Convergence between the new California Psychological Inventory and the 1994 Strong Interest Inventory

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Convergence between the New California Psychological Inventory and the 1994 Strong Interest Inventory

by

Courtney Elaine Gasser

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Psychology

Program of Study Committee:
Lisa Larson, Major Professor
Frederick Borgen
Florence Hamrick

Iowa State University

Ames, Iowa

2002

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Graduate College
Iowa State University

This is to certify that the master’s thesis of

Courtney Elaine Gasser

has met the thesis requirements of Iowa State University

Signatures have been redacted for privacy
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CHAPTER 1. INTRODUCTION

Introduction

Recently, the relationship between personality and career interests has sparked much research interest among vocational psychologists (Borgen, 1999). Many studies have looked at the interest piece of this overlap using versions of the Strong Interest Inventory (SII; Harmon, Hansen, Borgen, & Hammer, 1994) and measures of personality such as the NEO-Personality Inventory-Revised (Carless, 1999; Gottfredson, Jones, & Holland, 1993; Tokar & Swanson, 1995). However, no published studies were found that have looked specifically at the overlap using the 1994 SII and the California Psychological Inventory. Historically, the CPI has been known for its emphasis on pragmatic evaluation of the individual's personality (Groth-Marnat, 1990), and currently is one of the most common personality measures for normal populations used by counselors today (Bubenzer, Zimpfer, & Mahrle, 1990). In the past, researchers have looked at the CPI and the Strong to examine some third variable, but no published studies have investigated the overlap between the two themselves. It was important for the field to gain a more balanced view on this overlap by examining results gained from multiple measures of personality. In doing so, we became better informed and have greater insight into the relationship between personality and vocational interests.

For over 40 years, the California Psychological Inventory has been studied and applied in a variety of contexts in conjunction with countless other measures. However, an exciting new dawn has begun for the CPI now that its newest version has been developed, the CPI 260. The CPI’s short form demonstrated considerable promise in aiding career counselors work with clients, as it made it easier to incorporate personality information to gain insight into the intersection of personality with client interests. Anticipating this new era
for vocational psychology, this study looked at the CPI's relationship to the construct of interests, operationalized by the SII. This work centered on the conceptual interplay of personality and interests.

In this introduction, the CPI and the SII have each been discussed, followed by a review of the relevant literature concerning the two measures. First, findings from studies using the earlier versions of the CPI and the SII (namely, the Strong Vocational Interest Blank, SVIB) have been explored. Next, studies that used later versions of the two measures have been discussed; specifically, those that predict personality according to group membership and that predict performance using personality. Also, one study was reviewed which used personality in interest measurement in developing other scales. Finally, the introduction ended with the review of studies on the CPI personality and SII vocational interest overlap.

The CPI

The CPI 260 is a 260-item personality inventory, comprised of 10 folk scales, 7 special interest scales, and 3 vector scales. The CPI was constructed with the idea that personality would be measured in terms of everyday language that anyone would use, and thus the first 20 scales of the CPI are called folk scales (Gough & Bradley, 1996). See Table 1.1 for descriptions of these scales. The 3 vector scales portrayed the dimensions of introversion/extroversion, norm-favoring/norm-disfavoring, and ego integration/nonintegration. Finally, the 7 special-purpose scales were designed to select individuals for specific purposes.

Historically, the CPI has been used in conjunction with many different vocational interest inventories in order to probe into the overlap of career interests and personality.
(Vocational Preference Inventory: McDermd, 1965; McDermid, 1965; Kuder Preference Record: Springob, 1963; Becker, 1977; Gowan, 1957; Self-Directed Search: Aldrich, 1992; Walsh, 1974). Here, the focus has been on the CPI and the Strong Interest Inventory (SII; Harmon, et al, 1994). Similar to the CPI, the SII has undergone multiple revisions; thus, the previous versions such as the Strong-Campbell Interest Inventory (SCII; Hansen & Campbell, 1985) and the Strong Vocational Interest Blank (SVIB) have been reviewed here as well.

The Strong

The 1994 SII is a 317-item measure that assessed vocational interests (Harmon, et al, 1994). For the purposes of this study, the 6 General Occupational Theme (GOTs) and the 25 Basic Interest Scales (BISs) have been used.

It was important to note that the SII has undergone at least five revisions; however, only those most recent versions that have been looked at in conjunction with the CPI will be reviewed here. Namely, these relevant versions included the SVIB, the SCII, and the most recent 1994 SII.

Early Studies Using the SVIB and the CPI

As an earlier version of the Strong, the SVIB only contained occupational scales. Beginning with the earliest versions of the two inventories, studies focused on the overlap between the CPI and the SVIB have researched topics such as scale validation or inquiry (Dunnette, Kirchner, & DeGidio, 1958; Johnson, Nelson, & Flammer, 1975) and group differences (Korn, 1962; Durflinger, 1963; Gough & Hall, 1977; Helson, 1978).

Concerning scale validation, Johnson et al (1975) looked at construct validity of the SVIB Occupational Scales (OS) by correlating these scales with the CPI. Through factor
analysis, the number of CPI scales were reduced to five factors in order to decrease folk concept overlap. The authors thought this would allow clearer multiple correlations with the SVIB. These five factors accounted for 77.4% of the CPI scales variance. Factor I (24.7% total variance) was comprised of Self Control, Good Impression, Achievement via Conformance, Well-being, Tolerance, and Responsibility, and was considered to represent the individual’s social adjustment. Factor II (20.8% total variance) involved Self-acceptance, Sociability, Dominance, Capacity for Status, and Social Presence; this factor was named “social poise and extroversion”. Factor III (14.3% total variance) constituted thought independence, and involved Flexibility, Achievement via Independence, and Tolerance scales. Factor IV (9.0% total variance) involved Communality and Socialization and represented conventionality, and Factor V (8.5% total variance) was a measure of sensitivity via the Femininity scale (renamed the Psychological Mindedness scale in the 2002 CPI). Interestingly, these five factors correlated with 48 of the Occupational Scales (OSs) of the Strong with a median value of .44. The OS President-Manufacturing Concern and OS Osteopath showed the lowest correlation (.24), and the OS School Superintendent was the highest correlation (.64). All were significant at the .01 level (Johnson, et. al, 1975).

Basically, the OSs which correlated most highly with the CPI factors were skilled trades (e.g. Carpenter) and social services (e.g. Social Worker). Also, three of the CPI factors matched up with Holland’s RIASEC dimensions; namely, extroversion (Factor II) with Social, independent thought (Factor III) with Artistic and Investigative, and emotional sensitivity (Factor V) with Artistic and Social dimensions (Johnson, et. al, 1975).

Some of these interesting RIASEC findings were replicated in Helson’s (1978) work. Helson tested Holland theory pertaining to the personality of writers and critics, and found
that both groups had high SVIB scores in Artistic (authors: $M = 55.47$, $SD = 8.38$; critics: $M = 51.06$, $SD = 7.93$) and low scores on Conventional (authors: $M = 9.32$, $SD = 6.65$; critics: $M = 14.92$, $SD = 8.84$). On the CPI, both groups had a peak score on the Achievement via Independence scale. Gender differences were found on Femininity ($p<.005$), Socialization ($p<.01$), and Social Presence ($p<.03$). In sum, the results supported the part of Holland theory that predicts writers and critics have high Artistic and Investigative interests.

Though not incorporating RIASEC directly, Dunnette et. al (1958) examined the CPI, Edwards Personal Preference Schedule, and the SVIB to further delineate what different personality measurements meant in terms of the SVIB interest scales. The SVIB measures which involved interacting with people (e.g. sales) were positively related to CPI dimensions of Dominance, Self-acceptance, Sociability, and Good Impression ($p<.05$). Similar to the Johnson et. al (1975) findings, Dunnette et. al (1958) found that the SVIB scales involving personal contact (e.g. YMCA Secretary, Minister, Personnel Director, Social Worker, City School Superintendent, Social Science Teacher) positively correlated with CPI Dominance, Capacity for Status, Sociability, Social Presence, Responsibility, Tolerance, Good Impression, Achievement via Conformance, and Conceptual Fluency ($p<.05$).

However, SVIB scales for Physicist, Mathematician, Engineer, Chemist, and other skilled trades correlated negatively on Dominance, Sociability, Social Presence, and Self-acceptance; yet, these SVIB scales correlated positively on Psychological Mindedness ($p<.05$). The managerial SVIB scales correlated negatively on Social Presence and Self-acceptance, but positively on Self Control and Psychological Mindedness ($p<.01$). Finally, SVIB Bankers, Morticians, and Pharmacists correlated negatively with Psychological Mindedness and Flexibility but positively on Well-being and Good Impression ($p<.01$).
These findings showed how certain vocations tended to relate with different personality traits (Dunnette et. al, 1958).

Korn (1962) and Durflinger (1963) also examined variations in personality traits via specific career interests. Korn (1962) looked at score differences of engineer majors and physical science majors on the CPI and SVIB. Using Chi square analysis, Korn (1962) found that physical science majors had higher Femininity ($p < .01$), Capacity for Status, Responsibility, Achievement via Independence, and Flexibility scores than engineer majors ($p < .05$). However, engineers had higher Sociability, Communality, and Social Presence scores. The most striking finding here was that the Femininity scale showed that physical science majors tended to be more sensitive and conscious of ethical issues than engineering majors (Korn, 1962).

Durflinger (1963) looked at the CPI, SVIB, and other measures to see if they were valid for predicting student teachers’ effectiveness, and what traits underlie that effectiveness. Effectiveness was determined by student teachers grades and by a teacher rating scale (filled out by the student teacher’s supervisors). Here, Achievement via Independence and Flexibility negatively correlated at the .01 level with the rating scale, indicating that successful student teachers like routine, structured work (Durflinger, 1963). Sociability and Socialization correlated positively with grades, whereas Self-acceptance, Psychological Mindedness, Communality, Achievement via Independence, and Flexibility correlated negatively with grades ($p < .01$; Durflinger, 1963). This finding suggested that student teachers accepted rules and regulations, liked to be around people, doubted themselves, looked at behavior rather than inner processes, saw themselves as different from others, or again enjoyed structure and routine. Only the SVIB scales of Elementary Teacher
and Femininity-Masculinity were used in this study, and neither correlated highly with either grades or ratings (Durflinger, 1963).

Finally, Gough & Hall (1977) studied different variable contributions to whether physicians would respond to mailed questionnaires. Regarding the CPI, it was found that physicians who did not return questionnaires had higher scores on Good Impression and Self Control, but those who did return it scored higher on Conceptual Fluency. This inferred that returnees cared more about what other people think, were more likely to speak out, or tended to stay focused completing tasks. On the SVIB, physicians returning the questionnaire scored higher on Sales Manager scale, but lower on Psychiatrist and Interest Maturity than those who did not return it ($p < .05$). Gough & Hall (1977) concluded that there was not a high magnitude of difference between the two groups.

In summary, these early studies on the SVIB and the CPI have indirectly found certain relationships between the two measures. Using the current SII's categorization of the OSs into GOTs, we saw that Realistic engineers score higher on CPI dimensions such as Sociability, Communality, and Social Presence than Investigative physical science majors (Korn, 1962). Also, we have known that teachers' (a Social occupation) effectiveness can be in part predicted from high CPI dimensions of Socialization and Sociability and low scores on Psychological Mindedness and Flexibility (Durflinger, 1963). According to Johnson, Nelson, & Flammer (1975), "social" CPI dimensions like Self-acceptance, Socialization, Dominance, Capacity for Status, and Social Presence were negatively correlated with Holland's Investigative and Realistic dimensions. Also, an independent thought dimension (considered by the authors as representing Artistic and Investigative dimensions) involving
CPI scales of Flexibility, Achievement via Independence, and Tolerance correlated negatively with Conventional and Enterprising.

These studies on the precursors of today's SII (the SVIB) and CPI gave insight into the meaning of the scales themselves and how the measures could have been used to portray group differences. However, more recent work with newer versions provided information between groups in terms of differences and similarities in membership (Murray, 1981) and performance (Stevens, Hemstreet, & Gardner, 1989; Gough, Bradley, & McDonald, 1991; Dyer, 1987). Also, different constructs have been tested in recent work (Lawson, 1993).

Studies Using Later Versions of the SII and the CPI

Predicting Personality According to Group Membership. In regards to group membership research, Murray (1981) used both the SVIB and the SCII, in conjunction with the CPI and the Minnesota Importance Questionnaire (MIQ), to look at personality differences between adult women with low- versus high-scoring interest profiles. Murray (1981) used multiple analysis of covariance and multiple analysis of variance to look at the CPI and MIQ scales scores between the low and high profile groups. For both the SVIB and SCII samples, Murray found that groups differed significantly on the CPI dimensions of Dominance, Capacity for Status, Socialization, Social Presence, Self-acceptance, Responsibility, Achievement via Conformance, Conceptual Fluency, and Psychological Mindedness ($p < .05$). However, in the SCII sample low profile women scored higher on Self Control and Psychological Mindedness. The Chi square analysis showed that high profile women had a preference for oral and written communication and leadership for both the SVIB and SCII samples (Murray, 1981).
Also, it was found that women with high profiles on both the SVIB and the SCII preferred writing, public speaking, law, politics, or managerial career items significantly more than women with low profiles (Murray, 1981). Additionally, low profile women did not have high preferences for SVIB and SCII academic orientation scales and career extroversion dimensions (Murray, 1981).

**Predicting Performance Using Personality and Interests.** While Murray’s (1981) work focused on differences on personality scores between interest profiles, others have focused on predicting performance using personality and interest variables. For example, Stevens, Hemstreet, & Gardner (1989) explored the ability of temperament, personality, and interest scores to predict success in the U.S. Coast Guard Academy. Defining success as cadet graduation, Stevens et. al used discriminant analysis clusters to group women and men who resigned from the program or graduated. Though the discriminant analysis itself showed low predictability (accuracy for women was 54% and for men was 56%), this study had interesting data on the CPI and SCII scales. Statistically significant CPI differences between those women who resigned and graduated included Capacity for Status, Good Impression, Conceptual Fluency, and Flexibility scales at the $p < .05$ level; Sense of Well-being at $p = .10$; Achievement via Conformance at $p = .005$ (Stevens & Gardner, 1984). Those women who graduated scored higher on all scales, with the exception of Flexibility scores that were lower than those women who resigned. The finding of differentiation on the Flexibility scale ($p = .05$) was replicated in the Stevens & Hemstreet (1986a, 1986b) data. Also, SCII scales such as Domestic Arts, Military Activities, and Sales differed significantly at the .05 level for female cadets who resigned or graduated (women who graduated were higher on Military Activities only; Stevens & Hemstreet, 1986a, 1986b). For male cadets, the SCII scale of
Athletics \((p=.05)\) as well as CPI scales of Responsibility \((p=.05)\) and Masculinity \((p=.07)\) differed significantly. The men who graduated scored higher than those who resigned on all three scales.

Gough, Bradley, and McDonald (1991) were more successful in using personality and interest variables in prediction. Gough et. al (1991) studied factors contributing to high performance of anesthesiology residents, using faculty ratings of the students in their second year as the criterion. For males, correlations with performance and CPI scores were significant for Independence, Responsibility, Socialization \((p<.05)\); for both females and males overall, correlations were significant for Independence, Empathy, Socialization, Well-being, Achievement via Conformance \((p<.05)\). Regarding interests, significant correlations with the SII and performance were found for females on the General Occupational Theme (GOT) Investigative and the Basic Interest Scale (BIS) Science \((p<.05)\). Based on these data, Gough et. al used multiple regression on the four primary personality traits (Empathy, Socialization, Achievement via Conformance, and Achievement via Independence) to regress against the faculty ratings in year two. They found that better performance in the anesthesiology residency program could be significantly predicted from higher scores on these personality traits (Gough, et. al, 1991).

Not only anesthesiology student performance could be predicted from personality. Dyer (1987) found that personality factors helped predict nursing students' college success and first year job performance. This study measured college success in terms of university grades, nursing school grades, and American College Testing scores, and measured job performance by supervisors' ratings. These students scored highly on the SCII measures of medical service, medical science, and domestic activities; on the CPI, students scored highly
on Dominance, Capacity for Status, Achievement via Conformance, and Achievement via Independence. Results showed that using stepwise multiple regression analysis with the SCII and CPI scores predicted grade point average (GPA) and job performance at the .01 level, explaining approximately 30% of the variance in grades and 90% of the variance in job performance. Of this, the CPI accounted for 3 to 5% of the variance and SIi accounted for 1%. Also, when used alone, the CPI accounted for 7% of nursing GPA and 12% of university GPA. In short, students who were high on SCII scales of Medical Services, Medical Sciences, Social Services, and Domestic Arts, and scored highly on CPI scales of Dominance, Capacity for Status, Socialization, Social Presence, Self-acceptance, Achievement via Conformance, and Achievement via Independence should have considered a career in nursing (Dyer & Winward, 1995).

In summary, this research which predicted performance using personality yielded some interesting patterns. For example, Self-Acceptance and Dominance were both generally predictive of performance differences for those high performers in nursing programs and those who successfully completed the U.S. Coast Guard Academy (Stevens, Hemstreet, & Gardner, 1989; Dyer, 1987). Successful nursing students scored highly on Medical Service and Medical Science interests, whereas female U.S. Coast Guard graduates scored highly on Military Activities and male graduate scored highly on Athletics interests. Also, high means of those in the nursing program and those well-performing anesthesiology residents were both high on the Achievement via conformance scale (Gough, Bradley, & McDonald, 1991; Dyer, 1987). More successful female anesthesiology residents scored highly on Investigative interests. Finally, those Coast Guard Academy graduates and well-performing anesthesiology
residents both scored highly on their CPI dimension of Well-being (Gough, Bradley, & McDonald, 1991; Stevens, Hemstreet, & Gardner, 1989).

Other Use of Personality in Interest Measurement. As has been discussed, most of the studies involving the CPI and the SII have focused on prediction. However, one study was markedly different; Lawson (1993) used these trait measures to quantify the constructs used in the Theory of Work Adjustment (TWA). In study 1, expert raters chose CPI items to create new scales representative of the TWA constructs intolerance, activeness, and reactiveness (Lawson, 1993). Intolerance referred to a person having no patience for discorrespondence; that is, the person experienced a weak match with her or his work environment and the requirements of that setting. Activeness referred to the person changing their work environment to achieve greater vocational satisfaction, and reactiveness referred to the person changing herself or himself to fit the work environment. Lawson wrote that the CPI was used since “it represents a large collection of heterogeneous items.” However, it was not reported which items or existing CPI scales went into the newly created scales. In study 2, validation of the personality scales was achieved by correlating GOTs of the SCII to the MIQ (Lawson, 1993).

These collective 11 studies focused on the overlap between interests and personality, as measured by the Strong and the CPI, respectively. However, other studies have focused on interests and personality as well, though using different measures of these constructs. For our purposes, three studies representing this other existing body of research have been presented; namely, the personality-interest overlap paper by Larson & Borgen (2002), the meta-analyses on the same by Larson, Rottinghaus, & Borgen (2002), and the study by Staggs, Larson, & Borgen (in press) which looked at interests overlap using a different personality instrument.
The reason for the inclusion of these three papers was that they covered a large part of the work on vocational interests and personality relevant to this study.

*Vocational Interests and Personality Overlap*

First, Larson & Borgen (2002) presented this overlap in terms of the SII, the NEO-Personality Inventory-Revised (Costa & McCrae, 1992), and the MPQ using a sample of gifted adolescents. Both the NEO-PI-R and the MPQ represented measures of the domain of personality, whereas the SII again measured vocational interests. This study offered 10 theoretically-consistent hypotheses on the Big Five (personality: Neuroticism, Extraversion, Openness to Experience, Agreeableness, Conscientiousness) and Big Six (interests: Realistic, Investigative, Artistic, Social, Enterprising, Conventional) facet scales overlap. These 10 hypotheses were driven by 8 previous studies’ general findings. According to Larson & Borgen (2002), these prior studies basically reported the following relationships: Artistic with Openness to Experience, Enterprising with Extraversion, Social with Extraversion, Investigative with Openness to Experience, Social with Agreeableness.

Among the extensive findings reported by Larson & Borgen (2002), their general results supported the five findings named above. Extraversion correlated with Enterprising at .29 and with Social at .38. Agreeableness correlated .33 with Social. Also, Openness correlated .27 with Investigative and .62 with Artistic. Notice that the interest dimensions of Realistic and Conventional did not correlate significantly with any of the Big Five personality dimensions.

Concurrently, Larson, et. al’s (2002) study addressed some of the same findings in their meta-analyses, though this study looked at the Big Six in terms of the Self-Directed Search (SDS), the SII, and the Vocational Preference Inventory (VPI), and the Big Five in
forms of the NEO-PI-R. This meta-analyses work was based on 12 studies with correlation matrices of the previously mentioned measures of the Big Five and Big Six. For both sexes, these results were replicated: Openness to Experience correlated .48 with Artistic and .28 with Investigative, Extraversion .31 correlated with Social and .41 with Enterprising, and Agreeableness correlated .19 with Social. However, other results were present in the meta-analyses that were not found in the literature, such as the relationships between Enterprising and Conscientiousness (.29), between Conventional and Conscientiousness (.29), between Enterprising and Neuroticism (-.24), and between Social and Openness (.22). Interestingly, some meaningful and significant results were found in terms of Big Five and Big Six relationships that differed by sex. For women, Realistic and Openness were positively related (.17) and Conventional and Openness were negatively related (-.16). For men, Conventional related significantly and positively to both Extraversion (.16) and Conscientiousness (.30; Larson, et. al, 2002).

From these studies, it was obvious that the interplay between personality and interests was an important area of research in the field of counseling and vocational psychology. The current study sought to further our knowledge regarding the overlap between personality and interests via the new CPI and the venerable Strong.
CHAPTER 2. METHOD

Participants

Data were collected from 210 students from a large upper Midwestern state taking part in an extra credit opportunity for their introductory psychology coursework. There were 120 women and 90 men in this sample. The age range of the sample was 18 to 50 years with a mean age of 20.07 ($SD = 2.42$). The ethnicity of the sample was 87% Caucasian, 5.6% African-American, 3.2% Asian or Pacific Islander, 2.3% Hispanic, and 1.9% American Indian. Participants’ year in college was as follows: 62% freshmen, 26.9% sophomores, 6.5% juniors, and 4.6% seniors. Most participants were single (96.2%), 86% of the sample had declared a major. For more information regarding the sample, see Table 2.1.

Table 2.1. Frequencies of demographic information for women, men, and total sample.

<table>
<thead>
<tr>
<th>Educational Aspirations (N=210)</th>
<th>Women %</th>
<th>Men %</th>
<th>Total %</th>
</tr>
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<tr>
<td>Some College</td>
<td>8.2</td>
<td>18.1</td>
<td>12.5</td>
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<tr>
<td>Associate’s Degree</td>
<td>1.6</td>
<td>--</td>
<td>.9</td>
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<tr>
<td>Bachelor’s Degree</td>
<td>40.2</td>
<td>50.0</td>
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<td>Master’s Degree</td>
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<tr>
<td>Professional Degree</td>
<td>18.9</td>
<td>10.6</td>
<td>15.3</td>
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<tr>
<td>Doctoral Degree</td>
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### Ethnicity (N = 210)

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<th>Ethnicity</th>
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<th>2006</th>
<th>2007</th>
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</thead>
<tbody>
<tr>
<td>African-American/Black</td>
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<td>5.3</td>
<td>5.6</td>
</tr>
<tr>
<td>American Indian</td>
<td>.8</td>
<td>3.2</td>
<td>1.9</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>1.7</td>
<td>5.3</td>
<td>3.2</td>
</tr>
<tr>
<td>Caucasian</td>
<td>91.8</td>
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<td>Latino/Latina/Hispanic</td>
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<td>5.3</td>
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### Major Declared (N = 207)

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### Marital Status (N = 209)

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<th>2007</th>
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</thead>
<tbody>
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<td>Single/Never Married</td>
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<td>94.7</td>
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<td>Engaged</td>
<td>--</td>
<td>3.2</td>
<td>1.4</td>
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<td>1.9</td>
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### Year in College (N = 210)

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<th>2007</th>
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<tr>
<td>Freshman</td>
<td>64.8</td>
<td>58.5</td>
<td>62.0</td>
</tr>
<tr>
<td>Sophomore</td>
<td>28.7</td>
<td>24.5</td>
<td>26.9</td>
</tr>
<tr>
<td>Junior</td>
<td>4.0</td>
<td>9.6</td>
<td>6.5</td>
</tr>
<tr>
<td>Senior</td>
<td>2.5</td>
<td>7.4</td>
<td>4.6</td>
</tr>
</tbody>
</table>
Procedures

Participants were given an opportunity to sign up for large group sessions on participation sheets detailing the date, time, and location of the study. Furthermore, the sheet informed participants how many extra credits the experiment was worth. The expected time for packet completion was 90 minutes, which was noted on both the sign-up sheet and announced by the investigator administering the measures.

At the beginning of the session, the investigator handed out the packets and read the informed consent statement out loud to the participants. Next, the instructions to the participants asked them to answer the inventory questions to the best of their knowledge. After completion of the packet, participants dropped off their packet to the investigator in exchange for the research credits.

Measures

*California Psychological Inventory (2002).* The California Psychological Inventory (CPI; Gough, 2002) is a 260-item measure of personality constructs, consisting of 30 scales. This CPI version is a new, shorter form than the original CPI, and is designed to be more efficient and user friendly than past versions. In 1957, the CPI consisted of 480 items; in 1987 it was revised to 462 items, and then later was reduced to 434 items (Groth-Marnat, 1990).

The CPI was constructed with the idea that personality would be measured in terms of everyday language rather than abstract lingo or professional jargon. For example, the Dominance scale represented to what degree a person is assertive and task-oriented, and should be consistent with and predictive of how that individual's family and friends would describe her or him. Also, the measured traits were present in every culture or society. Thus,
20 scales of the CPI were called folk scales to represent the terminology most persons use in day-to-day life (Gough & Bradley, 1996). These scales included Dominance, Self-acceptance, Responsibility, Flexibility, and Capacity for Status. See Table 2.2 for a complete list of these scales and their descriptions.

These folk scales were constructed using two different methods. First, most of the scales were derived from the empirical approach, where groups of individuals exhibiting the trait being measured were compared to a normal population. Second, some scales were formed using the rational approach, by examining the items’ internal consistency within each scale, and selecting items on the basis of high alphas. However, a few of the scales evolved through a combination of the two methods. This new version of the CPI reflected the streamlining of the item content of all scales.

The other 10 scales of the CPI include the 3 vector scales and the 7 special-purpose scales. First, the vector scales portrayed the dimensions of introversion versus extroversion, societal norm-favoring versus norm-disfavoring, and level of self-actualization (Gough & Bradley, 1996). Vector 1 measured introversion versus extroversion, Vector 2 measured norm-favoring versus norm-disfavoring, and Vector 3 measured level of self-actualization (an individual’s perception of how well they were meeting their life goals and potential). These were designed to capture a snapshot of the individual, and are used to classify persons into general categories of Alphas, Betas, Gammas, and Deltas. Alphas oriented towards societal norms; Betas could be humane and moralistic; Gammas preferred the social sciences; Deltas oriented towards humanities (Gough & Bradley, 1996). Second, the seven specially designed scales are used to select individuals for specific purposes, such as supervisory positions or law enforcement. These scales were Managerial Potential, Work Orientation,
Leadership, Social Maturity Index, and Creative Temperament, Amicability, Law Enforcement Orientation, and Tough-mindedness (Gough & Bradley, 1996).

Regardless of how the scales evolved, all forms of the CPI have embodied the standard where scales that were not adequately measuring personality traits were dropped from the inventory. Likewise, new scales could have been added that better express traits or measure different traits. It was important to note that the folk scales were not orthogonal to one another. In measuring traits, some traits would have some overlap with other traits, and this was reflected in the item overlap of the CPI scales. For example, it was expected that Independence and Empathy were linked, and in fact have correlated at .53 for men and at .58 for women in a sample of college sophomores (Gough & Bradley, 1996).

In this study, the new CPI was be used; the information presented here for the 1985 CPI (form 434) is largely representative of the new CPI due to their similarity. For reliability and validity information, see the California Psychological Inventory manual (Gough & Bradley, 1996).
<table>
<thead>
<tr>
<th>Scale</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dominance (Do)</td>
<td>Confident, assertive, dominant, task-oriented</td>
</tr>
<tr>
<td>Capacity for Status (Cs)</td>
<td>Ambitious, wants to be a success, has many interests</td>
</tr>
<tr>
<td>Sociability (Sy)</td>
<td>Sociable, likes to be with people, outgoing</td>
</tr>
<tr>
<td>Social Presence (Sp)</td>
<td>Self-assured, spontaneous; versatile; verbally-fluent; pleasure-seeking</td>
</tr>
<tr>
<td>Self-acceptance (Sa)</td>
<td>Has good opinion of self; sees self as talented and personally attractive; talkative</td>
</tr>
<tr>
<td>Independence (In)</td>
<td>Self-sufficient, resourceful, detached; persistent in seeking goals, whether others agree or not</td>
</tr>
<tr>
<td>Empathy (Em)</td>
<td>Comfortable about self and well-accepted by others; perceptive of social nuances, understands how others feel; optimistic</td>
</tr>
<tr>
<td>Responsibility (Re)</td>
<td>Responsible, reliable, ethically perceptive; serious about duties and obligations</td>
</tr>
<tr>
<td>Socialization (So)</td>
<td>Conscientious, well-organized; finds it easy to accept and conform to normative rules; seldom gets in trouble</td>
</tr>
<tr>
<td>Self Control (Sc)</td>
<td>Tries to control emotions and temper; suppresses hostile and erotic feelings; takes pride in being self-disciplined</td>
</tr>
<tr>
<td>Good Impression (Gi)</td>
<td>Wants to make a good impression; tries to do what will please others, sometimes to the point of being obsequious and sycophantic; short of this level, tends to be conventional, formal, and conservative</td>
</tr>
<tr>
<td>Personality Traits</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Communality (Cm)</td>
<td>Fits in easily, reasonable, sees self as a quite average person; makes little effort to change things</td>
</tr>
<tr>
<td>Well-being (Wb)</td>
<td>Feels self to be in good physical and mental health; optimistic about the future, cheerful</td>
</tr>
<tr>
<td>Tolerance (To)</td>
<td>Is tolerant of others’ beliefs and values, even when different from or counter to own beliefs; fair-minded</td>
</tr>
<tr>
<td>Achievement via Conformance (Ac)</td>
<td>Has strong drive to do well; likes to work in settings where tasks and expectations are clearly defined; efficient and well-organized</td>
</tr>
<tr>
<td>Achievement via Independence (Ai)</td>
<td>Has strong drive to do well; likes to work in settings that encourage freedom and individual initiative; clearthinking and intelligent</td>
</tr>
<tr>
<td>Conceptual Fluency (Cf)</td>
<td>Efficient in use of intellectual abilities; can keep on at a task where others might give up or get discouraged; insightful and resourceful</td>
</tr>
<tr>
<td>Insightfulness (Is)</td>
<td>Insightful and perceptive; understands the feelings of others, but is not necessarily supportive or nurturant</td>
</tr>
<tr>
<td>Flexibility (Fx)</td>
<td>Flexible; likes change and variety; easily bored by routine and everyday experience; may be impatient and even erratic; clever and imaginative, but also careless and loosely organized</td>
</tr>
<tr>
<td>Sensitivity (Sn)</td>
<td>Among males, high-scorers tend to be seen as high-strung, sensitive, and esthetically reactive; females with high scores tend to be seen as sympathetic, warm, and modest, but also dependent</td>
</tr>
</tbody>
</table>

Table adapted from Gough & Bradley (1996)
Strong Interest Inventory (SII; Harmon, et. al, 1994). The SII is a 317-item measure of vocational interests that was structured based on Holland’s RIASEC model (Harmon, et. al, 1994). Also known as the Big Six factors, RIASEC described six categories of person-environment fit. In theory, an individual selected an occupation based on how the work environment matched her or his own personal interests. These six categories included Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. Realistic scales of people preferred working with their hands, Investigative scales liked to figure out solutions, Artistic scales liked to create, Social scales preferred working with people, Enterprising scales liked to influence people, and Conventional scales liked set tasks (Holland, 1973).

Largely, the SII measures the Big Six through six corresponding scales termed the General Occupational Scales (GOTs). Underlying these 6 general categories were the 25 Basic Interest Scales (BISs), which pull apart specific elements of the GOTs for further information on the individual’s vocational interests. For example, the Social GOT has BISs such as Teaching and Social Service. Also, interests were further broken down into Occupational Scales (OSs) that showed an individual how similar or dissimilar his or her interests were with people working in different fields within that GOT (Harmon, et. al, 1994). For reliability and validity information, see the Strong Interest Inventory: Applications and technical guide (Harmon, et. al, 1994).

Hypotheses

Since no available published studies have looked at the SII GOTs’ overlap with the old or new CPI scales, hypotheses for the current study were formulated based on a correlation matrix found in the CPI manual (Gough & Bradley, 1996). The inclusion criteria for the hypotheses were that SII scales had to correlate above .20 with CPI scales. Since
differences among correlations were found in the table for women and men, the hypotheses for this study followed that trend. See Table 2.3 for a list of hypotheses.

For the SII Realistic scale, I expected that CPI scales such as Responsibility, Socialization, Good Impression, Communality, Well-Being, Flexibility, Sensitivity, and vector two would significantly correlate above .2, for men. For women and Realistic, we expected that only Sensitivity would significantly correlate, or at least correlate above .2.

For men on Investigative, I expected CPI scales of Capacity for Status, Responsibility, Tolerance, Achievement via Conformance, Achievement via Independence, Intellectual Efficiency, Insightfulness, and vector three to significantly correlate above .2. For women on Investigative, we expected Responsibility, Well-Being, Tolerance, Achievement via Independence, Conceptual Fluency, Insightfulness, and vector three to significantly correlate above .2.

For men in the SII Artistic scale, I expected Capacity for Status, Self-Acceptance, Empathy, Socialization, Self Control, Good Impression, Well-Being, Achievement Via Independence, Flexibility, Sensitivity, and vector two to significantly correlate above .2. For women and Artistic, I expected Dominance, Capacity for Status, Sociability, Social Presence, Self-Acceptance, Independence, Empathy, Socialization, Self Control, Good Impression, and vector two to significantly correlate above .2.

For men in the SII Social scale, I expected Dominance, Capacity for Status, Sociability, Self-Acceptance, Empathy, Good Impression, Achievement via Conformance, vector one, and vector two to significantly correlate above .2. For women on Social, I expected Dominance, Sociability, Self-Acceptance, Communality, Achievement via Conformance, vector one, and vector two to significantly correlate above .2.
For men in the SII Enterprising scale, I expected Dominance, Sociability, Self-Acceptance, Good Impression, Communality, Well-Being, Achievement via Conformance, Achievement via Independence, Insightfulness, Flexibility, Sensitivity, vector one, and vector two to significantly correlate above .2. For women on Enterprising, I expected Dominance, Capacity for Status, Sociability, Social Presence, Self-Acceptance, Empathy, Communality, vector one, and vector two to significantly correlate above .2.

For men in the SII Conventional scale, I expected Dominance, Sociability, Responsibility, Socialization, Self Control, Good Impression, Communality, Well-Being, Achievement via Conformance, Flexibility, Sensitivity, and vector two to significantly correlate above .2. For women on Conventional, I expected Socialization, Communality, Achievement via Conformance, Flexibility, and vector two to significantly correlate above .2.

Table 2.3. Hypotheses of significant correlations above .20 between Strong Interest Inventory (SII; 1994) Scales and California Psychological Inventory (CPI; 2002) Scales.

<table>
<thead>
<tr>
<th>SII Scale</th>
<th>CPI Scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>REALISTIC</td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>Sensitivity (-.50), Vector 2 (.37), Communality (.28), Well-Being (.27), Flexibility (-.29), Responsibility (.25), Socialization (.23), Good Impression (.22)</td>
</tr>
<tr>
<td>Women</td>
<td>Sensitivity (-.26)</td>
</tr>
<tr>
<td>INVESTIGATIVE</td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>Insightfulness (.39), Achievement via Independence (.36), Conceptual Fluency (.34), Vector 3 (.33), Capacity for Status (.27), Responsibility (.27), Tolerance (.24), Achievement via Conformance (.23)</td>
</tr>
<tr>
<td>Gender</td>
<td>Artistic Traits</td>
</tr>
<tr>
<td>--------</td>
<td>----------------</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>Insightfulness (.41), Responsibility (.26), Vector 3 (.25), Achievement via Independence (.24), Conceptual Fluency (.24), Tolerance (.22), Well-Being (.21)</td>
</tr>
<tr>
<td><strong>Men</strong></td>
<td>Empathy (.41), Sensitivity (.37), Flexibility (.35), vector 2 (-.33), Achievement via Independence (.29), Well-Being (-.25), Capacity for Status (.24), Self Control (.23), Good Impression (-.22), Socialization (-.21), Self-Acceptance (.20)</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>Self Acceptance (.41), Empathy (.36), Vector 2 (-.35), Capacity for Status (.32), Self Control (-.30), Sociability (.26), Social Presence (.23), Good Impression (-.22), Dominance (.21), Independence (.21), Socialization (-.20)</td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Men</strong></td>
<td>Sociability (.40), Dominance (.36), Vector 1 (-.32), Empathy (.30), Capacity for Status (.29), Vector 2 (.28), Self Acceptance (.27), Achievement via Conformance (.27), Good Impression (.22)</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>Dominance (.31), Vector 1 (-.26), Self Acceptance (.25), Communality (.25), Achievement via Conformance (.25), Sociability (.23), Vector 2 (.21)</td>
</tr>
<tr>
<td><strong>Enterprising</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Men</strong></td>
<td>Sociability (.41), Vector 2 (.39), Sensitivity (-.36), Dominance (.34), Flexibility (-.34), Vector 1 (-.31), Communality (.24), Self Acceptance (.24), Achievement via Independence (-.23), Insightfulness (-.23), Good Impression (.22), Achievement via Conformance (.22), Well-Being (.21)</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>Sociability (.38), Vector 1 (-.37), Self Acceptance (.30), Communality (.29), Dominance (.27), Empathy (.25), Social Presence (.24), Vector 2 (.22), Capacity for Status (.20)</td>
</tr>
<tr>
<td><strong>Conventional</strong></td>
<td></td>
</tr>
</tbody>
</table>
Men  Vector 2 (.49), Flexibility (-.44), Achievement via Conformance (.37), Good Impression (.32), Responsibility (.32), Socialization (.29), Sensitivity (-.28), Communality (.27), Well-Being (.26), Sociability (.26), Dominance (.23), Self Control (.23)

Women  Vector 2 (.36), Flexibility (-.29), Achievement via Conformance (.27), Socialization (.26), Communality (.23)

Note: Correlations from CPI Manual (Gough & Bradley, 1994) in parentheses.
CHAPTER 3. RESULTS

Correlations were computed between the 6 GOTs of the Strong and the 20 folk scales and the 3 vector scales of the CPI by sex and overall. The results will first be discussed generally and then specific hypotheses will be discussed.

Preliminary Analyses

Preliminary analyses were run to determine how the current sample compared to other samples.

Comparison of CPI Scores with Norm Group

The data collected for the current study was compared to the Consulting Psychologists Press (CPP) normed random sample of CPI-260 administrations (N= 6000; Gough, 2002). Comparisons of the means and standard deviations of the two samples were compared using t-tests with a Bonferroni adjustment. As can be seen by Table 3.1, 19 of the 23 scales were significantly different (p< .001), with the current study’s means lower than the CPP sample’s means on those scales with significant differences. These scales included Dominance, Capacity for Status, Sociability, Independence, Empathy, Responsibility, Socialization, Self Control, Good Impression, Communality, Well-Being, Tolerance, Achievement via Conformance, Achievement via Independence, Conceptual Fluency, Insightfulness, Vector 1, Vector 2, and Vector 3. Eight of the scales were different by approximately half a standard deviation, and eleven of the scales were different by approximately one standard deviation. Scales in which there was no significant difference included Social Presence, Self-Acceptance, Flexibility, and Sensitivity. With the exception of Flexibility and Sensitivity, the current sample’s means were consistently lower than the CPP sample.
Table 3.1. Means and Standard Deviations for the California Psychological Inventory (CPI) scales — Comparison of Current Sample with Consulting Psychologist’s Press (CPP) CPI-260 Random Sample

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total N=210</th>
<th>CPP Sample Total N=6000</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Dominance</td>
<td>53.14</td>
<td>9.37</td>
<td>58.03</td>
</tr>
<tr>
<td>Capacity for Status</td>
<td>52.49</td>
<td>7.91</td>
<td>57.17</td>
</tr>
<tr>
<td>Sociability</td>
<td>52.95</td>
<td>9.10</td>
<td>56.56</td>
</tr>
<tr>
<td>Social Presence</td>
<td>51.95</td>
<td>9.38</td>
<td>53.21</td>
</tr>
<tr>
<td>Self-Acceptance</td>
<td>55.47</td>
<td>9.04</td>
<td>56.65</td>
</tr>
<tr>
<td>Independence</td>
<td>51.59</td>
<td>9.19</td>
<td>58.33</td>
</tr>
<tr>
<td>Empathy</td>
<td>57.25</td>
<td>9.11</td>
<td>59.39</td>
</tr>
<tr>
<td>Responsibility</td>
<td>44.64</td>
<td>7.68</td>
<td>53.10</td>
</tr>
<tr>
<td>Socialization</td>
<td>48.68</td>
<td>9.53</td>
<td>54.20</td>
</tr>
<tr>
<td>Self Control</td>
<td>45.98</td>
<td>8.83</td>
<td>55.97</td>
</tr>
<tr>
<td>Good Impression</td>
<td>47.64</td>
<td>8.24</td>
<td>58.55</td>
</tr>
<tr>
<td>Communality</td>
<td>42.34</td>
<td>13.01</td>
<td>52.26</td>
</tr>
<tr>
<td>Well-Being</td>
<td>45.86</td>
<td>10.20</td>
<td>55.55</td>
</tr>
<tr>
<td>Tolerance</td>
<td>51.01</td>
<td>8.33</td>
<td>59.46</td>
</tr>
<tr>
<td>Achievement via Conformance</td>
<td>46.53</td>
<td>9.12</td>
<td>56.65</td>
</tr>
<tr>
<td>Achievement via Independence</td>
<td>53.36</td>
<td>8.29</td>
<td>60.23</td>
</tr>
<tr>
<td>Conceptual Fluency</td>
<td>47.48</td>
<td>8.35</td>
<td>56.87</td>
</tr>
<tr>
<td>Insightfulness</td>
<td>49.35</td>
<td>9.08</td>
<td>58.23</td>
</tr>
<tr>
<td>Flexibility</td>
<td>55.62</td>
<td>9.55</td>
<td>54.71</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>48.24</td>
<td>9.37</td>
<td>47.33</td>
</tr>
<tr>
<td>Vector 1</td>
<td>41.58</td>
<td>9.63</td>
<td>44.39</td>
</tr>
<tr>
<td>Vector 2</td>
<td>47.82</td>
<td>8.88</td>
<td>51.24</td>
</tr>
<tr>
<td>Vector 3</td>
<td>50.57</td>
<td>8.27</td>
<td>60.13</td>
</tr>
</tbody>
</table>

* = p < .001; ** = p < .0001
Though the current sample’s means were consistently lower than the CPP sample, it seemed as though the current sample’s means were more normal than the CPP sample’s means. Since all means were based on raw scores which were standardized to have a mean of 50 and a standard deviation of 10, the current study’s sample had means and standard deviations which were closer to that standardization than the CPP sample.

*Within Sample Sex Comparisons*

Means and standard deviations for men and women in the current study’s CPI scales were examined. Again a Bonferroni adjustment was made in conducting the t-tests. Nine significant differences were found; women and men were significantly different on Capacity for Status, Sociability, Social Presence, Responsibility, Socialization, Communality, Tolerance, and Achievement via Conformance (\(p<.01\)) by approximately one-half standard deviation. Men and women differed significantly on Sensitivity by one standard deviation (\(p<.001\)). The mean scores for women were higher than the mean scores for men for all scales except two. In those cases, the mean scores for men on Independence and Vector 1 were higher than the mean scores for women. See Table 3.2.
Table 3.2. Means and standard deviations for the California Psychological Inventory scales for Women (N=120) and Men (N=90) in the current sample.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Women M</th>
<th>Women SD</th>
<th>Men M</th>
<th>Men SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dominance</td>
<td>53.19</td>
<td>9.67</td>
<td>53.07</td>
<td>9.00</td>
<td>.093</td>
</tr>
<tr>
<td>Capacity for Status</td>
<td>53.72</td>
<td>8.27</td>
<td>50.86</td>
<td>7.11</td>
<td>2.69*</td>
</tr>
<tr>
<td>Sociability</td>
<td>54.29</td>
<td>9.31</td>
<td>51.16</td>
<td>8.54</td>
<td>2.52*</td>
</tr>
<tr>
<td>Social Presence</td>
<td>53.47</td>
<td>9.12</td>
<td>49.92</td>
<td>9.38</td>
<td>2.75*</td>
</tr>
<tr>
<td>Self-Acceptance</td>
<td>55.53</td>
<td>9.32</td>
<td>55.38</td>
<td>8.70</td>
<td>.12</td>
</tr>
<tr>
<td>Independence</td>
<td>51.36</td>
<td>9.70</td>
<td>51.90</td>
<td>8.51</td>
<td>-.43</td>
</tr>
<tr>
<td>Empathy</td>
<td>57.83</td>
<td>9.38</td>
<td>56.49</td>
<td>8.73</td>
<td>1.07</td>
</tr>
<tr>
<td>Responsibility</td>
<td>46.15</td>
<td>7.86</td>
<td>42.63</td>
<td>6.98</td>
<td>3.42**</td>
</tr>
<tr>
<td>Socialization</td>
<td>50.41</td>
<td>9.19</td>
<td>46.36</td>
<td>9.55</td>
<td>3.09*</td>
</tr>
<tr>
<td>Self Control</td>
<td>46.40</td>
<td>9.19</td>
<td>45.41</td>
<td>8.35</td>
<td>.82</td>
</tr>
<tr>
<td>Good Impression</td>
<td>48.00</td>
<td>8.33</td>
<td>47.16</td>
<td>8.14</td>
<td>.74</td>
</tr>
<tr>
<td>Communalitty</td>
<td>44.74</td>
<td>11.31</td>
<td>39.14</td>
<td>14.43</td>
<td>3.05*</td>
</tr>
<tr>
<td>Well-Being</td>
<td>46.59</td>
<td>10.31</td>
<td>44.89</td>
<td>10.02</td>
<td>1.20</td>
</tr>
<tr>
<td>Tolerance</td>
<td>52.26</td>
<td>8.42</td>
<td>49.35</td>
<td>7.93</td>
<td>2.57*</td>
</tr>
<tr>
<td>Achievement via Conformance</td>
<td>48.46</td>
<td>8.89</td>
<td>43.96</td>
<td>8.83</td>
<td>3.65**</td>
</tr>
<tr>
<td>Achievement via Independence</td>
<td>54.38</td>
<td>8.41</td>
<td>52.00</td>
<td>7.97</td>
<td>2.09</td>
</tr>
<tr>
<td>Conceptual Fluency</td>
<td>47.97</td>
<td>8.64</td>
<td>46.84</td>
<td>7.93</td>
<td>.99</td>
</tr>
<tr>
<td>Insightfulness</td>
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* = p < .001; ** = p < .0001
Comparison of Strong scales with Norm Group

Scores on the current study’s GOTs were compared with scores from another sample from the same large Midwestern university (Staggs, et. al, in press). A Bonferroni adjustment was made, and no significant differences were found between the total sample GOTs ($p < .01$). Gender differences of one-half standard deviation were found for the total sample for Artistic and Social GOTs ($p < .01$). Also, there was a one-half standard deviation difference between samples for women on the GOTs of Artistic and Social. This showed that women in the current study’s sample are endorsing Artistic and Social less than the women in the Staggs sample. Also, scores for men in the current study’s sample were more than one standard deviation less on Realistic. See Table 3.3.

Table 3.3. Means and Standard Deviations for Strong Interest Inventory GOTs—Comparison of Current Sample with Staggs, et. al (in press) Sample.

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Simple Correlations within the CPI Scales

CPI Folk Scales

Bivariate correlations within the CPI scales are presented in Table 3.4 (total sample) and Table 3.5 (women and men). Correlations ranged from absolute values of .01 to .80 for the total sample. For the total sample, clusters of high correlations between scales occurred between Dominance through Empathy, with correlations ranging from .51 to .80. Similarly, Well-Being, Tolerance, Achievement via Conformance, Achievement via Independence, Conceptual Fluency, and Insightfulness significantly correlated with the first 12 scales (Dominance through Communality; significant correlations range .19 to .66), and had moderate to high correlations with each other (ranging from .52 to .71). Scales such as Sensitivity and Flexibility correlated with few scales, with Sensitivity negatively and positively correlated to six out of 19 scales and Flexibility negatively and positively correlated with eight out of 18 scales. Socialization and Self-Acceptance, Good Impression and Dominance, Good Impression and Sociability, Flexibility and Responsibility, and Sensitivity and Achievement via Independence all correlated minimally at the absolute value of .01. Conversely, Dominance and Self-Acceptance correlated highly and positively at .80.

Most of the higher correlations seen within scales was probably due to the fact that many of those scales share some items with other scales. The specific overlap of items was not specified by CPP for test security reasons.
Table 3.4. Correlations Between the California Psychological Inventory (CPI) Scales for the Combined Sample (N=210).

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Significant correlations are in bold print. Absolute values above .18 are significant at \( p < .01 \); absolute values above .22 are significant at \( p < .001 \); absolute values above .24 are significant at \( p < .0001 \).
Table 3.5. Correlations Between the California Psychological Inventory (CPI) Scales for Women (N=120) and Men (N=90).

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Significant correlations are in bold print. For women, correlations are on the top of the diagonal: absolute values above .23 are significant at \( p<.01 \); absolute values above .29 are significant at \( p<.001 \); absolute values above .32 are significant at \( p<.0001 \). For men, correlations are on the bottom diagonal: absolute values above .27 are significant at \( p<.01 \); absolute values above .34 are significant at \( p<.001 \); absolute values above .36 are significant at \( p<.0001 \).
Correlations by Sex for CPI Folk Scales

Similar trends were seen for both women and men. Correlations ranged from absolute values of .01 to .83 for men and from .01 to .81 for women. Both sexes showed patterns of moderate to high positive correlations between Dominance, Capacity for Status, Sociability, Social Presence, Self-Acceptance, Independence, and Empathy (correlations ranged from .50 to .80 for women and from .52 to .83 for men). Also, Well-Being, Tolerance, Achievement via Conformance, Achievement via Independence, Conceptual Fluency, and Insightfulness significantly correlated with the first 12 scales (Dominance through Communality; significant correlations ranged from .24 to .67 for women and from .30 to .68 for men). These scales had moderate to high positive correlations with each other (ranging from .47 to .75). However, for men, Flexibility correlated significantly for only two out of 18 scales (Empathy and Achievement via Independence). For women, Flexibility correlated significantly with nine out of 18 scales and Sensitivity correlated significantly with seven out of 19 scales.

Although statistical tests were not conducted, a visual examination was conducted. The difference that emerged that may be substantial include the following: the relationship of Dominance and Tolerance (women: r = .36; men: r = .10); the relationship of Dominance and Achievement via Independence (women: r = .36; men: r = .16); the relationship Dominance and Insightfulness (women: r = .54; men: r = .30); the relationship of Capacity for Status and Conceptual Fluency (women: r = .62; men: r = .35); the relationship of Sociability and Conceptual Fluency (women: r = .63; men: r = .43); the relationship of Sociability and Achievement via Independence (women: r = .45; men: r = .20); the relationship of Social Presence and Tolerance (women: r = .32; men: r = .11); the relationship of Social Presence
and Achievement via Independence (women: $r = .45$; men: $r = .17$); the relationship of Social Presence and Insightfulness (women: $r = .51$; men: $r = .22$); the relationship of Self-Acceptance and Insightfulness (women: $r = .34$; men: $r = .13$); the relationship of Independence and Insightfulness (women: $r = .62$; men: $r = .35$); the relationship of Independence and Flexibility (women: $r = .24$; men: $r = .01$); the relationship of Socialization and Communality (women: $r = .39$; men: $r = .59$); and the relationship of Sensitivity and Insightfulness (women: $r = -.27$; men: $r = -.05$).

**Vector Scales**

For the total sample, Vector 1 (extroversion versus introversion) negatively correlated with Dominance, Capacity for Status, Sociability, Social Presence, Self-Acceptance, Independence, and Empathy (correlations ranged from -.49 to -.78; significant at $p < .0001$) and positively with Self Control and Good Impression ($r_s = .56$ and .32, respectively). Vector 2 (norm-favoring versus norm-disfavoring) correlated positively with Responsibility, Socialization, Self Control, Good Impression, Communality, and Well-Being (correlations ranged from .20 to .49; $p < .01$) and positively with Achievement via Conformance ($r = .57$). Vector 3 (level of self-actualization) correlated positively with 18 out of 22 scales, with significant correlations ranging from .26 to .77. Most of the higher correlations seen within scales were probably due to the fact that many of those scales share some items with other scales. Also, since the vectors were constructed based on data reduction strategies, it made sense that they would correlate with many scales.

**Correlations by Sex for Vector Scales**

For women and men on the vector scales, Vector 1 had a cluster of significant negative correlations with Dominance, Capacity for Status, Sociability, Social Presence, Self-
Acceptance, Independence, and Empathy. Likewise, Vector 2 significantly positively correlated with Responsibility, Socialization, Self Control, Good Impression, and Communality (women only). Finally, for women, Vector 3 correlated significantly with 18 out of 22 scales, with significant correlations ranging from .28 to .78. For men, Vector 3 correlated significantly with 13 out of 22 scales, with significant correlations ranging from .32 to .75.

Again, although statistical tests were not conducted, a visual examination was conducted. There were no differences that emerged that may be substantial.

*Simple Correlations within the GOTs*

Bivariate correlations within the GOTs are presented in Table 3.6 (total sample) and Table 3.7 (women and men). For the total sample, correlations ranged from .02 to .60, with all relationships correlating positively. The weakest relationship was between Realistic and Social ($r = .02$) and the strongest relationship was between Enterprising and Conventional ($r = .60$). The intercorrelations between Artistic, Social, Enterprising, and Conventional were positive and significant, and ranged from .19 to .60. Conventional correlated positively and significantly with all other GOTs.

*Correlations by Sex*

For women, correlations ranged from .14 to .60, with Investigative and Enterprising correlated at .14 and Enterprising and Conventional correlated at .60. The intercorrelations between Artistic, Social, and Enterprising were positive and significant. Conventional correlated significantly with all GOTs except Artistic. For men, correlations ranged from .02 to .59, with Enterprising and Investigative correlated at .02 and Conventional and Enterprising correlated at .59. As with women, the intercorrelations between Artistic, Social,
and Enterprising were positive and significant. Unlike the correlations for women, Conventional correlated significantly with all GOTs except Realistic.
Table 3.6. Correlations between Strong Interest Inventory Scales for the Combined Sample (N=210).

<table>
<thead>
<tr>
<th></th>
<th>Realistic</th>
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<th>Artistic</th>
<th>Social</th>
<th>Enterprising</th>
<th>Conventional</th>
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</table>

Significant correlations in bold print. Absolute values above .18 significant at \(p<.01\); absolute values above .22 significant at \(p<.001\).

Table 3.7. Correlations between Strong Interest Inventory Scales for Women (N=120) and Men (N=90).

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<td>Conventional</td>
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</table>

Significant correlations in bold print. For women, correlations are on the top of the diagonal: absolute values above .23 are significant at \(p<.01\); absolute values above .29 are significant at \(p<.001\). For men, correlations are on the bottom diagonal: absolute values above .27 are significant at \(p<.01\); absolute values above .34 are significant at \(p<.001\).
Simple Correlations between the CPI and the Strong Scales

Overview

Correlational analyses were performed on the GOTs and the 23 scales of the CPI. Bivariate correlations between the CPI and the Strong scales are presented in Table 3.8 (total sample), Table 3.9A (women), and Table 3.9B (men). Correlation matrices were examined by sex to see if women and men should be looked at separately. Since the correlations for the total sample looked different for women and men, sex was looked at separately in the analyses. Since the correlations were inflated when women and men were combined, a more accurate picture of relationships was obtained by looking at the correlations for women and men separately (e.g. see correlations on the CPI scale Sensitivity). Correlations for the total sample are discussed first followed by a discussion of correlations by sex.

Correlations for Total Sample

For the total sample, correlations ranged from absolute values of .01 to .33, and significant correlations ranged from .18 to .33 (p<.05). Of the correlations in the total sample, 43 out of 138 correlations were significant. Realistic correlated negatively and significantly with six scales, with small to large correlations ranging from -.18 to -.54. Investigative correlated positively and significantly with six scales, with positive relationships ranging from small to moderate in strength. Artistic correlated positively with some of the more interpersonally-oriented personality scales (Capacity for Status, Sociability, Social Presence, and Empathy), and correlated negatively with Vector 1 (-.16). Social correlated positively with some of the more interpersonal scales as well (Dominance, Capacity for Status, Sociability, and Social Presence). Three small relationships were found with Enterprising,
with correlations ranging from -.16 to -.23. Conventional had small to moderate negative relationships with six of the interpersonal scales.
Table 3.8. Correlations between Strong Interest Inventory Scales and the California Psychological Inventory Scales for the Combined Sample ($N=210$).

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Significant correlations are in bold print. Absolute values above .14 are significant at $p<.05$; absolute values above .18 are significant at $p<.01$. 
Table 3.9. Correlations between Strong Interest Inventory Scales and the California Psychological Inventory Scales for Women (N=120).

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Significant correlations are in bold print. Absolute values above .18 are significant at p< .05; absolute values above .23 are significant at p< .01; absolute values above .29 are significant at p< .001.
Table 3.10. Correlations between Strong Interest Inventory Scales and the California Psychological Inventory Scales for Men (N= 90).

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<th>CPI Scales</th>
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</tbody>
</table>

Significant correlations are in bold print. Absolute values above .21 are significant at $p<.05$; absolute values above .27 are significant at $p<.01$; absolute values above .34 are significant at $p<.001$. 
Correlations by Sex

For women, correlations ranged from absolute values of .01 to .35. Of the correlations for women, there were 22 significant relationships. The largest relationship was the positive and moderate correlation between Investigative and Insightfulness (.33), of which was followed by the positive and moderate relationship between Artistic and Empathy (.30). Realistic had small, negative relationships with Socialization (-.18) and Sensitivity (-.26). Investigative had small to moderate positive relationships with four scales (Responsibility, Achievement via Independence, Conceptual Fluency, and Insightfulness). Artistic had small to moderate positive relationships with the interpersonal scales (Dominance, Capacity for Status, Sociability, Social Presence, Self-Acceptance, Independence, and Empathy), and a small negative relationship with Vector 1 (-.24). Social had small, positive relationships with Dominance (.19) and Self-Acceptance (.22). Enterprising had a small, negative relationship with Self Control (-.20). Conventional correlated moderately and negatively with some of the more interpersonal scales (Sociability, Social Presence, Independence, and Empathy).

For men, the correlations ranged from absolute values of .01 to .38. There were eleven significant relationships ($p < .05$). The largest relationship was the negative and moderate relationship between Realistic and Sensitivity (-.38). Investigative had a small relationship with Insightfulness (.21), and Artistic had a small relationship with Sensitivity (.26). Social seemed to have minimal relationships with the CPI scales. Furthermore, Enterprising had small to moderate negative relationships with four personality scales (Socialization, Self Control, Good Impression, and Vector 1). Finally, Conventional had small, negative relationships with some of the more interpersonal scales (Social Presence, Self-Acceptance, and Independence), with significant correlations ranging from -.22 to -.25.
Hypotheses

Pearson product-moment correlations were computed to test these hypotheses. Of the hypotheses made, 19 were supported ($p < .05$). See Table 4.1 for the actual correlations between hypothesized relationships. The hypotheses that were supported for women were as follows: Realistic with Sensitivity (-.26); Investigative with Responsibility (.30), Achievement via Independence (.20), Conceptual Fluency (.25), and Insightfulness (.33); Artistic with Dominance (.21), Capacity for Status (.35), Sociability (.26), Social Presence (.24), Independence (.19), and Empathy (.30); Social with Dominance (.19) and Self-Acceptance (.22). The hypotheses that were supported for men were as follows: Realistic with Sensitivity (-.38); Investigative with Insightfulness (.21); Artistic with Sensitivity (.26); Enterprising with Good Impression (-.22) and Vector 1 (-.32); Conventional with Flexibility (-.22).
Table 3.11. Actual Correlations Found Regarding the Hypotheses Between Strong GOTs and CPI Scales of the Present Study \( (N = 210) \).

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<th>Men</th>
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## Actual Correlations

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# Actual Correlations

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<tr>
<td></td>
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</tr>
<tr>
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<td>-.01</td>
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### Actual Correlations

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<th>GOTs</th>
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<th>Men</th>
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- denotes hypotheses not made in current study. Significant correlations in bold ($p < .05$).
CHAPTER 4. DISCUSSION

Overview

First, the results relevance to the study's hypotheses are presented. Second, the bivariate relationships between the GOTs and CPI folk and vector scales are discussed. Next, the present study's contributions to theoretical trends are discussed. Finally, limitations and future directions are considered.

Hypotheses

Pearson product-moment correlations were computed to test these hypotheses. When constructing the hypotheses initially, the CPI Manual had presented data that suggested many relationships of small to moderate strength between the GOTs and the CPI (Gough & Bradley, 1996). However, the data from the current study told a different story. Of the hypotheses made, only 19 were supported. The hypotheses that were supported for women were as follows: Realistic with Sensitivity (-.26); Investigative with Responsibility (.30), Achievement via Independence (.20), Conceptual Fluency (.25), and Insightfulness (.33); Artistic with Dominance (.21), Capacity for Status (.35), Sociability (.26), Social Presence (.24), Independence (.19), and Empathy (.30); Social with Dominance (.19) and Self-Acceptance (.22).

The hypotheses that were supported for men were as follows: Realistic with Sensitivity (-.38); Investigative with Insightfulness (.21); Artistic with Sensitivity (.26); Enterprising with Good Impression (-.22) and Vector 1 (-.32); Conventional with Flexibility (-.22).

It was surprising to find so little support for the majority of the hypotheses. One reason that the relationships expected were not found could be due to the population
sampled. This study drew from a population of college students whose means and standard deviations were, on average, significantly lower than the CPP sample. The current study’s sample exhibited lower means and standard deviations from the CPP sample on most of the folk and vector scales.

**Bivariate Relationships with Folk Scales**

There were minimal relationships found for both men and women on GOTs and CPI scales. Since different relationships were found overall between the CPP scales and the GOTs for women and men, the results are discussed by sex separately. For women, correlations ranged from absolute values of .01 to .35.

Of the correlations for women, there were 21 significant relationships with the CPI folk scales. Realistic had small, negative relationships with Socialization (-.18) and Sensitivity (-.26). These findings suggest that women who were more conscientious regarding societal norms (Socialization) or who were more sympathetic and sensitive towards others (Sensitivity) were less likely to endorse vocational interests involving working with one’s hands (Realistic).

Investigative correlated positively with Responsibility (.30), Achievement via Independence (.20), Conceptual Fluency (.25), and Insightfulness (.33). These findings imply that those women who are more interested in work that involves figuring things out were more likely to have seen themselves as either: (a) serious about their duties (Responsibility), (b) like unstructured environments (Achievement via Independence), (c) intellectually efficient (Conceptual Fluency), or (d) insightful regarding others’ emotions (Insightfulness).

Artistic correlated with Dominance (.21), Capacity for Status (.35), Sociability (.26), Social Presence (.24), Self-Acceptance (.22), Independence (.19), and Empathy (.30). These
findings suggest that women who were more confident and assertive (Dominance), more ambitious (Capacity for Status), more sociable (Sociability), more socially spontaneous (Social Presence), felt better about themselves personally (Self-Acceptance), more self-sufficient (Independence), or more understanding of others’ emotions (Empathy) were more likely to endorse creative career interests (Artistic).

Social had small, positive relationships with Dominance (.19) and Self-Acceptance (.22). These findings suggest that women who were more confident and assertive (Dominance) or feel better about themselves (Self-Acceptance) were more likely to endorse careers that involve helping others (Social).

Enterprising had a small, negative relationship with Self Control (-.20). This finding implies that women who were more vocationally interested in influencing others tended to endorse the importance of emotional control less.

Conventional correlated negatively with Sociability (-.21), Social Presence (-.24), Independence (-.20), Empathy (-.20), and Conceptual Fluency (-.18). These findings suggest that women who were more sociable (Sociability), more socially spontaneous (Social Presence), more self-sufficient (Independence), more understanding of others’ emotions (Empathy), or more intellectually efficient were less likely to endorse careers that involve set tasks and routine (Conventional).

For men, the correlations ranged from .01 to .38. There were ten significant relationships (p<.05). Realistic had a negative and moderate relationship with Sensitivity (-.38), which suggests that men who endorse more Realistic interests of working with their hands were less likely to have seen themselves as warm and sensitive. Investigative had a small relationship with Insightfulness (.21), which implied that men who were more
perceptive of others’ emotions were more likely to endorse careers that involve figuring things out. Artistic had a small relationship with Sensitivity (.26), which implied that men who were more warm and sensitive were more likely to endorse creative career interests. Social seemed to have minimal relationships with the CPI scales. Furthermore, Enterprising correlated negatively with Socialization (-.21), Self Control (-.26), and Good Impression (-.22). These findings suggest that men who were more conscientious regarding adherence to societal norms (Socialization), more likely to control their feelings (Self Control), or more concerned with making a good impression on others (Good Impression) were less likely to endorse career interests involving influencing others. Finally, Conventional had small, negative relationships with Social Presence (-.24), Self-Acceptance (-.23), Independence (-.25), and Flexibility (-.22). These findings suggest that men who were more socially spontaneous (Social Presence), felt better about themselves personally (Self-Acceptance), more self-sufficient (Independence), or more easily bored by routine (Flexibility) were less likely to endorse career interests that involved set tasks and routine.

**Bivariate Relationships with Vector Scales**

Two negative relationships were found for the GOTs and Vector scales. For women, Investigative had a small, negative relationship with Vector 1 (-.24). This finding suggests that women who were more socially yielding and vulnerable were less likely to endorse career interests that involved figuring things out. For men, Enterprising had a moderate, negative relationship with Vector 1 (-.32). This finding implies that men who were more socially yielding and vulnerable were less likely to endorse career interests that involved influencing other people.
Convergence between Personality and Interests: General Trends

The current study’s findings stood out from the meta-analysis results conducted by Larson, et. al (2002). One difference between the Larson et. al (2002) and this study was that they were reporting overlap of overarching dimensions or personality with the RIASEC. However, in this study the author was examining the RIASEC’s overlap with more specific dimensions of personality. Larson et. al (2002) found that the interest dimensions of Realistic and Conventional did not correlate above .19 with any of the Big Five personality dimensions. However, the current study presented evidence that Realistic and Conventional correlated with some dimensions of personality. First, Realistic correlated negatively with Socialization for women and correlated negatively with Sensitivity for both sexes. Second, Conventional correlated negatively with Sociability, Social Presence, Independence, Empathy, and Conceptual Fluency for women and correlated negatively with Social Presence, Self-Acceptance, Independence, and Flexibility for men. Since the CPI has 20 different dimensions of personality traits, in the current study it was used to look at specific relationships between interests and personality, whereas the NEO-PI-R in the meta analyses focused on examining the five broad, overarching relationships.

Convergence between Personality and Interests: Specific Theoretical Trends

There were two main themes that emerged from the current study’s results. First, there were many relationships between interests and personality that support previous findings in regards to the Strong and the Big Five personality dimensions. Second, there were a few relationships that stand apart from prior findings regarding the Big Five, but which support other trends in interest and personality convergence.
Many relationships were found which supported previous findings regarding Big Five personality and vocational interests convergence. First, the current study's findings regarding the relationship of Investigative interests with the CPI scales of Responsibility (.30), Achievement via Independence (.20), and Conceptual Fluency (.25) for women, and the relationship of Investigative interests with Insightfulness for both sexes (women: $r = .33$; men: $r = .21$) was similar to the findings of the relationship of Investigative with Openness ($r = .28$). These CPI scales describe persons who are perceptive, like freedom to pursue their goals, are resourceful, and are insightful. These traits are reflected in the tendency for people high on Openness to be intellectually curious and independent thinkers.

Second, there were similar findings between the meta-analytic findings of Larson, et. al (2002) and the current study’s findings of relationships with Artistic interests. The current study’s findings were reflected in the Larson et. al (2002) findings of the relationship between Artistic and Openness (.48). According to Costa and McCrae (1992), “open individuals are curious about both inner and outer worlds,” and are described as “being attentive to inner feeling,” independent thinkers, and unconventional. This description is applicable to the relationships of Artistic with CPI personality traits of Dominance (.21), Capacity for Status (.35), Sociability (.26), Social Presence (.24), Self-Acceptance (.22), Independence (.19), Empathy (.30), and Vector 1 (-.24) for women and Sensitivity (.26) for men. Though these CPI scales share items, they are all measures of the domains of self-assurance and interpersonal tendencies. So people who saw themselves as confident, enjoying many interests, outgoing, versatile, talkative, independent, sensitive, or tuned into others feelings were mostly similar to the description of Openness. Though some of these scales, described as “talkative” and “outgoing”, reflect more Extraversion themes, the
relationships found in this study could be due to the group contrast method by which the CPI scales were constructed. However, most of these traits were similar to low scores on Vector 1 (low scorers are assertive and talkative), which was in keeping with the negative relationship between Artistic and Vector 1 which suggests that women who endorse creative interests would not be socially yielding and vulnerable. Thus, the meaning of Vector 1 was contrary to the meaning of Openness and fit in with what was expected from previous findings.

Third, the findings of positive relationships between Social interests and CPI scales of Dominance (.19) and Self-Acceptance (.22) for women were again similar to the Larson et. al (2002) meta-analyses findings. They found a relationship of .31 between Social and Extraversion. Dominance and Self-Acceptance reflect the more outgoing and extraverted content of all the CPI scales, and fit in well with the Big Five dimension of Extraversion, where people high on Extraversion were described as assertive, talkative, and upbeat (Costa & McCrae, 1992). Dominant people were described as assertive and Self-Acceptance people as talkative, and these adjectives obviously reflect the very essence of Extraversion.

Fourth, the current study’s finding of the negative relationship between Enterprising and Self Control (women: \( r = -.20 \); men: \( r = .26 \)) for both sexes and Enterprising and Socialization (-.21) and Good Impression (-.22) for men also fit with the Larson et. al (2002) finding concerning the relationship between Enterprising and Extraversion (.41). People who scored high on Extraversion were described as talkative, liking excitement, or were not at all reserved. This was similar to people who saw themselves as low on Self Control, which involved impulsivity and a preference for adventure, or who shared emotions with others. Also, the Extraversion description matched the ideology behind the negative relationships
Enterprising had with Socialization (men who were not concerned with social rules) and Good Impression (men who were not concerned with what others thought of them).

Finally, Conventional relationships found in the past for the Big Five were supported by the current study's findings as well. The current study found that Conventional interests were negatively related to the CPI scales of Sociability (-.21), Empathy (-.20), and Conceptual Fluency (-.18) for women, Self-Acceptance (-.23) for men, and Social Presence (both sexes: \( r = -.24 \)) and Independence (women: \( r = -.20 \); men: \( r = -.25 \)) for both sexes. Again, these findings were similar to the positive relationship found overall for Conventional and Conscientiousness (.29) by Larson, et. al (2002). According to Costa and McCrae (1992), Conscientiousness referred to “active planning, organizing, and carrying out tasks.” In examining the meaning of these CPI scales, one notices a trend of extraversion in social activities (Sociability, Social Presence, and Self-Acceptance scales), an awareness of emotion (Empathy and Conceptual Fluency scales), or a tendency of independent and flexible thought (Independence and Flexibility scales). These socially-focused CPI traits seem contradictory of the organized and work-centered nature of the Big Five trait of Conscientiousness. Thus, the negative relationships found between the GOT Conventional and CPI scales reflect the positive relationship between the GOT Conventional and Big Five Conscientiousness. Interestingly, Larson, et. al (2002) did not find the Conventional-Conscientiousness relationship for women specifically on the Strong, yet the current study did find this relationship for women using the Strong. It was unclear as to why this trend may have occurred.

Regarding those relationships that were uncommon, the most remarkable relationships theoretically were those found between CPI personality dimensions and the
Realistic theme. Previously, few studies have found much of a relationship between the Big Five personality dimensions and Realistic. In fact, Larson, et. al (2002) did not find any Realistic relationships in their meta analyses, nor did Larson & Borgen (2002) find any relationships in their sample of gifted adolescents. However, Staggs, et. al (in press) did find some overlap between the MPQ primary personality scales and Realistic interests. Staggs, et. al (in press) found that Realistic interests correlated negatively with the MPQ personality dimensions of Social Closeness (SC) and Stress Reaction (SR; Staggs, et. al, in press). A person low on SC has been described as being unsociable, while a person low on SR has been described as being insensitive (Staggs, et. al, in press). When comparing these findings to the findings of the current study, some basic trends in the relationship between personality and Realistic interests are suggested. For example, the CPI findings of negative relationships between Realistic and Socialization (-.18) for women and Realistic and Sensitivity for both sexes (women; r = -.26; men: r = -.38) reflect these findings for the MPQ primary scales of personality. Meaning, these MPQ traits were very similar to the CPI traits of sensitivity (Sensitivity) and acceptance of social rules (Socialization). Thus, the current study’s results provided evidence that further supported prior findings regarding the overlap between personality and interests.

One final point was evident when examining the findings from the current study. Holland theory posits that people with Artistic and Conventional interests should look quite different from each other in terms of correlations with related variables. The current study found clear evidence of the differences in Artistic and Conventional interests for women on personality dimensions such as Sociability, Social Presence, Independence, and Empathy. On these scales, the relationships were positive with Artistic and negative with Conventional
interests. This trend showed that Artistic and Conventional interests were endorsing personality traits in opposite directions, thus providing support for Holland’s RIASEC theory.

**Limitations and Future Directions**

One limitation involved in this study was the lack of prior studies to guide hypotheses and to compare results with. More research is needed in looking at the vocational interests and personality overlap. This study was the first study to have looked at that domain with the CPI-260, and further research with this measure of normal personality is necessary to gain a clearer sense of these relationships.

Another limitation of the current study was the lack of generalizability of this sample to other populations besides college students. Future studies should address vocational interests and personality convergence with the college population as well as other populations. Obviously, the results here showed small relationships between GOTs and CPI scales in the college sample, and these results need to be replicated in order to have further support for the relationships found in the current study. A clearer picture is needed on interest-personality overlap with this instrument and all populations.

**Conclusion**

The current study looked at the convergence between vocational interests and normal personality. The 1994 Strong Interest Inventory and the 2002 California Psychological Inventory-260 were used to look at the interests-personality overlap in a college sample. Results showed that there was overlap for women and men in the Realistic interest scale in regards to personality scales, of which few Big Five studies have found relationships. However, the majority of relationships were found for women on interest scales of Artistic,
Conventional, and Investigative, which provided further support for prior findings regarding overlap between Big Five personality and vocational interests. Future studies need to done with these measures to replicate the current study’s results and look at how generalizable these results are to other populations.
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