Hispanic normative sample (t = 2.38, p < 0.01) was also evidenced in the study sample (t = 2.93, p < 0.01). There was not a significant difference between the women (t = 1.04, p > 0.05) in the current sample and the normative Hispanic group. However, the men in the current sample demonstrated a significantly higher level of Enterprising interests (t = 2.24, p < 0.05, d = 0.61) than the men in the normative Hispanic sample. Consequently, the difference between the genders within the study sample (d = 0.80) was over twice the difference between the genders found within the normative sample (d = 0.38).

In the normative Hispanic sample, men were significantly lower than women on the C scale, while in the current sample the men were not significantly different than the women (t = 1.69, p > 0.05). The women in the current sample were significantly lower (t = 2.24, p < 0.05, d = 0.34) in Conventional interests than the normative Hispanic sample, while the men were
significantly higher \((t = 2.47, \ p < 0.05, \ d = 0.72)\) in Conventional interests, bringing both genders closer to each to other on average than in the normative Hispanic sample.

Means and standard deviations on the NEO PI-R in relation to gender for the current sample and the college-age norm group are provided in Table 4-2. A number of notable differences were found between the current study and the normative sample with regard to the NEO PI-R. Costa and McCrae (1992a) found that the factor structure was consistent across ethnic groups, but did not provide means and standard deviations by ethnic group, so any comparison with the normative sample must be made to their overall college-age sample. They did find differences in gender for four of the five global scales, with the C scale demonstrating no significant difference with regard to gender. In the current study the exact opposite with regard to gender differences was found, such that the only scale that demonstrated a significant difference across genders was the C scale \((t = 2.51, \ p < 0.05, \ d = 0.75)\). That the current sample does not differ in gender as the normative college age sample did is surprising because the scale scores for the men in the current sample did not differ significantly from the scores of the men in the normative sample on any of the five scales, while the scale scores of the women in the current sample differed from the scores of the women in the normative sample only on the N scale \((t = 3.87, \ p < 0.01, \ d = 0.52)\), with the women in the current sample being notably lower in Neuroticism.

The current sample overall differs from the college-age normative sample on three of the five scales. The current sample had scores that were significantly lower than the normative sample on the N scale \((t = 2.37, \ p < 0.05, \ d = 0.29)\). Conversely, they had scores that were significantly higher than the college-age normative sample on the O \((t = 2.33, \ p < 0.05, \ d = 0.\)
26) and A (t = 2.33, p < 0.05, d = 0.28) scales. The current sample’s scores did not significantly differ from the normative sample on the E (t = 2.37, p > 0.05) and C (t = 0.80, p > 0.05) scales.

**Group Equivalency**

A series of chi-square analyses were conducted in order to determine the equivalency of the consistent and inconsistent groups. In order to determine group equivalency with regard to acculturation, both language preference and the generation in which participants’ families immigrated to the United States were assessed. There was no significant difference in language preference across the two groups, \( \chi^2 (2, N = 86) = 0.30, p > 0.05 \) (Table 4-3). Likewise, the groups were found to be equivalent with regard to familial immigration, \( \chi^2 (4, N = 85) = 6.36, p > 0.05 \). Similarly, a chi-square was conducted to determine if there was a significant difference in gender between the consistent and inconsistent condition groups and they were found to be statistically equivalent, \( \chi^2 (1, N = 87) = 0.04, p > 0.05 \). Additionally, these groups were found to be equivalent with regard to age, \( \chi^2 (9, N = 87) = 12.73, p > 0.05 \).

**Manipulation Check**

A manipulation check was used to assess the effectiveness of the priming. Three questions were asked to determine how strongly each participant felt affiliated with the Latino/a or American cultures during each administration. Results for two of the three questions showed a significant difference in cultural identity at Time 1 between groups primed to have a stronger Anglo-American identity and primed to have a stronger Hispanic identity.

A MANOVA was conducted of cultural identification and priming context and those participants primed to have an Anglo-American identity at Time 1 were found to have expressed a stronger American cultural identification than participants primed to have a Hispanic identity, \( F(1, 85) = 10.91, p < 0.001 \). Similarly, participants primed to have an Anglo-American identity
at Time 1 expressed a more American cultural identification than a Hispanic cultural identification, $F(1, 85) = 8.75, p < 0.05$. However, there did not appear to be a significant difference in Latino cultural identification between participants primed for a Latino identity and an Anglo-American identity, $F(1,85) = 0.002, p > 0.05$ at Time 1. A second MANOVA was conducted to determine if the language with which the participant was most comfortable might explain differences in cultural identification at Time 1 and the effect of language was not significant for any of the three questions inquiring about cultural identification: Identity in the moment, $F(1, 84) = 0.70, p > 0.05$; identification with Latin culture, $F(1, 84) = 1.20, p > 0.05$; and identification with American culture, $F(1, 84) = 1.94, p > 0.05$.

Of particular interest was whether there was a significant difference in the degree and direction of cultural affiliation for participants between administrations in the inconsistent groups relative to the consistent groups. A MANOVA was conducted to determine if there was a significant change in cultural affiliation across time. There was no significant interaction effect (Wilks’ $\lambda = 0.974, p > 0.05$) across time by condition. There was small main effect across time (Wilks’ $\lambda = 0.871, p < 0.01$). In a follow-up univariate analysis, only identification with American culture in the moment was significant, $F(3, 82) = 0.735, p < 0.05$, across time for all conditions. However, even this increase accounted for only a small portion of the overall variance ($\eta^2 = 0.13$; Table 4-4). Overall, these results suggest that the manipulation was more effective generating a stronger American cultural identification when primed to think of oneself as American than a Hispanic cultural identification when primed to think of oneself as Latino/a.

In order to assess possible effect of the initial priming upon the groups at Time 1, separate MANOVAs were conducted for the SDS and the NEO PI-R for the groups in the Anglo-American priming context relative to the Hispanic priming context. No significant differences
were found on the five GOT on the SDS (Wilks’ $\lambda = 1.06$, $p > 0.05$). However, for the NEO PI-R, there appeared to be a significant difference between the priming contexts (Wilks’ $\lambda = 0.703$, $p < 0.001$). Follow up univariate analyses showed that Agreeableness was significantly different between the Anglo-American priming context and the Hispanic priming context, $F(1, 85) = 27.45$, $p < 0.001$, such that participants in the Anglo-American context demonstrated a higher level of Agreeableness than the groups initially primed in a Hispanic context.

**Hypothesis Testing**

**Hypotheses One and Two**

Hypothesis One was that there would be a high level of absolute stability in personality expression for participants primed repeatedly in either an Anglo-American or a Hispanic context across two administrations. Hypothesis Two was that there would be a low level of absolute stability in personality expression for the participants initially primed in an Anglo-American context and subsequently primed in a Hispanic context or initially primed in a Hispanic context and subsequently primed in an Anglo-American context. In order to test these hypotheses, separate repeated-measures MANOVAs were conducted on the results from the SDS and the NEO PI-R. In these analyses, context of the administration at Time 1 (American or Latino/a) and at Time 2 (American or Latino/a) was the between subjects factor and time (Time 1, Time 2) was the within subjects factor. When significant multivariate effects were detected, the repeated measures ANOVAs were explored for each dependent variable.

**SDS.** On the SDS there was a statistically significant three-way interaction between cultural context and time, $F(6, 18) = 2.58$, $p < 0.001$. See Table 4-5 for SDS means and standard deviations between the groups. Univariate analyses were explored and significant differences were found for the GOT of Investigative interests, $F(3,83) = 3.99$, $p < 0.01$, and Social interests,
In order to confirm that the difference between the four groups was between the consistent and the inconsistent groups, independent ANOVAs were conducted for these variables. The absence of significant differences in tests of R, A, E, and C scales supported their absolute stability across the experimental conditions.

The consistent-inconsistent comparison for the I scale was not significant, $F(1,85) = 0.06$, $p > 0.05$. This was unexpected given the results of the four-group comparison. There did not appear to be a distinct pattern of change among the four groups with regard to Investigative interests, but each group changed a small, approximately equal amount. The consistent Anglo-American group increased in Investigative interests across time, while the consistent Hispanic group decreased across time. Similarly among the inconsistent groups, the Hispanic to Anglo-American group increased in Investigative interests across time, while the Anglo-American to Hispanic group decreased across time. When the consistent pair and inconsistent pair were each combined they seem to have balanced each other out, cancelling the apparent effect. In both of the inconsistent groups the scores were higher in the Anglo-American context. The changes for the inconsistent groups were also slightly larger than the consistent groups, but not significantly so (Figure 4-1).

On the S scale, the consistent-inconsistent comparison remained significant, $F(1,85) = 10.743$, $p < 0.01$. For both pairs, the scores decreased across time, but the scores for the inconsistent groups decreased more, with the raw scores of the inconsistent groups dropping more than twice as much as for the consistent groups (Figure 4-2).

Hypothesis One (absolute stability with consistent priming) with regard to the SDS, was largely supported. However, Hypothesis Two (low absolute stability for inconsistent priming) was supported only for the GOT, Social. Consequently, all groups appear to have been largely,
though not wholly, stable across time, and that personality, as measured by five of the six aspects of the SDS, does not significantly vary as a function of context. The S scale was the only measure for which cultural context had an effect on the participants’ self-concept with regard to career variables.

NEO PI-R. There was a significant difference with regard to the NEO PI-R on the four group MANOVA, $F(5, 79) = 8.57, p < 0.001$. See Table 4-6 for NEO PI-R means and standard deviations between the groups. Univariate analyses were explored and significant differences were found for three of the five factors of the NEO PI-R. Neither the E or O scales demonstrated a significant difference among the four groups, and therefore supported their absolute stability.

There was a significant difference between the four groups between Time 1 and Time 2 for the N scale, $F(1, 83) = 7.88, p < 0.01$. That this difference was between the groups which primed in the Anglo-American condition at both administrations or the Hispanic condition at both administrations and the groups primed differently across the administrations was confirmed by the consistent-inconsistent ANOVA, $F(1,85) = 5.77, p < 0.05$. There did not appear to be a distinct trend in the direction in which participants’ personality changed across time for Neuroticism and cultural context. In the inconsistently primed groups the level of Neuroticism overall decreased across time. The level of Neuroticism changed in the two consistently primed groups as well, but in opposite directions. These changes appeared to effectively balance each other out (Figure 4-3).

On the A scale a significant difference among the four groups was also found, $F(1, 83) = 6.55, p < 0.05$. Again a consistent-inconsistent ANOVA was conducted to confirm that this difference was due to differences between the two groups with the repeated priming condition and the alternating priming condition, $F(1,85) = 5.98, p < 0.05$. In the two groups with the
differing cultural contexts, there was approximately a one-point raw score decrease in Agreeableness for the Anglo-American to Hispanic context and a seven-point increase in Agreeableness for the Hispanic to Anglo-American context, suggesting the possibility that the Anglo-American context promotes more Agreeableness. This is consistent with there being a higher level of expressed Agreeableness in the Anglo-American primed conditions than the Hispanic primed condition for all participants at Time 1. With regard to the two groups with the similar priming, in the Anglo-American to Anglo-American group the Agreeableness scores decreased slightly across time, while the A scale scores increased slightly across time for the Hispanic to Hispanic group (Figure 4-4).

The C scale scores also exhibited a significant difference between the four groups at Time 1 and Time 2, $F(1, 83) = 38.83, p < 0.001$. Again, the consistent-inconsistent ANOVA, $F(1,85) = 32.20, p < 0.001$, confirmed that this difference was due to change in the priming condition. For both of the consistent conditions the C scale score decreased across time. For the inconsistent conditions there was a small decrease for the Anglo-American to Hispanic condition and a larger increase for the Hispanic to Anglo-American condition (Figure 4-5).

Therefore, with regard to the NEO PI-R, Hypotheses One and Two are both partially supported. Hypothesis One is supported with regard to Extraversion and Openness, but not with regard to Neuroticism, Agreeableness, and Conscientiousness. Conversely, Hypothesis Two is supported with regard to Neuroticism, Agreeableness, and Conscientiousness, but not Extraversion and Openness. Consequently, the personality factors of Extraversion and Openness appear to have been generally stable across time for all groups and that these personality variables do not vary as a function of context. However, the personality factors of Neuroticism, Agreeableness, and Conscientiousness appear to be sensitive to cultural context.
Hypothesis Three

Hypothesis Three predicted that there would be less relative stability in personality expression for participants when cultural priming context was inconsistent across administrations than for participants in which the cultural context priming was consistent across administrations. Test-retest correlations were conducted for the six Global Occupational Themes of the SDS and the five factors of the NEO PI-R. See Table 4-7 for the test-retest correlations for the four conditions.

The hypothesis did not address the individual sequences of the administrations. In other words, no predictions were made with regard any effect associated with the order in which participants completed the instruments (i.e., Hispanic first and then Anglo-American or Anglo-American first and then Hispanic). Therefore the two sequences in which the prime differed between the first administration and the second administration were combined into a single group labeled “inconsistent.” Likewise, no predictions were made with regard to the effect of being primed for a Latino/a identity during both administrations or being primed in American during both administrations. In other words, no hypotheses were concerned with what effect being primed both times under same condition (i.e., Hispanic first and then Hispanic again or Anglo-American first and then Anglo-American again). Consequently, the two sequences in which the prime was the same for the first administration as for the second administration were combined into a single group labeled “consistent.” Thus correlations were conducted for the 11 outcome measures with regard to consistent or inconsistent condition. A Fisher’s z transformation was used to compare the correlations across groups. A Bonferroni corrected alpha level of 0.008 was used for the SDS and of 0.01 for the NEO PI-R (Table 4-8).
**SDS.** Comparison of the test-retest correlations of the six Global Occupational Themes of the SDS produced a significant difference between participants in groups with the same cultural context for both administrations and participants with differing cultural contexts for the administrations of the SDS for one GOT, the E scale (Fishers z = 2.814, p < 0.008). The consistently primed groups had a stronger correlation (0.938) than the inconsistently primed groups (0.799) with regard to Enterprising interests. In general, four of the six GOT had weaker correlations for the inconsistently primed groups, but only for Enterprising did the difference achieve statistical significance. The differences between the groups’ correlations overall were small, with differences ranging from 0.003 to 0.152. Thus, with regard to the SDS, the third hypothesis regarding relative stability between groups was supported only by Enterprising and not supported by the five other factors.

**NEO PI-R.** Comparison of the test-retest correlations of the five factors of the NEO PI-R produced a significant difference between the consistently primed groups and the inconsistently primed groups for two factors. Contrary to what was predicted, the consistent groups had a weaker correlation (0.748) than the inconsistent group (0.959; p < 0.001) for the N scale. On the O scale, there was also a significant difference, in the direction predicted, such that the consistent groups had a stronger test-retest correlation (0.959) than the inconsistent groups (0.852; p < 0.001). For all of the factors other than Neuroticism, the inconsistent group had weaker correlations, but only for Openness did the difference achieve statistical significance. Again, there was not a great difference between the groups’ correlations, with differences ranging from 0.013 to 0.211. Thus, with regard to the NEO PI-R, the third hypothesis regarding relative stability between groups was only partially supported by Openness and not supported by the four other factors.
Table 4-1. SDS means and standard deviations by gender at time 1

<table>
<thead>
<tr>
<th>SDS General Occupational Themes</th>
<th>R</th>
<th>I</th>
<th>A</th>
<th>S</th>
<th>E</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female (n = 71)</td>
<td>M 14.55</td>
<td>25.55</td>
<td>26.92</td>
<td>35.32</td>
<td>25.45</td>
<td>21.58</td>
</tr>
<tr>
<td>SD 7.00</td>
<td>10.13</td>
<td>9.64</td>
<td>7.34</td>
<td>10.22</td>
<td>11.06</td>
<td></td>
</tr>
<tr>
<td>Male (n = 16)</td>
<td>M 24.69</td>
<td>23.19</td>
<td>28.44</td>
<td>34.06</td>
<td>33.81</td>
<td>26.56</td>
</tr>
<tr>
<td>SD 7.11</td>
<td>9.40</td>
<td>12.48</td>
<td>8.48</td>
<td>10.66</td>
<td>8.52</td>
<td></td>
</tr>
<tr>
<td>Combined (n = 87)</td>
<td>M 16.41</td>
<td>25.11</td>
<td>27.20</td>
<td>35.09</td>
<td>26.99</td>
<td>22.49</td>
</tr>
<tr>
<td>SD 9.99</td>
<td>10.16</td>
<td>7.53</td>
<td>10.74</td>
<td>10.77</td>
<td>0.77</td>
<td></td>
</tr>
<tr>
<td>Norm Hispanic female (n = 113)</td>
<td>M 15.17</td>
<td>19.99</td>
<td>20.52</td>
<td>32.11</td>
<td>23.87</td>
<td>25.44</td>
</tr>
<tr>
<td>SD 9.27</td>
<td>10.46</td>
<td>9.48</td>
<td>9.30</td>
<td>9.98</td>
<td>11.54</td>
<td></td>
</tr>
<tr>
<td>Norm Hispanic male (n = 60)</td>
<td>M 26.98</td>
<td>25.13</td>
<td>21.08</td>
<td>24.83</td>
<td>27.62</td>
<td>19.93</td>
</tr>
<tr>
<td>SD 10.70</td>
<td>11.75</td>
<td>11.54</td>
<td>10.01</td>
<td>9.60</td>
<td>9.77</td>
<td></td>
</tr>
</tbody>
</table>

Table 4-2. NEO PI-R means and standard deviations by gender at time 1

<table>
<thead>
<tr>
<th>NEO PI-R Global Scales</th>
<th>N</th>
<th>E</th>
<th>O</th>
<th>A</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female (n = 71)</td>
<td>M 88.85</td>
<td>123.96</td>
<td>122.07</td>
<td>118.70</td>
<td>120.04</td>
</tr>
<tr>
<td>SD 21.21</td>
<td>17.70</td>
<td>21.48</td>
<td>15.10</td>
<td>21.05</td>
<td></td>
</tr>
<tr>
<td>Male (n = 16)</td>
<td>M 96.25</td>
<td>118.25</td>
<td>120.88</td>
<td>114.94</td>
<td>106.00</td>
</tr>
<tr>
<td>SD 17.95</td>
<td>17.85</td>
<td>14.92</td>
<td>15.68</td>
<td>15.72</td>
<td></td>
</tr>
<tr>
<td>Combined (n = 87)</td>
<td>M 90.21</td>
<td>122.91</td>
<td>121.85</td>
<td>118.01</td>
<td>117.46</td>
</tr>
<tr>
<td>SD 20.75</td>
<td>17.50</td>
<td>20.36</td>
<td>15.19</td>
<td>20.83</td>
<td></td>
</tr>
<tr>
<td>Norm college-age female (n = 241)</td>
<td>M 99.8</td>
<td>123.9</td>
<td>118.6</td>
<td>117.2</td>
<td>115.1</td>
</tr>
<tr>
<td>SD 20.9</td>
<td>17.7</td>
<td>17.1</td>
<td>15.7</td>
<td>20.6</td>
<td></td>
</tr>
<tr>
<td>Norm college-age male (n = 148)</td>
<td>M 90.5</td>
<td>116.7</td>
<td>113.9</td>
<td>107.4</td>
<td>113.5</td>
</tr>
<tr>
<td>SD 22.1</td>
<td>18.3</td>
<td>18.5</td>
<td>16.2</td>
<td>22.0</td>
<td></td>
</tr>
<tr>
<td>Combined (n = 389)</td>
<td>M 96.3</td>
<td>121.2</td>
<td>116.8</td>
<td>113.5</td>
<td>114.0</td>
</tr>
<tr>
<td>SD 21.9</td>
<td>18.2</td>
<td>17.8</td>
<td>16.6</td>
<td>21.1</td>
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</table>
Table 4-3. Levels of acculturation by condition

<table>
<thead>
<tr>
<th>Primary language preference</th>
<th>Consistent</th>
<th>Inconsistent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>23</td>
<td>18</td>
<td>47</td>
</tr>
<tr>
<td>Spanish</td>
<td>18</td>
<td>18</td>
<td>36</td>
</tr>
<tr>
<td>Both</td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Not indicated</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>40</td>
<td>87</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Generation in America*</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>Pre-4th</th>
<th>Not indicated</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistent</td>
<td>18</td>
<td>22</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>47</td>
</tr>
<tr>
<td>Inconsistent</td>
<td>21</td>
<td>18</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>39</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>87</td>
</tr>
</tbody>
</table>

*Note: 1st generation indicates that person immigrated to the United States, whereas 2nd generation indicates that the person was born in the United States and that her or his parents immigrated to United States and so forth. Pre-4th indicates that the person’s family was residing on land before it became incorporated into the United States.

Table 4-4. Manipulation check means and standard deviations by condition

<table>
<thead>
<tr>
<th>Cultural identification in the moment</th>
<th>Time 1</th>
<th>Time 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dominant*</td>
<td>Latin</td>
</tr>
<tr>
<td>Consistent</td>
<td>M 4.74</td>
<td>5.38</td>
</tr>
<tr>
<td></td>
<td>SD 1.45</td>
<td>1.17</td>
</tr>
<tr>
<td>Inconsistent</td>
<td>M 4.73</td>
<td>5.57</td>
</tr>
<tr>
<td></td>
<td>SD 1.53</td>
<td>1.21</td>
</tr>
</tbody>
</table>

*Note: Dominant culture is an indication of whether a participant feels a strong Latino/a identification (7) or a strong American identification (1)
### Table 4-5. SDS means and standard deviations by priming context

<table>
<thead>
<tr>
<th>SDS General Occupational Themes</th>
<th>R</th>
<th>I</th>
<th>A</th>
<th>S</th>
<th>E</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td><strong>Time 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anglo</td>
<td>14.08</td>
<td>8.20</td>
<td>26.25</td>
<td>8.98</td>
<td>24.33</td>
<td>10.21</td>
</tr>
<tr>
<td>Hispanic</td>
<td>16.52</td>
<td>7.68</td>
<td>22.65</td>
<td>11.76</td>
<td>27.00</td>
<td>11.49</td>
</tr>
<tr>
<td>Hispanic Anglo</td>
<td>21.43</td>
<td>8.08</td>
<td>30.19</td>
<td>9.42</td>
<td>29.05</td>
<td>8.84</td>
</tr>
<tr>
<td><strong>Time 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>14.43</td>
<td>7.31</td>
<td>20.09</td>
<td>10.63</td>
<td>25.70</td>
<td>11.41</td>
</tr>
<tr>
<td>Hispanic Anglo</td>
<td>2281</td>
<td>11.07</td>
<td>31.81</td>
<td>11.26</td>
<td>31.33</td>
<td>8.70</td>
</tr>
</tbody>
</table>

### Table 4-6. NEO PI-R means and standard deviations by condition

<table>
<thead>
<tr>
<th>SDS General Occupational Themes</th>
<th>N</th>
<th>E</th>
<th>O</th>
<th>A</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td><strong>Time 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anglo</td>
<td>96.92</td>
<td>11.95</td>
<td>124.04</td>
<td>20.35</td>
<td>120.21</td>
</tr>
<tr>
<td>Hispanic</td>
<td>75.48</td>
<td>29.27</td>
<td>125.39</td>
<td>10.96</td>
<td>121.09</td>
</tr>
<tr>
<td>Hispanic Anglo</td>
<td>88.90</td>
<td>15.43</td>
<td>125.10</td>
<td>22.70</td>
<td>126.90</td>
</tr>
<tr>
<td>Hispanic</td>
<td>101.00</td>
<td>10.07</td>
<td>116.05</td>
<td>12.21</td>
<td>119.26</td>
</tr>
<tr>
<td><strong>Time 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anglo</td>
<td>92.96</td>
<td>12.90</td>
<td>124.92</td>
<td>17.96</td>
<td>122.00</td>
</tr>
<tr>
<td>Hispanic</td>
<td>70.30</td>
<td>27.75</td>
<td>126.48</td>
<td>12.10</td>
<td>117.65</td>
</tr>
<tr>
<td>Hispanic Anglo</td>
<td>85.14</td>
<td>16.74</td>
<td>129.86</td>
<td>17.63</td>
<td>131.81</td>
</tr>
<tr>
<td>Hispanic</td>
<td>105.05</td>
<td>10.25</td>
<td>116.32</td>
<td>10.43</td>
<td>119.79</td>
</tr>
</tbody>
</table>
Table 4-7. Test-retest Correlations for the SDS and NEO PI-R across groups

<table>
<thead>
<tr>
<th>Groups</th>
<th>Anglo-Anglo</th>
<th>Hispanic-Hispanic</th>
<th>Anglo-Hispanic</th>
<th>Hispanic-Anglo</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDS R</td>
<td>0.947</td>
<td>0.794</td>
<td>0.863</td>
<td>0.814</td>
</tr>
<tr>
<td>SDS I</td>
<td>0.891</td>
<td>0.912</td>
<td>0.895</td>
<td>0.918</td>
</tr>
<tr>
<td>SDS A</td>
<td>0.865</td>
<td>0.896</td>
<td>0.765</td>
<td>0.703</td>
</tr>
<tr>
<td>SDS S</td>
<td>0.660</td>
<td>0.793</td>
<td>0.871</td>
<td>0.861</td>
</tr>
<tr>
<td>SDS E</td>
<td>0.932</td>
<td>0.947</td>
<td>0.744</td>
<td>0.823</td>
</tr>
<tr>
<td>SDS C</td>
<td>0.850</td>
<td>0.958</td>
<td>0.925</td>
<td>0.785</td>
</tr>
<tr>
<td>NEO PI-R N</td>
<td>0.844</td>
<td>0.604</td>
<td>0.961</td>
<td>0.946</td>
</tr>
<tr>
<td>NEO PI-R E</td>
<td>0.917</td>
<td>0.655</td>
<td>0.628</td>
<td>0.839</td>
</tr>
<tr>
<td>NEO PI-R O</td>
<td>0.969</td>
<td>0.963</td>
<td>0.896</td>
<td>0.805</td>
</tr>
<tr>
<td>NEO PI-R A</td>
<td>0.723</td>
<td>0.926</td>
<td>0.808</td>
<td>0.686</td>
</tr>
<tr>
<td>NEO PI-R C</td>
<td>0.831</td>
<td>0.977</td>
<td>0.985</td>
<td>0.853</td>
</tr>
</tbody>
</table>

Table 4-8. Test-retest correlations for the SDS and NEO PI-R across conditions

<table>
<thead>
<tr>
<th>Groups</th>
<th>Consistent</th>
<th>Inconsistent</th>
<th>Fisher’s z</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDS R</td>
<td>0.907</td>
<td>0.838</td>
<td>1.332</td>
</tr>
<tr>
<td>SDS I</td>
<td>0.900</td>
<td>0.903</td>
<td>-0.072</td>
</tr>
<tr>
<td>SDS A</td>
<td>0.858</td>
<td>0.745</td>
<td>1.458</td>
</tr>
<tr>
<td>SDS S</td>
<td>0.712</td>
<td>0.864</td>
<td>1.879</td>
</tr>
<tr>
<td>SDS E</td>
<td>0.938</td>
<td>0.799</td>
<td>2.814*</td>
</tr>
<tr>
<td>SDS C</td>
<td>0.920</td>
<td>0.864</td>
<td>1.260</td>
</tr>
<tr>
<td>NEO PI-R N</td>
<td>0.748</td>
<td>0.959</td>
<td>-4.341**</td>
</tr>
<tr>
<td>NEO PI-R E</td>
<td>0.869</td>
<td>0.767</td>
<td>1.422</td>
</tr>
<tr>
<td>NEO PI-R O</td>
<td>0.959</td>
<td>0.852</td>
<td>3.014**</td>
</tr>
<tr>
<td>NEO PI-R A</td>
<td>0.811</td>
<td>0.745</td>
<td>0.757</td>
</tr>
<tr>
<td>NEO PI-R C</td>
<td>0.927</td>
<td>0.914</td>
<td>0.384</td>
</tr>
</tbody>
</table>

*p < 0.008

**p < 0.001
Figure 4-1. Investigative scores over time and by cultural context
Figure 4-2. Social scores over time and by priming condition
Figure 4-3. Neuroticism scores over time and by cultural context
Figure 4-4. Agreeableness scores over time and by cultural context
Figure 4-5. Conscientiousness scores over time and by cultural context
CHAPTER 5
DISCUSSION

The purpose of this study was to examine the effect of cultural context on the expression of personality for bicultural Latino/as, specifically with regard to career assessment. There have been many anecdotal accounts that a bicultural individual feels like a different person when she or he interacts in one language rather than the other. This idea was supported by the Sapir-Whorf Hypothesis and has been partially supported by research (Dinges & Hull, 1992; Ervin, 1964; Hoffman et al., 1986; Sodowsky & Carey 1988). In considering the central role that person-environment fit plays in career counseling, the impact upon the person by the environment may be an important consideration for career counselors. The current study specifically examined the effect of cultural context on career assessment with bicultural, biliterate Latino/a college students.

I hypothesized that there would be a high level of absolute stability of personality expressed by bicultural Latino-Americans primed in either an Anglo-American or Hispanic context and subsequently tested within the same context. In other words, personality would appear consistent when assessed within the same cultural context repeatedly. This hypothesis was largely supported for the SDS, with only one of the six Global Occupational Themes (GOT) exhibiting a significant difference across time. This hypothesis was partially supported for the NEO PI-R, with two of the five scales not showing a significant difference between Time 1 and Time 2. However, three of the five scales on the NEO PI-R failed to support this hypothesis, exhibiting significant change across the administrations.

I conversely hypothesized that there would be a low level of absolute stability of personality expressed by bicultural Latino-Americans initially primed in an Anglo-American context and subsequently primed in a Hispanic context, and vice versa. I expected that
personality expression would be significantly different across time when assessed in differing cultural contexts. This hypothesis was only supported by one of the GOT on the SDS, Social, while the other five scales did not exhibit a significant difference across time. However, it should be noted that the Social scale had a low internal consistency in the second administration (0.52), and therefore any conclusions drawn from this should be tentative. Similarly, this hypothesis was only partially supported with regard to the NEO PI-R, with only three of the five scales (N, A, and C) of the NEO PI-R exhibiting a significant difference across time. The findings in this study are somewhat incongruent with previous research, which indicated that personality expression differed when the language context of assessment differed (Dinges & Hull, 1992; Ervin, 1964; Hull, 1996; Ramirez-Esparza et al., 2006).

A third hypothesis, that there would be less relative stability when cultural priming context was changed across administrations compared to administrations in which cultural context priming did not change, was also only partially supported. With regard to the SDS, there was not a significant difference in relative stability between the consistently primed and inconsistently primed groups on five of the six GOT; only Enterprising expressed less relative stability for the inconsistently primed groups, compared to the consistently primed groups. The results from the NEO PI-R suggest that personality expression was largely more stable than I had predicted, with only one of the five Factors of the NEO PI-R, Openness, exhibiting significantly less relative stability for the inconsistently primed groups than the consistently primed groups. Surprisingly, one the five factors, Neuroticism, had less relative stability for the consistent groups than inconsistent groups. The test-retest correlations of the current sample, for both the inconsistent and consistent groups, were in line with test-retest reliabilities that have been found in previous research for the six Global Occupational Themes of the SDS (0.57 to 0.78; Holland,
Fritzsche, & Powell, 1997) and for the five global factors of the NEO PI-R (0.63 to 0.81; Costa, & McCrae, 1992a), which used consistent conditions for instrument administration.

Overall, the results of this study are mixed with regard to the susceptibility of vocational assessments to Whorfian effects that have been shown for other assessment instruments. The SDS appears to be largely robust to the effects of cultural context and cultural saliency. The NEO PI-R appears to be only slightly less robust to the effect of cultural context. No previous studies have examined the effect of language or culture within individuals on the Holland codes in general or the SDS specifically. Likewise, though Ramirez-Esparza and her colleagues explored the stability of the five factor model with the Big Five Inventory, no research has reported on the stability of the NEO PI-R across culture or language for individuals. These instruments may have greater transcultural stability than the California Psychological Inventory, Thematic Apperception Test, which have been shown to be affected by the cultural context or priming of the taker, although, each of the instruments in this study also showed some influence of cultural context upon the results. As such, this research raises questions with regard to under what circumstances does cultural context affect the expression of personality and when might this be relevant to career assessment.

Previous research examined differences in language across administrations, but no previous research attempted to manipulate the cultural context of administrations. Both Ramirez-Esparza’s (Ramirez-Esparza et al., 2006) study, using the Big Five Inventory, and the current study found an affect on the expression of personality for the five factor model resulting from cultural saliency. However, the pattern of inconsistency was different between the two studies. Whether the difference in results is due to differences in the instruments, differences in the population samples, or differences in the research design is not clear. The previous study
explored the influence of language, but did not account for the role of cultural context beyond language. The current study incorporated additional aspects of culture, which raises the question as to whether language alone might have certain affects while a fuller cultural context might have other affects. Similarly, the previous study only examined absolute stability and not relative stability and so there is a question of whether the two forms of stability function differently with regard to language and larger cultural context.

Ramirez-Esparza’s (Ramirez-Esparza et al., 2006) is a clearer test of the examination of the Sapir-Whorf Hypothesis, in that it focused specifically upon the effects of language. The current study was interested in the effect that language along with cultural context (both of which may play a role in priming within a workplace) upon the expression of personality. Therefore, cultural priming was more of the focus of the current study.

Gilbert and Hixon (1991) pointed out that priming works below a conscious level and that the person must not be aware of the stimuli in order for priming to be effective. The attempt to generate a particular mindset may have been too heavy-handed, and may have instead resulted in greater self-awareness. Alternatively, that if English was the primary reading language for many, then struggling in reading Spanish may have decreased Latino/a identity in that context. However, preference of reading language was not specifically assessed, since the question about language preference did not distinguish between written and spoken language. No direct measures of general self-consciousness or self-awareness, beyond the cultural identification questions, were conducted so this explanation remains speculative. The effect of one cultural context affecting cultural identification more than the other is unclear.

The manipulation appeared to be more effective in generating a stronger Anglo-American identity in the contexts in which an American identity was primed than a Latino/a identity in the
contexts in which a Latino/a identity was primed. Participants’ American and Latina/o identity was not assessed prior to the manipulation, so it is difficult to determine the true effect of the manipulation. That the participants already had a strong Latino/a identity and were more affected by the Anglo-American priming than the Latino/a priming is possible. Also possible is that a pre-existing strong Latino/a identification may have caused the participants to be too self-reflective in the Latino/a context.

Because no previous study has attempted to manipulate the context—but rather only altered the language, the results of previous studies may suggest a lack of conceptual equivalency (in the presence of the simpler translation equivalency), more than a response to cultural context. The findings in previous studies may represent differences in Carter’s (1992) mental lexicons (contextual and cultural connotations of words), rather than actual differences in the cultural context of personality expression. This argument would suggest that the SDS and the NEO PI-R have greater conceptual equivalency than the instruments used in other studies. This claim is, thus far, an unsupported claim and still purely speculative.

In a similar vein, that these instruments do not fully account for some of the ways in which personality does change across cultures is also a possibility. These may be better accounted for by some of the instruments upon which cultural differences in personality have been found. If the five factor model only accounts for 60% of personality variance, as Boyle (2008) has claimed, then the ways in which personality differs intra-personally across cultures may not fit well within the scope of the five factors of the NEO PI-R. No measure of what portion of personality variance is assessed by the SDS has been conducted to date. However, Holland (1997) has acknowledged that more than six factors may be required in order to fully
account for vocational personality, thus the additional factor(s) may better account for culturally oriented differences in personality expression.

That the level of personality at which this experiment was conducted was insufficient to detect culturally-influenced differences in personality is another possibility. Boyle (2008) has pointed out that higher-order factors such as those in the five factor model are poorer predictors of behavior than are lower-order factors. As such, greater difference might possibly be seen on the NEO PI-R scores if one looked at the facet scores rather than the factor scores. Similarly, the GOT may be too high of an order of personality to accurately account for culturally driven differences in personality, or more specifically behavior. The Strong Interest Inventory, also based on Holland’s typology, contains 25 Basic Interest Scales that may better account for culturally different expressions of personality within Holland’s typology than can be accounted for by the GOT. This would support Mischel’s (2007) claim that higher order factors are poor predictors of behavior in specific situations, because the higher-order factor may gloss over situationally different behaviors that might be better accounted for by the lower-order factors.

**Limitations**

One of the limitations in the current study was poor power. The apparent effect of the manipulation was smaller than anticipated and the number of participants may have been too small to detect a significant difference, making the study susceptible to type-II errors. In four of the six test-retest correlations of the GOT on the SDS, the inconsistent groups had weaker test-retest correlations than the consistent group, with a fifth scale being very similar (0.900 compared to 0.903). On the NEO PI-R, four of the five test-retest correlations of the factors, had stronger correlations for the consistent groups than the inconsistent groups. With a larger, more adequate, sample size some of these differences may have achieved statistical significance.
The current study also had some possible limitations regarding the particular sample characteristics. How well the sample in this study represents the various ethnic-language minorities in the United States, including how well they represent Latino/as, is unclear. How representative the current sample is of other age groups is likewise uncertain. Even how well this group represents the experiences of other Latino/a college students is questionable.

The current study was conducted with Latino/as specifically and their experience may not generalize to other (smaller) ethnic-language minorities, such as Asian-American populations. Similarly, how representative the current sample is to the other Latino/a populations is not clear, in that the current study had 64% of the participants identifying as Mexican, which may not well represent the experiences of other Hispanic groups. While the majority of the Hispanic population in the United States is of Mexican descent, there are distinct differences between Hispanic populations that may not be captured in this study.

Other similar studies used samples from the general population or immigrant populations, whereas the current study used college students. The majority of college students are adolescents, a developmental period noted for identity exploration, thus the current population may be more fluid in the expression of their personality than members of an older population, which is likely to have a more stable personality, and therefore differences across contexts might be less discernable with adolescents. In fact Roberts (Roberts et al., 2006) stated that adolescence is characterized by more erratic patterns of mean-level change and less consistency in rank-ordering than adults, and that in adolescents personal dispositions appear to be in flux. This may suggest that using multiple contexts in vocational assessment with college-age clients may not be necessary, while using multiple cultural contexts for vocational assessment with older clients, who might have more well-defined personalities within each culture, may still be important.
Additionally, the particular current sample was drawn from two college campuses that are both approximately one-third Hispanic. Therefore, these campuses are not representative of typical college campuses in the U.S. The setting in which the administrations were conducted, on the campuses, might already be associated with bicultural identity and the participants may have a history of integrating their multiple identities within the campus environment. The pre-existing tendency to frame-switch may have exceeded the effects of the contextual manipulation.

Students from less Hispanic-influenced campuses may be less able to frame switch or integrate their various personalities on their campuses. The majority of participants came from a small university (student population of approximately 2,500) and many of these participants appeared to previously know each other. This level of familiarity suggests that the participants may be used to interacting biculturally on campus. Assessing career counseling clients in multiple cultures may not be important if they are going to work in an environment in which both cultures are fairly equally represented, while this may be important for clients pursuing culturally distinct work environments.

**Directions for Further Research**

To my knowledge, this was the first study to attempt to look at within-group absolute stability with consistent and inconsistent administrations. Repeating this design with different administrations may be useful. First, conducting the basic experiment without specific priming and allow the test language itself to act as a prime may be useful. This may allow the prime to recede into the background and consequently be more subtle; this may be less likely to trigger self-awareness more generally.

One of the limitations in this study may have been the nature of the university setting in which the majority of administrations occurred. This may be countered through a number of
changes. Repeating the basic design at a greater variety of institutional settings may be helpful in eliminating the bicultural associations that may have occurred in the current study.

Administering the instruments in either natural settings to which the participants have no prior identification or more naturalistic environments (such as home and work environments), therefore allowing the administration alone to determine the cultural saliency may also be informative. This might better capture real differences in personality expression resulting from cultural contexts and limit the influence of cultural flexibility that may be present in the current study. To see what effect these different natural environments might have on cultural identification would be revealing.

In order to more purely assess the Sapir-Whorf Hypothesis it might be useful to test the consistency of personality across language specifically within the same context. By eliminating all contextual priming contexts, the more pure effect of language alone could be assessed. To my knowledge, neither of these instruments has been examined with regard to the simple effect of language. Such an investigation could extend or clarify some of the findings with other instruments (e.g., Dinges & Hull, 1992; Ervin, 1964; Hull, 1996).

Language proficiency might also be an interesting variable to explore more thoroughly. To what degree ability to read both Spanish and English may have affected either the cultural saliency or the accuracy of the responding is not clear. Measuring participants’ reading proficiency and comfort may better account for any possible effects that language issues might introduce or allow for the elimination of this as a relevant variable in moderating the relationship between language and cultural identification.

Another factor that may warrant change in the basic research design involves the participants. Determining if administrating the instruments to adult populations would yield the
same results as with college students may be useful. This would allow for determination of how generalizable these findings are to a broader age range of the population. Likewise, repeating this basic research design with Asian Americans and Pacific Islanders or other language-ethnic groups may be informative. Similarly, the degree to which the predominance of persons of Mexican heritage may have shaped the image of Latino/as generally within the current study is unknown, so repeating this experiment with samples which are predominantly or exclusively other ethnic Hispanic groups may be useful in determining how generalizable these findings may be to other Hispanic ethnic groups.

Conducting a similar study focusing the on facets of the NEO PI-R, the basic interest scales of the SII, or the primary factors of the 16PF in order to determine if lower order factors might better account for differences in personality expression may be useful. These lower-order factors may be more important, particularly in counseling bicultural career clients, in matching persons with the best work environments. This would be in accordance with Mischel’s (2007) claim.

However, each of these instruments has numerous subscales (25 basic interest scales in the SI, 16 primary factors in the 16PF, 30 facets in the NEO PI-R) and so assessing all of them would cumbersome and potentially lead to inflated Type II errors with corrected alphas levels. Possible solutions might include conducting a Delphi poll of personality experts to determine which subscales might be more susceptible to the cultural context, based on either previous reliability measures or the conceptualization of the construct. Alternatively, a non-null-hypothesis exploratory study which examined effect sizes may offer some insight into how the various subscales may be affected by cultural context.
Conclusion

In general, the results of the current study suggest that when counselors are working with multicultural clients, they may want to consider administering career assessment instruments in the multiple cultural contexts in which the client may work. A counselor should consider the cost and inconvenience of testing under both conditions relative to the likely additional benefit before proceeding with the dual testing. Specifically, counselors may want to consider the degree to which a client has expressed a preference for working in either culture, the real opportunities for the client regarding the workplace cultural contexts, and how well integrated the client’s cultural identities are.

In a broader sense, the results further suggest that the SDS and the NEO PI-R have at least limited conceptual equivalency, in addition to translational equivalency. The study likewise provides some support for the claims of social-interactionists, with these results suggesting that personality may be at least somewhat susceptible to environmental influence. Much of the social interactionist claims are based on lower level traits and behaviors, which this study does not directly address, but in demonstrating some instability of the higher order traits these results suggest that there may be support for the argument that the traits and behaviors, upon which the higher order traits are based, may not be stable across contexts. Conversely, the results of this study partially challenge Costa and McCrae’s claim that biology determines personality traits, rather than culture or context—at least on the higher-order level. Overall, this study adds to the developing literature that demonstrates that language or cultural context may affect the way that personality is expressed.
Please provide the following information about yourself:

Gender:____________        Age:______________

Major__________________       Year in School________

Race/Ethnicity__________________________________________________

Hispanic or Latina/o Culture with which you identify (Please check all that apply):

_____ Argentinean
_____ Bolivian
_____ Chicana/o
_____ Chilean
_____ Colombian
_____ Costa Rican
_____ Cuban
_____ Dominican
_____ Ecuadorian
_____ El Salvadorian
_____ Guatemalan
_____ Honduran

_____ Mexican
_____ Nicaraguan
_____ Panamanian
_____ Paraguayan
_____ Peruvian
_____ Puerto Rican
_____ Uruguayan
_____ Venezuelan
_____ Other (please specify)

Other Racial Background (Please check all that apply):

_____ African Descent/Black
_____ Native American/American Indian
_____ East Asian or Pacific Islander

_____ Caucasian/White (non Latina/o)
_____ Arab/Middle Eastern
_____ South Asian

Please indicate on the scale below what best fits how you see yourself right now

American * * * * * * Latino/a

Please indicate on the scale below how strongly you identify with your Latino/a Culture right now

Little * * * * * * Greatly

Please indicate on the scale below how strongly you identify with you American Culture right now

Little * * * * * * Greatly
How long has your family been in this country?

_____ 1st Generation (you immigrated to this country)
_____ 2nd Generation (your parents immigrated to this country and you were born in the USA)
_____ 3rd Generation (your grandparents immigrated to this country, and you and your parents were born in the USA)
_____ 4th Generation or higher (all generations, beginning with your grandparents, were born in the USA)
_____ Your ancestors lived on this land prior to American expansion

Are you an International Student? Yes No Nationality:__________________

Language you are most comfortable with:_____________________

Language you are second most comfortable with:_____________________

Do you identify yourself in other ways that are meaningful to you (e.g., sexual orientation, religion, physical ability)? Please specify:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
1. **TITLE OF PROTOCOL:** The Influence of Cultural Context on Vocational Assessment with Bi-cultural Latina/o College Students

2. **PRINCIPAL INVESTIGATOR(s):** (Name, degree, title, dept., address, phone #, e-mail & fax)

Denis Flanigan, M.S.
Graduate student
Department of Psychology, 114 Psychology Building, Gainesville, FL 32611-2250

3. **SUPERVISOR (IF PI IS STUDENT):** (Name, campus address, phone #, e-mail & fax)

Dr. Ken Rice, Ph.D.
Department of Psychology, 114 Psychology Building, Gainesville, FL 32611-2250

4. **DATES OF PROPOSED PROTOCOL:** From August 21, 2006 To August 20, 2007

5. **SOURCE OF FUNDING FOR THE PROTOCOL:**
(As indicated to the Office of Research, Technology and Graduate Education)

   National Career Development Association Graduate Research Award ($500)
   Currently seeking additional funding.

6. **SCIENTIFIC PURPOSE OF THE INVESTIGATION:**

The purpose of this research is to better understand the influence of cultural context on vocational assessment with bicultural college students. Self-concept plays an important role in career exploration, and by recognizing the possible influence that cultural salience might play on one’s self-concept, counselors may be able to better serve clients considering career options.

7. **DESCRIBE THE RESEARCH METHODOLOGY IN NON-TECHNICAL LANGUAGE.** The UFIRB needs to know what will be done with or to the research participant(s).

The participants will be asked to construct a collage about themselves, from magazines that are culturally oriented. Half of the participants will be asked to develop collages that represent “Me as a Latino/a,” and the other half will base their collages on the theme of “Me as an American.”
Following this, the participants will complete a vocational assessment questionnaire (Self Directed Search) and two self-report personality measures (the NEO Personality Inventory-Revised, and the Almost Perfect Scale-Revised). These measures and a brief demographics survey will be administered in either Spanish or English. Both language forms of the measures are versions released by the publishers or authors of the scales. The demographics survey and informed consent were translated into Spanish by a Cuban immigrant and back-translated by a Mexican American, both of whom are native Spanish speakers for over 30 years. Questionnaires will be administered in an environment intended to make one aspect of their cultural identity salient. Specifically, participants will complete the measures in a small office or classroom that has been decorated in a way that presumably prompts a sense of “Latino/a identity” or more general “American identity.” For the “Latino/a identity” prompt, Spanish-language posters and picture will be hung on the walls, and Spanish-language magazines and brochures will be displayed on a table and Spanish-language music will be played in the background. For the “American identity” prompt, English-language posters, pictures and brochures will be displayed while English-language music plays. Each administration is expected to last from 60-90 minutes. The participants will be asked to return in two weeks and repeat these procedures in either the same or a different context and instrument language.

8. POTENTIAL BENEFITS AND ANTICIPATED RISK. (If risk of physical, psychological or economic harm may be involved, describe the steps taken to protect participant.)

No direct potential benefits or risks to participants are predicted. Participants will be directed to available counseling services in the event that participation in the study arouses any psychological concerns.

9. DESCRIBE HOW PARTICIPANT(S) WILL BE RECRUITED, THE NUMBER AND AGE OF THE PARTICIPANTS, AND PROPOSED COMPENSATION (if any):

Given the number of participants needed to detect statistically significant effects of the size typically found in this area of research, a total of 250 students 18 years or older will be recruited from multiple sources. Participants will be recruited through student organizations and the General Psychology subject pool on the University of Florida campus. Students will be required to specify whether they want their participation to count toward the General Psychology research requirement or contribute to a student organization’s point accumulation.

Participants recruited through student organizations will have points awarded to their organization such that any student that participates once will earn 1 point for her or his organization and a student will earn an additional 5 points for her or his organization by participating in the second part of the experiment. The student group that earns the highest number of points will be given a $100 gift certificate to Classic Fare Catering. The group with the second highest number of points will be given a $50 Classic Fare gift certificate.
Participants recruited through the General Psychology subject pool will receive 3 credits for participating in the first administration and an additional 3 credits for participating in the second administration.

10. DESCRIBE THE INFORMED CONSENT PROCESS. INCLUDE A COPY OF THE INFORMED CONSENT DOCUMENT (if applicable).

After arriving at the first scheduled experimental session, participants will be greeted by an experimenter who will provide the students with an informed consent form in either English or Spanish. Each participant will be asked to read the form and encouraged to ask any questions or raise any concerns about participation. Students will not be permitted to participate in the study until after they have provided their consent. Investigators will not withhold benefits to participants to which they would otherwise be entitled.

Please use attachments sparingly.

__________________________
Principal Investigator's Signature

__________________________
Supervisor's Signature

I approve this protocol for submission to the UFIRB:

__________________________
Dept. Chair/Center Director Date
Informed Consent Form

This study involves research designed to improve counselors’ use of vocational assessment instruments with bicultural college students. This study consists of two parts and entails completion of a self-awareness exercise followed by the completion of a few questionnaires, which will take approximately 90-120 minutes of your time. You will be requested to return in two weeks to complete the second portion of the study, which is expected to take an additional 90-120 minutes. You will be compensated for your time in participating in this study by one of the following methods: (a) receiving credits toward completion of your research requirements for your General Psychology course, (b) extra credit in your psychology course, or (c) receiving $25.

There is no anticipated risk to you for participating in this study. Although it will be most helpful if you are able to fully complete the questionnaires, you may choose not to answer selected questions and still receive credit for your participation. You are free to withdraw from the study at any time without penalty. Your name will be associated with your responses through a code system in which the key to the code is password protected on a secure computer, so your identity will be confidential to the extent provided by law.

Please ask any questions you may have by contacting me by e-mail at <Denis.Flanagan@ufl.edu> or by mail at Department of Psychology, 114 Psychology Building, Gainesville, FL 32611-2250. You may also direct your questions or concerns to my advisor, Dr. Ken Rice by e-mail at <Ken.Rice@ufl.edu> or by mail at Department of Psychology, 114 Psychology Building, University of Florida, Gainesville, FL 32611-2250. If you have any questions about your rights as a participant in a research project, please contact the University of Florida Institutional Review Board at 392-0433, by e-mail at <UFIRB@ufl.edu>, or by mail at UFIRB, University of Florida, Box 112250, Gainesville, FL 32611-2250.

In the unlikely event that answering any of the questions make you aware of personal problems or concerns, there are several campus resources where you may choose to seek help in resolving these issues. The UF Counseling Center is located in Peabody Hall, Room 301. The telephone number there is 392-1575. Student Mental Health is located in the Infirmary Building and the phone number there is 392-1171.

I have read and understand the procedure described above. I agree to participate and have received a copy of this form.

Name (Please Print)________________________________________

Signature_________________________________________________

Date_________________

Thank you for your participation.

Denis "Woodja" Flanigan
Principal Investigator

Dr. Ken Rice
Research Advisor
### UNIVERSITY OF ST. THOMAS
#### HUMAN SUBJECTS COMMITTEE APPLICATION

**COVER SHEET**

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR(S):</th>
<th>DEPARTMENT:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denis “Woodja” Flanigan</td>
<td>Psychology Department University of Florida</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>TELEPHONE:</th>
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<tr>
<th>CO-INVESTIGATOR(S):</th>
<th>DEPARTMENT:</th>
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<tbody>
<tr>
<td>Elizabeth Maynard</td>
<td>Psychology</td>
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(for student applicants)

**FACULTY SPONSOR:**

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<th>TELEPHONE:</th>
<th>E-MAIL:</th>
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**TITLE OF PROJECT:**
The Influence of Cultural Context on Vocational Assessment with Bi-cultural Latina/o College Students

**DURATION OF ENTIRE PROJECT**

<table>
<thead>
<tr>
<th>START:</th>
<th>END:</th>
</tr>
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<tbody>
<tr>
<td>September 2005</td>
<td>May 2008</td>
</tr>
</tbody>
</table>

**APPROVAL REQUESTED FOR (MAXIMUM OF ONE YEAR)**

<table>
<thead>
<tr>
<th>START:</th>
<th>END:</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2007</td>
<td>May 2008</td>
</tr>
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</table>

**APPLICATION FOR EXTERNAL SUPPORT?**

<table>
<thead>
<tr>
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<th>APPLICATION DEADLINE:</th>
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</thead>
<tbody>
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</table>

All scholarly research (that which is aimed at presentation or publication) involving human subjects carried out by faculty*, administrators, staff, or students affiliated with the University—whether conducted on campus or elsewhere—must be reviewed and approved by the Human Subjects Committee. This policy applies to both funded and non-funded research activities. Any research involving Human Subjects performed without the review and approval of the Human Subjects Committee gravely violates UST’s explicit policy and ethical standards. Such a breach of conduct places the investigator in serious jeopardy and could be considered sufficient cause for dismissal from the University.

*all full-time faculty and part-time faculty when they utilize University resources or affiliation with the University, or when they involve any member of the University in data collection.
1. Please give a brief (50 words or less), non-technical summary of the proposed research.

This study examines the influence of cultural context on the expression of personality with bi-cultural students using standardized assessment instruments using a test-retest reliability research design.

2. Please detail all procedures that relate to the participation of human subjects in your research.
   a. How are subjects recruited? Are any inducements to participation offered?

   Subjects will be recruited through courses in the psychology department and through flyers and a table set up on campus specifically for recruiting for this study. Subjects will be offered either extra credit in classes or $25 for their full participation.

   b. What are the salient characteristics of the subjects: (e.g., number who will participate, age range, sex, institutional affiliation or other criteria)?

   Participants will be adults who self-identify as Latino/a and are to speak and read both English and Spanish.

   c. Are any of your participants? (Check all that apply)

   | Children       |       |
   | pregnant women |       |
   | unborn children|       |
   | Prisoners      |       |
   | mentally disabled persons |       |
   | economically or educationally disadvantaged persons |       |
   | X None of the above |       |

d. Are any of your participants students enrolled in your class or members of any other group over whom you exercise authority?

   Yes

   e. Describe what you will ask subjects to do as participants in this study and how long you will anticipate subjects will be involved in study activities. Describe any experimental manipulations you are employing and how subjects will be assigned to experimental conditions. How will the study be conducted? Will any observations, tests, be taken more than once?

   Participants will be asked to complete a collage and then three personality measures [the Self Directed Search (SDS), the NEO Personality Inventory-Revised (NEO PI-R), and the Almost Perfect Scale-Revised (APS-R)] and a demographics form. They will be asked to return two (2) weeks later to repeat the procedure.

   Some of the administrations will be conducted in Spanish within an environment constructed to elicit a “Hispanic” identity and other administrations will conducted in English within an environment constructed to elicit an “American” identity, such that one group will complete the administrations in Spanish both times, one group will complete the administrations in English both times, one group will complete the first administration in Spanish and the second administration in English, and one group will complete the administration in English the first time and Spanish the second time.
The environments will be constructed through the use of culturally-matched images, music and food present during the administrations. Additionally, the collages will be used to further facilitate cultural identification by being constructed around the themes of “Me as a Latino/a,” or “My Latino Heritage” or “Me as an American” or “My American Experience” using culturally-matched magazines.

The procedures are expected to take 90-120 minutes for each administration so that participants will be asked to commit for a total of four (4) hours across the two (2) administrations. Participants will be assigned to the conditions randomly.

f. Describe how permission has been obtained from any cooperating institution--- school, hospital, corporation, prison or other relevant organization. Is the permission of another Institutional Review Board Required? If so, how has this permission been obtained?

This study is being conducted at the University of Florida and the University of Houston. Institutional Review Board approval is being sought from each of the institutions.

3. List any assistants who will be working with you. What experience with this kind of research do you and your assistants have?

The principle investigator and co-investigator will be assisted by Jorge Chavez, a graduate of the psychology program at the University of St. Thomas.

4. Do subjects risk any harm by participating in the research? Are the risks necessary? What safeguards do you take to minimize the risks? Does your debriefing letter suggest remedies for any harm subjects may experience? The investigator is expected to consider the physical, psychological, moral and spiritual, legal and social dimensions of human life when making the risk-assessment.

There are no anticipated risks. Participants will be directed to seek assistance from Counseling and Disability Services or the Career Services Center if their participation increases self-awareness which they would like to explore further.

5. How will participation in this research benefit subjects? If subjects will gain no direct benefits, explain how the importance of the knowledge gained through this research is commensurate with the risks to which the subjects are exposed. Do subjects receive any information about the research when they are ‘debriefed’ or after the conclusion of the project?

Participants are unlikely to directly benefit from involvement in this study, however they may receive either extra credit or remuneration for their involvement in the form of $25. Participants will also be allowed to keep a brief summary of one of the personality assessments and the collages that they construct. The bi-cultural Latino/a is likely to benefit through the application of improved assessment techniques with their community.

Participants will be informed of the research purpose at debriefing and allowed to find out more about the outcome of the research upon completion of the project.

6. Are subjects deliberately deceived in any way, that is, will their experience as research subjects be significantly different from what you have led them to expect? How will you explain this deception to subjects following their participation?

Subjects will be told that the study is looking at alternatives ways of conducting vocational assessment in career counseling for bi-cultural students. In the debriefing participants will be informed that while collages are often used in career counseling assessment, they were used to help facilitate cultural identity
in this study. They will also be told that a separate experiment examining the effectiveness of collage in vocational assessment is also being conducted. Their experience of the research should not be significantly different than what they have been led to expect.

7. **How are confidentiality and/or anonymity assured? Do you have identifying information on your protocol (e.g., name, male/female, ethnicity and age)? At what stage are identifiers removed from the data? If identifiers must be retained, please explain why.**

Raw data without any personally identifying information will be maintained on paper in a locked cabinet until 5 years following the completion of data analysis. During the data analysis process raw data will be converted into an Excel file for computerized analysis. This file will be maintained on the principle investigator’s computer and in an electronic storage device for 5 years following completion of data analysis.

A password protected Excel file containing the key matching participants’ names and contact information with their codes will be maintained by the principle investigator until all data from the first and second administrations are matched.

8. **How will the study materials and research data (written or otherwise recorded) be stored at the end of the study? Who will have access to them? To what uses—research, demonstration, public performance, archiving—might they be put in the future? How will subjects’ permission for further use of their data be obtained?**

Following completion of the second sessions and matching of all data between the first and second sessions all records with identifying information will be destroy (i.e., the password protected Excel file will be deleted).

Raw data, which will be void of personally identifying information, will be maintained in a locked cabinet for 5 years after completion of the data analysis before being shredded. A password protected Excel file with the analysis will be maintained on the principle investigator’s computer and in an electronic storage device for 5 years after completion of the data analysis as well.

9. **How do you explain the research to subjects and obtain their informed consent to participate? If subjects are children, mentally disabled or otherwise not legally competent to consent to participation, how is their assent obtained and from whom is proxy consent obtained? How is it made clear to subjects that their participation is voluntary and that they can quit at any time? Is there a clear statement that no penalty will result from non-participation? Is there a clear statement concerning anonymity or the degree of confidentiality that a subject can expect?**

During recruitment participants will be informed of the general nature of the research and the basic tasks and time commitment that will be expected of them.

Upon arriving at the first scheduled experimental session, participants will be greeted by an experimenter who will provide the students with an informed consent form in either English or Spanish. Each participant will be asked to read the form and be encouraged to ask any questions or raise any concerns about participation. Students will not be permitted to participate in the study until after they have provided their consent in writing. The informed consent form will stipulate that participants may withdraw from the study at any time without penalty, though they may not be fully eligible for some incentives, and that investigators will not withhold benefits to participants to which they would otherwise be entitled. The methods for maintaining confidentiality will be briefly described in the informed consent, along with a statement that Confidentiality will be maintained within legal limits.

10. **List any significant financial interest held by or for the benefit of you, your spouse, or your dependent children that may reasonably appear to be affected by the proposed research. A “significant financial


interest” is anything of monetary value, other than salary or other remuneration you receive from the University of St. Thomas, or income from services provided to public or nonprofit entities.

There are no personal financial interests associated with this research.

Append copies of all supporting materials: letters of recruitment or advertisement; letters seeking and obtaining permission from cooperating institutions or other IRBs; all study materials used with subjects, e.g. tests, surveys, copies of verbal or visual stimulus materials; all debriefing materials and communications to subjects about research results; documents relating to informed consent; documents relating to potential conflicts-of-interest.

Applications which do not involve vulnerable subjects (see 2c above), have guaranteed adequate protection for students and others in subordinate positions (see 2d above) pose minimal risk to subjects (see 4 above), do not involve deception of subjects (see 6 above), do not have identifying information on the protocol (see 7 above), and present no potential conflict-of-interest (see 10 above) will be considered for expedited review. In addition, applications that have been approved by other Institutional Review Boards (IRBs) are eligible for expedited review.

All HSC application materials (cover sheet, narrative and supporting documents) should be submitted as a WORD document attached to an e-mail sent to the HSC chair. One printed copy of the application should be sent to the chair of the HSC.
Your research is eligible for expedited review if it involves only minimal risk to participants. "Minimal risk means that the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests" (45 CFR 46.102).

More than minimal risk describes research that includes vulnerable participants, sensitive research topics, or intrusive methods. Vulnerable participants include children (under 18) and prisoners, fetuses, and pregnant women; some institutionalized groups without the ability to make uncompromised decisions about consent also are considered vulnerable. Sensitive research topics include any information about illegal activities or other topics whose disclosure would harm a participant's reputation; examples include: sexual topics (attitudes, behavior, or preferences); drug or alcohol use; illegal behavior; or information pertaining to an individual's mental health.

Answer Yes or No to the following questions.

1. _No_ Do you have identifying information on your protocol?

2. Are your participants:
   _No_ children (under 18 years old)?
   _No_ fetuses?
   _No_ institutionalized?
   _No_ pregnant women?
   _No_ prisoners?

3. Is your research about:
   _No_ sexual topics (attitudes, behavior, or preferences)?
   _No_ drug or alcohol use?
   _No_ illegal behavior?
   _No_ participants' mental health?

4. Do your methods pose any risk for participants?
   _No_ Are participants asked to ingest any nonfood substance?
   _No_ Are measurement methods risky (e.g., draw blood)?

If you answered No to all of the above questions, your proposal is eligible for expedited review by University of St. Thomas' Human Subjects Committee. Submit an electronic copy of your proposal as an e-mail to the HSC chair with a WORD document attached, and send one printed copy to the chair of the committee. Expedited review should be completed within 7-10 days.
HUMAN SUBJECTS APPLICATION
GUIDELINES FOR INFORMED CONSENT DOCUMENTS

A. *If in your study*

1) **no** subject-identifying information is attached to the study materials (i.e., subjects do not give their names and cannot be identified);

2) **no** vulnerable subjects are participants (see Application 2c);

3) **no** participant is exposed to more than minimal risk (see Application 4);

4) **no** procedures are involved for which written consent is normally required outside the research context;

then the informed consent may be adequately communicated to potential subjects in a letter of information and oral exchanges between investigators and potential subjects.

B. *If any of conditions 1-4 is not met, then a written and signed consent document is essential. In the case of vulnerable participants, consent may have to be obtained from the legally authorized representative of the subject, e.g. where children are involved, parental consent must be obtained, in addition to the assent of the child.*

The consent process has three elements:

A. *Information.*

Letters of Information shall contain:

1) A statement that the project is a research one and an explanation of its scope, aims and purposes.

2) A statement regarding the amount of time a subject will have to spend in order to participate and a description of the research procedures.

3) A description of any reasonably foreseeable risks or discomforts subjects may incur and actions taken to minimize such risks.

4) A statement regarding any payment or reimbursement for expenses. If there is more than minimal risk, a statement as to whether any compensation and/or medical treatment is available if injury occurs.

5) A statement describing the potential benefits to subjects or others.

6) A statement of what incentive (e.g., extra course credit), if any, is available to subject and information regarding any alternative means of obtaining the incentive.
7) A statement describing the extent to which confidentiality of records identifying the subject will be maintained or whether subjects will be anonymous. This should include, where applicable, information concerning the storage and disposition of any recordings.

8) A statement that participation is voluntary and that a subject may discontinue participation at any time. Non-participation will not result in penalty or loss of benefits to which the subject is otherwise entitled.

9) An offer to answer any questions, which should include the principal investigator's name, phone number and mailing address; the faculty sponsor's name and phone number if the investigator is a student; the name of any sponsoring or funding source.

10) A statement that a copy of the informed consent form must be given to subjects or their legally authorized representative.

11) Where applicable, a statement that the investigator has “Right to Publish” research results should be included.

12) The following statement must be placed at the end of ALL consent documents immediately after the signature lines. "THIS RESEARCH STUDY HAS BEEN REVIEWED AND APPROVED BY THE HUMAN SUBJECTS COMMITTEE AT THE UNIVERSITY OF ST. THOMAS. For additional information concerning your rights as a human subject please contact Dr. John Hittinger, Vice President of Academic Affairs, John.Hittinger@stthomas.edu."

B. Comprehension.

Information given to the subject must be stated in simple, easily understood language. While there is always a moral and professional obligation to ascertain that information is complete and adequately comprehended by a subject, this obligation increases when any of the above conditions (1-4) obtains. Special provisions may need to be made to insure comprehension, particularly where there is significant risk or where a subject is immature, mentally disabled or incompetent.

C. Voluntariness.

Principal investigators must provide opportunities for the potential subject freely to consider whether or not to participate. Particular attention should be paid to minimizing the possibility of coercion. Therefore, subjects must be informed that participation is voluntary and that choosing not to participate will result in no cost or negative consequences to the individual. Nor should any undue influence in the form of an offer of an excessive, unwarranted or inappropriate reward be used in order to obtain participation. On this account, the investigator has the responsibility to avoid:

- utilizing UST instructional (class) time for data collection;
- mandating participation of a research subject as a requirement for a course; and
- maintaining dual relationships with subjects. Individuals employed by the researcher may not be asked during work time to participate in a study as a subject. If extra credit is afforded potential subjects to encourage participation, options commensurate in time and involvement must be provided so that research participation is not the only extra credit option available.
The Influence of Cultural Context on Vocational Assessment with Bi-cultural Latina/o College Students

Informed Consent

This study is intended to explore alternative methods of conducting vocation assessment with bi-cultural Latino/a college students with the aim of improving the ways in which counselors perform career counseling with bi-cultural Latino/a college students. This study involves a number of assessments regularly used in career counseling and we are interested in looking at the reliability and validity of use of these techniques with bi-cultural Latino/a college students.

There are no anticipated risks associated with your participation in this study. Your participation in this study may increase your self-awareness. You are encouraged to contact Counseling and Disability Services (Crooker Center, 2nd Floor; [redacted] or [redacted]) or the Career Services Center (Crooker Center, 2nd Floor; [redacted]) if you would like to further explore your increased self-awareness.

Participation in this study involves completing a number of measures used in career counseling and is expected to take 90-120 minutes per session. In order to fully examine the measures, the measures need to be completed in two separate sessions. You are requested to return in two weeks to complete the measures a second time. The second session is also expected to take 90-120 minutes. We are requesting that you commit to two (2) hours for each session for a total time commitment of four (4) hours.

In order to compensate you for your time, you may be eligible for either extra credit in your psychology course. Alternatively, if you were not recruited through a course, you may be eligible for $25 compensation. Students participating in order to receive extra credit will have their degree of participation (whether you participate in only the first session or both sessions) reported to their instructor(s). Students that desire monetary compensation ($25) will receive their compensation upon completion of the second session.

While it is not expected that you will receive any direct benefits from participation in this study, your participation will potentially allow psychologists and counselors to improve the way in which they conduct counseling and assessment with bi-cultural Latino/a students in the future. Additionally, you will be allowed to keep a brief summary of your results from one of the measures used in this study.

Every participant’s name will be paired with a code number by the principal investigator. This code number will appear on all written materials; please do not put your name on any research materials to be returned to the experimenter. The list pairing your name to the assigned code number will be kept separate from all research materials and will be available only to the principal investigator, along with any contact information. Confidentiality will be maintained within legal limits.

Your participation in this study is voluntary and you have the right to withdrawal at any time without penalty. Your withdrawal will not forfeit any benefit to which you are otherwise entitled. Thought we ask that you complete all questionnaires to your best ability, you have the right to decline to answer any question which you would prefer not to answer without penalty.

Should you have any questions concerning this study or your involvement in this study please contact the primary investigator, Denis “Woodja” Flanigan, M.S. ([redacted], Houston, TX 77098 or [redacted] or [redacted]) or the faculty sponsor, Elizabeth Maynard, Ph.D. (Psychology Department, University of St. Thomas, [redacted], Houston, TX 77005 or [redacted]) or the faculty sponsor, Elizabeth Maynard, Ph.D. (Psychology Department, University of St. Thomas, [redacted], Houston, TX 77005 or [redacted]).
This research is partially funded by a research grant from the National Career Development Association and a research fellowship from Division 17 of the American Psychological Association.

The results of this study may be published in professional and/or scientific journals. It may also be used for educational purposes or for professional presentations. However, no individual subject will be identified.

I have read and understand the procedure described above. I agree to participate and have received a copy of this form.

Name (Please Print) _____________________________________________

Signature _____________________________________________________ Date_________________

THIS RESEARCH STUDY HAS BEEN REVIEWED AND APPROVED BY THE HUMAN SUBJECTS COMMITTEE AT THE UNIVERSITY OF ST. THOMAS. For additional information concerning your rights as a human subject please contact Dr. John Hittinger, Vice President of Academic Affairs.
PART A: COVER PAGE

Project Title (identical to proposal or thesis/dissertation): The Influence of Cultural Context on Vocational Assessment with Bi-cultural Latina/o College Students

OR, if applicable:

Grant Title (if different from Project Title):

Principal Investigator (check one): [ ] Faculty [ ] Staff [ X ] Student

Name: [ ] Dr. [ ] Ms. [ X ] Mr. Denis Flanigan ___________________________________________

Phone #: __________________________ Fax #: __________________________

Department/College: Educational Psychology ____________________________________________

E-mail Address: ___________________________ UH Mail Code: 5029

Faculty Sponsor (required for all student investigators)

Name: Jonathan Schwartz, Ph. D. ____________________________________________

Phone #: __________________________ Fax #: __________________________

Department/College: Educational Psychology ____________________________________________

E-mail Address: ___________________________ UH Mail Code: 5029
List all key personnel (defined as individuals who contribute to the scientific development or execution of the project). Include their educational level, their role on the project (i.e., co-investigator, project manager, research assistant), and their institutional affiliation.

<table>
<thead>
<tr>
<th>Name</th>
<th>Educational Level</th>
<th>Role</th>
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<tbody>
<tr>
<td>Denis Flanigan</td>
<td>Master of Science</td>
<td>Principal Investigator</td>
<td>University of Florida</td>
</tr>
<tr>
<td>Jonathan Schwartz</td>
<td>Doctorate</td>
<td>Faculty Sponsor</td>
<td>University of Houston</td>
</tr>
</tbody>
</table>

This project is (check all that are appropriate):

- [X] Unfunded Research
- ___ Candidacy/Professional Paper
- [X] Funded Research
- ___ Master's Thesis
- ___ Senior Honor's Thesis
- ___ Pilot Study
- ___ Multi-Phase Study
- ___ Longitudinal Study
- ___ Doctoral Dissertation
- ___ Independent Study
- ___ Other (specify, _____________________)

If this application supports a proposal for funding, indicate the name of the agency/organization/foundation:  ______________________________________________________ .

(One copy of the proposal must be included with this application.)

I think this qualifies for the following type of review:

[ ] Exempt Category #__________ (submit original only)
[ X] Expedited Category #__________ (submit original plus 2 copies)
[ ] Full Review (submit original plus 10 copies for Committee 1 and original plus 5 for Committee 2)

Note: Committee 2 includes all departments in the College of Liberal Arts and Social Sciences. Committee 1 reviews all others.
PART B: RESEARCH PROJECT REVIEW SUMMARY

1. State the specific research hypotheses or questions to be addressed in this study.

This study examines whether or not cultural context or cultural self-awareness has an effect on the expression of personality on standardized personality and vocational assessment instruments with bicultural students.

2. What is the importance/significance of the knowledge that may result?

The results of this study may suggest important considerations regarding the way in which psychological assessment is conducted with bi-cultural and multicultural counseling clients. Additionally, this study could provide support for the theory that the expression of personality by bicultural individuals is dependent upon the cultural context in which they are performing.

3. Proposed Start Date (may not precede approval date): ___________________________   OR

[ X ] Upon CPHS Approval

4. Subject Population (check all that are appropriate)

[X] Adults  [ ] Elderly (65yrs and above)
[ ] Cognitively or Psychologically Impaired  [ ] Prisoners or Parolees
[ ] Children or minors (<18 in Texas and most states)  [ ] Institutional Residents
[X] Non-English speaking  [X ] UH Faculty, Staff, or Students

a. Expected maximum number of participants 120 ___________________________________

b. Age of proposed subject(s) (check all that apply):

[ ] Infants (2yrs and under)
[ ] Children (3yrs–10yrs)     [ ] Adolescents (11yrs-14yrs)       [ ] Adolescents (15yrs-17yrs)
[X] Adults (18yrs-64yrs)       [ ] Elderly Adults (65yrs and above)

b. Inclusion/Exclusion:

Describe criteria for inclusion and exclusion of subjects in this study. Include justification, how it will be determined, and by whom.

Inclusion Criteria:

Participants must self-identify as Latino/a.

Exclusion Criteria:

Participants must be able to converse in and read Spanish and English.

Justification:

The procedures require participants to perform reading and conversing in both Spanish and English.

Determination:

Participants will self-select for inclusion/exclusion based on stated criteria.
d. If this study proposes to include children, this inclusion must meet one of the following criterion for risk/benefit assessment according to the federal regulations (45 CFR 46, subpart D). Check the appropriate box:

[ ] (404) Minimal Risk
[ ] (405) Greater than minimal risk, but holds prospect of direct benefit to subjects
[ ] (406) Greater than minimal risk, no prospect of direct benefits to subjects, but likely to yield generalizable knowledge about the subject’s disorder or condition.

Explain the justification for the selected category:

5. If the research involves any of the following, check all that are appropriate:

[ ] Interview
[ ] Clinical Studies
[X] Survey/Questionnaire
[X] Behavioral Observation
[ ] Study of Existing Data
[ ] Study of Human Biological Specimens
[ ] Deception
[ ] Waiver of Consent
[ ] Venipuncture
[ ] Other (specify) __________________
[ ] Data Analyses Only

6. Location(s) of Research Activities:

[X] UH campus          [X] Other (specify) University of Florida, University of St. Thomas __________

Note: A letter of approval from sites other than the University of Houston must be included with the application. If it is not available, please explain:

University of Houston is the primary data collection point and procedures at other universities will be influenced by the approval and suggestions of the University of Houston Committees for the protection of Human Subjects.

OR

Request for approval by all data collection sites have been submitted simultaneously. Letters of approval from other participating sites can be made available to the University of Houston Committees for the Protection of Human Subjects as received.

7. Informed Consent of Subjects: Your study protocol must clearly address one of the following areas:

[X] Informed Consent. Signed informed consent is the default. A model consent is available on the CPHS website and should be used as a basis for developing your informed consent document. If applicable, the proposed consent must be included with the application. (www.research.uh.edu, then click on “human subjects”) ATTACH COPY OF PROPOSED CONSENT DOCUMENT

[ ] Cover Letter. You may request a waiver of documented informed consent with Appendix A – Request for Waiver of Documentation of Consent. ATTACH COPY OF PROPOSED COVER LETTER AND APPENDIX A.

[ ] No Informed Consent. You may request a waiver of informed consent with Appendix B – Request for Waiver/Modification of Informed Consent. If applicable, a copy of the modified consent document is required. ATTACH APPENDIX B.
NOTE: Studies including deception must qualify for waiver of consent. A modified version of a consent document to be used in deceptive research studies as well as a debriefing form must be included with the application.

PART C: RESEARCH PROTOCOL

8. Describe the research study design. (Describe the research methods to be employed and the variables to be studied. Include a description of the data collection techniques and/or the statistical methods to be employed.)

The study examines the test-retest reliability of instruments given across different cultural contexts. The participants will be randomly assigned to one of four conditions. The conditions will be distinguished by the cultural-saliency priming of the first and second administrations, such that in two conditions participants will be culturally primed the same in both administrations (either English/American or Spanish/Latino) and in the other two conditions participants will be culturally primed differently across the two administrations (either English/American and then Spanish/Latino or Spanish/Latino and then English/American).

The participants’ responses will be compared across the two administrations to determine the mean correlations for each condition. The group means will then be compared across groups to determine if there is a significant difference related to consistent or inconsistent cultural saliency in the expression of personality.

9. Describe each task subjects will be asked to perform.

Within a culturally primed environment, participants will be asked to complete a collage. As part of the Spanish/Latino administrations participants will be directed to create a collage with the theme of “Me as a Latino/a,” or “My Latino Heritage.” As part of the English/American administrations participants will be directed to create a collage with the theme of “Me as an American” or “My American Experience.” Linguistically/culturally-appropriate magazines will be available for the construction of the collage.

Following the construction of the collage, participants will be directed to complete three standard instruments assessing personality traits and a demographics questionnaire.

The participants will be asked to return in two weeks and repeat these procedures in either the same or a different context and instrument language.

10. Describe how potential subjects will be identified and recruited? (Attach a script or outline of all information that will be provided to potential subjects. Include a copy of all written solicitation, recruitment ad, and/or outline for oral presentation.)

Potential participants will be recruited through a number of methods.
(1) Participants will be recruited through the SONA system.
(2) Participants will be recruited directly through various courses, flyers, and at a table set up in the University Center.
11. Describe the process for obtaining informed consent and/or assent. How will investigators ensure that each subject’s participation will be voluntary (i.e., free of direct or implied coercion)?

Upon arriving at the first scheduled experimental session, participants will be greeted by an experimenter who will provide the students with an informed consent form in either English or Spanish. Each participant will be asked to read the form and encouraged to ask any questions or raise any concerns about participation. Students will not be permitted to participate in the study until after they have provided their consent in writing. The informed consent form will stipulate that participants may withdraw from the study at any time without penalty, though they may not be fully eligible for some incentives, and that investigators will not withhold benefits to participants to which they would otherwise be entitled.

12. Briefly describe each measurement instrument to be used in this study (e.g., questionnaires, surveys, tests, interview questions, observational procedures, or other instruments) AND attach to the application a copy of each (appropriately labeled and collated). If any are omitted, please explain.

Instruments consist of 3 standard measures of personality characteristics, the Self Directed Search (SDS), the NEO Personality Inventory-Revised (NEO PI-R), and the Almost Perfect Scale-Revised (APS-R). These measures and a brief demographics survey will be administered in either Spanish or English. Both language forms of the measures are versions released by the publishers or authors of the scales. The demographics survey was translated into Spanish by a Cuban immigrant and back-translated by a Mexican American, both of whom are native Spanish speakers for over 30 years. The informed consent was translated into Spanish by a Mexican national, educated in the United States and back-translated by a Mexican American who has been a native speaker of Spanish for more than 30 years.

13. Describe the setting and mode for administering any materials listed in question 12 (e.g., telephone, one-on-one, group). Include the duration, intervals of administration, and amount of time required for each survey/procedure. Also describe how you plan to maintain privacy and confidentiality during the administration.

Instruments will be administered in groups of 5 to 30 persons. During each administration the rooms will be designed to further prime for cultural saliency. The Spanish/Latino administrations will occur in Spanish and involve Spanish versions of the instruments in rooms in which images of Latino culture are displayed, Latino/Spanish language pop music will be played, and Latin food will be made available. The English/American administrations will occur in English and involve English versions of the instruments in rooms in which images of American culture are displayed, American/English language pop music will be played, and traditionally American food will be made available.

Each administration is expected to take 90-120 minutes and participants will be asked to return for a second administration of equal length 2 weeks later.

Participants will complete the instruments anonymously using a code. A key matching participants’ names with their codes will be maintained by the principle investigator as a password protected Excel file. This file will be deleted upon completion of the second administration and all results from the first and second administrations are matched. Participants’ answers will be maintained by the principle investigator in a locked cabinet.

14. Approximately how much time will be required of each subject? Provide both a total time commitment as well as a time commitment for each visit/session.

Total time commitment requested of participants is 4 hours, across 2 sessions. Each session is expected to last 90-120 minutes and will occur 2 weeks apart.
15. Will subjects experience any possible risks involved with participation in this project?

- Risk of Physical Discomfort or Harm [ ] YES [X] NO
- Risk of Psychological Harm (including stress/discomfort) [ ] YES [X] NO
- Risk of Legal Actions (such as criminal prosecution or civil sanctions) [ ] YES [X] NO
- Risk of Harm to Social Status (such as loss of friendship) [ ] YES [X] NO
- Risk of Harm to Employment Status [ ] YES [X] NO
- Other Risks [ ] YES [X] NO

If yes to any of the above, please explain. Describe procedures, if any, to address risk (such as referrals to agency or other source).

16. Does the research involve any of these possible risks or harms to subjects? Check all that apply.

[ ] Use of a deceptive technique (attach debriefing)
[X] Use of incomplete or generalized information to the subject regarding the actual purpose of the study (attach debriefing)
[ ] Use of private records (educational or medical records)
[ ] Manipulation of psychological or social variables such as sensory deprivation, social isolation, psychological stresses (attach debriefing)
[ ] Any probing for personal or sensitive information in surveys or interviews
[ ] Presentation of materials which subjects might consider sensitive, offensive, threatening or degrading
[ ] Possible invasion of privacy of subject or family (may require additional consent)
[ ] Other, specify: __________________________________________________________________________

17. What benefits, if any, can the subject expect from their participation?

Participants may gain a better understanding of themselves and will be allowed to leave with a summary of one measure of personality.

18. What inducements or rewards (e.g., financial compensation, extra credit, and other incentives), if any, will be offered to potential subjects for their participation?

Rewards will be offered in two ways.

(1) Participants recruited through SONA system will be given extra credit in their courses.
(2) Participants recruited directly through various courses, flyers, and at a table set up in the University Center will be offered $25 for their full participation.

Participants recruited through both means will additionally be induced through the offer of free food and the opportunity to improve counseling for Latino/as.
PART D. RESEARCH DATA

19. Will you record any direct identifiers, names, social security numbers, addresses, telephone numbers, patient or student ID numbers, etc.?

[X] Yes  [ ] No

If yes, explain why it is necessary to record findings using these identifiers? Describe the coding system you will use to protect against disclosure of these identifiers.

In order to match results from the first and second administrations, names will be associated with codes. All raw data will be identified with codes and will not contain any personally identifying information. The key matching participants’ names with their codes will be maintained by the principle investigator as a password protected Excel file. This file will be deleted upon completion of the second administration and all results are matched.

A password protected Excel file containing the names, phone numbers, and e-mail addresses will also be maintained by the principle investigator so that participants may be reminded of the second administration. This file will be deleted upon completion of the second administration.

20. Will you retain a link between study code numbers and direct identifiers after the data collection is complete?

[ ] Yes  [X] No

If yes, explain why this is necessary and state how long you will keep this link.

21. Will anyone outside the research team have access to the links or identifiers?

[ ] Yes  [X] No

If yes, explain why and to whom.

22. Where, how long, and in what format (such as paper, digital or electronic media, video, audio or photographic) will data be kept? In addition, describe what security provisions will be taken to protect these data (password protection, encryption, etc.). [Note: University of Houston’s policy on data retention requires that research data be maintained for a minimum of 3 years after completion of the project.]

Raw data without any personally identifying information will be maintained on paper in a locked cabinet until 5 years following the completion of data analysis. During the data analysis process raw data will be converted into an Excel file for computerized analysis. This file will be maintained on the principle investigator’s computer and in an electronic storage device for 5 years following completion of data analysis.

A password protected Excel file containing the key matching participants’ names and contact information with their codes will be maintained by the principle investigator until all data from the first and second administrations are matched.
PART E: CERTIFICATIONS

PRINCIPAL INVESTIGATOR – I hereby acknowledge and accept the responsibility for protecting the rights and welfare of all participating subjects in accordance with federal and institutional policies and procedures. Furthermore, I certify that:

- NO involvement of human subjects in this project will begin before written approval of the Committees for the Protection of Human Subjects has been received.
- Any additions or changes to this protocol will require the submission of a Request for Revision form and for the review and approval by the Committees for the Protection of Human Subjects prior to initiation.
- Written documentation of any unanticipated problems or injuries connected with an approved protocol must be provided to the Committees for the Protection of Human Subjects (713-743-9204) within 5 working days.
- All signed consent documents will be retained for at least 3 years past the completion of the research activity. (Note: Faculty sponsors are responsible for retaining signed consents for student projects.)
- The institution has provided me with a copy of the approved Institutional Assurance (either the electronic or manual form) and has provided access to the Belmont Report and the appropriate sections of the Public Law governing this Assurance, 45 CFR 46.

__________________________________________________      _____________________
Signature of Principal Investigator                                                   Date

FACULTY SPONSOR (required for all students) – I hereby acknowledge and accept the responsibility for supervision of this study to ensure the protection of the rights and welfare of all participating subjects in accordance with federal and institutional policies and procedures. After careful review of this application, I further certify:

- The accuracy of the information stated in this application AND
- The scientific merit of the proposed project.

__________________________________________________      _____________________
Signature of Faculty Sponsor                                                            Date

DEPARTMENT CHAIR/DEAN (not required if exemption is claimed) – I hereby confirm the accuracy of the information stated in this application. I am familiar with and approve of the procedures that involve human subjects.

__________________________________________________      _____________________
Signature of Chair/Dean                                                             Department/College                  Date

CPHS Application
Updated:  7/2006
Informed Consent Form-UH

This study involves research designed to improve counselors’ use of vocational assessment instruments with bicultural college students. This study consists of two parts and entails completion of a self-awareness exercise followed by the completion of a few questionnaires, which will take approximately 40-60 minutes of your time. You will be requested to return in one month to complete the second portion of the study, which is expected to take an additional 40-60 minutes. By participating in this study you have the opportunity to earn a food services gift certificate for your student organization. Your student organization will earn 1 (one) point for your completion of the first portion and 5 (five) points for your completion of the second portion. The student organization that earns the most points will receive a $100 gift certificate and the student organization that earns the second highest number of points will receive a $50 gift certificate.

There is no anticipated risk to you for participating in this study. Although it will be most helpful if you are able to fully complete the questionnaires, you may choose not to answer selected questions and still receive credit for your participation. You are free to withdraw from the study at any time without penalty. Your name will be associated with your responses through a code system in which the key to the code is password protected on a secure computer, so your identity will be confidential to the extent provided by law.

Please ask any questions you may have by contacting me by e-mail at < > or by mail at Department of Psychology, 114 Psychology Building, Gainesville, FL 32611-2250. You may also direct your questions or concerns to my advisor, Dr. Ken Rice by e-mail at < > or by mail at Department of Psychology, 114 Psychology Building, University of Florida, Gainesville, FL 32611-2250. If you have any questions about your rights as a participant in a research project, please contact the University of Florida Institutional Review Board at < >, by e-mail at < >, or by mail at UFIRB, University of Florida, Box 112250, Gainesville, FL 32611-2250.

In the unlikely event that answering any of the questions makes you aware of personal problems or concerns, you may choose to seek help in resolving these issues. The UH Counseling and Psychological Services is located in Student Services Center 1, Room 226. The telephone number there is < >.

I have read and understand the procedure described above. I agree to participate and have received a copy of this form.

Name (Please Print)________________________________________

Signature_________________________________________________

Date_________________

Thank you for your participation.

Denis "Woodja" Flanigan
Principle Investigator

Dr. Ken Rice
Research Advisor
APPENDIX C

SAMPLE REMINDER E-MAIL

Study Participation Reminder

Date: 3/23/2009

To: 

BCC:

You are receiving this e-mail as a reminder that you agreed to participate in my study of vocational assessment with bilingual Latino/as.

The second half of the study will occur Monday March 23rd from 1-3pm at the University Houston Main Campus in room 416 of Farish Hall.

As compensation for your time you may receive either $25 OR four (4) University of Houston-Main Campus Psychology Department Research Extra Credits upon completion of both parts of this study.

I have included a link to a map of the University of Houston-Main Campus. On this map Farish Hall is building 587. http://www.uh.edu/plantops/images/pts_maps/uh_map__legend.pdf

If you have any questions, please contact me at [email] or [email].

Denis "Woodja" Flanigan, M.S., L.P.A.
REFERENCE LIST


Rodriguez, R. (2004). Tapping the Hispanic labor pool: Creating an effective employment brand is the best way to successfully recruit from the nation’s fastest-growing demographic group. HR Magazine, 49, 73-79.


BIOGRAPHICAL SKETCH

Denis “Woodja” Flanigan was born in 1968 in Twin Falls, ID. The youngest of six children, he moved from Idaho to Bridgeport NY, just outside of Syracuse when he was six months old. Four years later, his family moved to Amsterdam, NY, where his family expanded to include an older live-in foster sister. After a year and half in Wethersfield, CT, his family moved to Frederick, MD, where he graduated from Gov. Thomas Johnson High School in 1987.

After high school he entered the University of Maryland, where, after two years of declining performance as a Zoology major, he dropped out, and shortly thereafter cut off ties with his parents. During his five year hiatus from school, Woodja re-established a rewarding relationship with his parents. He returned to the University of Maryland in 1994, to major in Psychology and American Multicultural Studies, a self-designed major. Throughout college he volunteered at local and national GLBT rights and service organizations in Washington, DC—where he acquired his nickname, and remained on the dean’s list the next five years, graduating cum laude in 1999.

After graduation from college, Woodja entered the Counseling Psychology Program at the University of Florida focusing on the particular needs of multicultural counseling clients and on career counseling. He received his M.S. in Psychology in 2004 and served as Interim Associate Director for Career Education at the University’s Career Resource Center for a year. He completed his pre-doctoral internship at the University of Houston Counseling and Psychological Services. He resides in Houston, TX, where he shares a home with his partner of ten years, Ed Crain, and has a psychotherapy practice specializing in non-traditional relationships and lifestyles. He has garnered a reputation with these communities around the state, and has won two state-wide leather titles. He received his Ph.D. from the University of Florida in the summer of 2011.