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## INTEGRATING SELF THROUGH PERSONALITY, INTERESTS, AND SELF-EFFICACY

FRED H. BORGEN AND NANCY E. BETZ

In 2000, Betz and Borgen wrote about the exciting possibilities of a combined look at personality, interests, and self-efficacy in the study of self and vocational behavior. Since then, research has addressed the issue of comprehensive career theory and assessment, including how personality, interests, and self-efficacy can be combined to help us understand and facilitate self- and career development. Advances in the measurement of these variables and concurrent use of such measures to explain career outcomes have emerged, now permitting truly comprehensive research and counseling applications. In this chapter, we review a sampling of recent research that has examined pairs of these variables, and then examine how all three variables may be looked at in an integrated fashion.

Typical self-report inventories are palettes for constructing human narratives. Good scores make good stories. Inventories with content scales, having obvious meaning, enable people to respond to phrases they understand with response scales that reflect how they see themselves. For example, using our three inventories, Jane might say she is usually shy, she would dislike arranging a family reunion, and she would not be confident in giving a speech to a social club. These responses would be elements in her self-narrative as she describes her personality, interests, and self-efficacy. Mary, on the other hand,

might say she is usually outgoing, she likes to inspire others with her leadership, and she would be confident in running for public office. The integrated pictures painted by Jane and Mary are very different. Their item responses can also be quantified and scaled to represent that Jane and Mary occupy very different niches in psychometric and psychological space. For example, they are quite opposite in a three-dimensional space defined by extraversion, interest in socializing, and confidence in public speaking. We can use their scores to write important parts of their career stories.

This perspective is not new. The objectives of comprehensive assessment and understanding of individuals were voiced 100 years ago by influential figures (Parsons, 1909; Thorndike, 1911). These objectives required assessment tools. We now have measures with unprecedented levels of comprehensiveness and precision that identify individuality and human strengths across the domains of personality, interests, and self-efficacy. As Walsh and Eggerth (2005) suggested, a major impetus for their integration has been the meta-analyses of the last decade that have produced stable insights about how variables are related across the domains of personality, interests, and self-efficacy. Holland's (1997) Big Six model of interests and Costa and McCrae's (1992) operationalization of the Big Five model of personality, with their simplicity, clearly advanced the first phases of research and practice. More complex inventories, such as the Campbell Interest and Skill Survey (Campbell, 1992) and the Strong Interest Inventory (Donnay, Morris, Schaubhut, & Thompson, 2005), evolved as multiple-scale inventories that are organized by Holland's Realistic, Investigative, Artistic, Social, Enterprising, and Convention (RIASEC; Holland, 1997) model but also measure other dimensions with more specificity and precision. The social cognitive perspective also has had enormous influence on career theory and assessment since Hackett and Betz (1981) introduced career self-efficacy as an adaptation of Bandura's (1977, 1997, 2008) concepts of self-efficacy and human agency (Betz, 2007).

## THE NOMOLOGICAL, NOMOTHETIC, AND IDIOGRAPHIC

The science of vocational psychology focuses on lawful relationships (i.e., nomologicals) between variables for groups of people. That nomological network is built into our theories and is closely related to the construct validity of the variables, or constructs (Cronbach & Meehl, 1955). Another similar term in psychology incorporates *nomos*, the Greek word for law. Long ago, Allport (1937) distinguished between nomothetic and idiographic ways of understanding people. Nomothetic research focuses on lawful relationships among constructs for groups of people. Idiographic assessment is much closer to the contemporary qualitative case study, implying the constructing of a life

story or narrative. In Allport's nomothetic–idiographic distinction, the former implies dimensions that apply in common across groups, and the latter means that the variables themselves are relatively unique to the individual. In our approach, we do not require the variables to be unique for each individual, but we believe we can build precise scales by nomothetic methods and use them to assess comprehensively human individuality.

Next, we highlight some of the vigorous scientific literature of the past decade that has advanced the understanding of relationships among the self constructs measuring personality, interests, and self-efficacy.

## **Interests and Confidence**

A major advance in the use of self-efficacy theory (Bandura, 1977, 1997) in career assessment and intervention has been the postulated utility of the joint use of interests and self-efficacy in the generation of educational and career options. As will be seen, early models of the importance of both interests and self-efficacy suggested that they are moderately correlated, although the correlations varied depending on the Holland theme area represented, and correlations are small enough to suggest that each variable set provided unique variance.

Some early studies of the relationships of measures of self-efficacy or confidence to the Holland interest themes were those of Lapan, Boggs, and Morrill (1989) and Lenox and Subich (1994). In 2003, Rottinghaus, Larson, and Borgen performed a comprehensive meta-analysis of the correlations between parallel measures of interests and self-efficacy in 53 independent samples. They found that the average interest–efficacy correlations ranged from .50 (enterprising) to .68 (investigative) across the six Holland themes and were .62 (art), .73 (math), and .69 (science) for three academic disciplines. Correlations of this magnitude suggest 25% to 50% of shared variance.

In terms of causality, most researchers (e.g., Lent, Brown, & Hackett, 1984, 1994) have suggested that self-efficacy leads to interest development, and Bandura (1997) agreed. Indeed, Kahn (2001) found that research self-efficacy was a significant predictor of 1-year changes in research interests in graduate students in applied psychology programs, but Tracey (2002), using LISREL software to examine RIASEC confidence and interest scores obtained over a 1-year interval in fifth- and seventh-grade students, reported a reciprocal influence. Nauta, Kahn, Angell, and Cantarelli (2002) also performed a longitudinal study to examine causal relationships of efficacy and interests. Results of their structural equation modeling analyses indicated support for a reciprocal influence model, indicating change in efficacy led to changes in interests and vice versa.

Regardless of causality, it seems a simple model of both interests and self-efficacy as necessary for consideration of major or career options has gained considerable acceptance. Neither interests nor confidence (self-efficacy) alone is sufficient to lead to a career choice. In addition, because means of increasing self-efficacy or confidence via interventions based on Bandura's theory (Betz & Borgen, 2006) are available, joint use of interest and efficacy measures in career assessment and counseling can be used to identify potential career options previously avoided because of lack of confidence. Across age ranges and types of criteria (e.g., occupational group membership, college major, occupational choice preferences), then, research suggests the incremental utility of both interests and self-efficacy in predicting academic and work choices.

### **Interests and Personality**

The relationships between personality and vocational interests have received considerable research attention as well (e.g., Larson & Borgen, 2002; Nauta, 2004; Rottinghaus, Lindley, Green, & Borgen, 2002). The dominant models of personality and interests are, respectively, the Big Five model of personality (Costa & McCrae, 1992) and Holland's model of interests (Holland, 1997). Recently, two independent and comparable meta-analyses of this literature (Barrick, Mount, & Gupta, 2003; Larson, Rottinghaus, & Borgen, 2002) identified several major linkages across the broad measures of personality and interests when the genders are combined.

Strong linkages are found between personality openness and artistic interests (.48 in Larson et al., 2002; .39 in Barrick et al., 2003), extraversion and enterprising interests (.41 in both meta-analyses), extraversion and social interests (.31 and .29, respectively), and openness and investigative interests (.28 and .25, respectively). In terms of effect sizes, values of greater than .25 are considered moderate effect sizes and those greater than .37 are considered large (Cohen, 1988). In addition, Larson et al. (2002) found a small but statistically significant correlation between agreeableness and social interests (.19).

More recent research has examined more specific relationships, attempting to amplify the meaning of the broader correlations. Sullivan and Hansen (2004) examined more specific relationships between personality facets and interests. The relationship of extraversion to enterprising interests was largely explained by the assertiveness facet of extraversion, and the relationship to social interests could be largely explained by the facet of warmth. The relationship of NEO openness to experience to artistic interests could be largely explained by the aesthetics facet of openness to ideas. Investigative interests were positively related to openness to ideas but negatively related to openness to feelings. Altruism and tender mindedness largely accounted for the

relationship between agreeableness and social interests. These findings show the utility of fleshing out the meaning of these higher order correlations.

These studies suggest a building nomological network. Holland's (1997) theoretical stance about vocational types being reflections of personality types is certainly true to some degree, and the Barrick et al. (2003) and Larson et al. (2002) meta-analyses suggest it is particularly true for social, enterprising, artistic, and investigative interest dimensions.

## **Personality and Confidence**

Paralleling research on the relationships between personality and interests has been that on personality and confidence (i.e., self-efficacy). The first studies examined personality correlates of the six Holland confidence themes, usually as operationalized by the Skills Confidence Inventory (SCI; Betz, Borgen, & Harmon, 1996; 2005). For example, Nauta (2004) reported several moderately strong relationships between Big Five factors as measured by the Adjective Checklist (ACL; Gough & Heilbrun, 1983) and the SCI. Openness correlated at or above .30 with investigative, artistic, social, and enterprising confidence. Extraversion correlated with social and enterprising confidence, and Agreeableness also correlated with social confidence. These relationships parallel those found between RIASEC interests and the Big Five, for example, Extraversion's relation to both enterprising and social confidence (Rottinghaus et al., 2003).

In addition, generalized effects of personality have been found where personality is associated with domains of confidence not usually considered specific to the personality dimension. Nauta (2004) and Rottinghaus et al. (2003) found that openness correlated with all six Holland efficacy themes. Nauta also found small, negative relationships between neuroticism and all six Holland efficacy themes. Conscientiousness showed significant positive associations with four of six efficacy themes in the Rottinghaus sample and three of six in Nauta's sample. Hartman and Betz (2007) also found generalized effects for confidence in that conscientiousness related to investigative, social, enterprising, and conventional confidence, neuroticism negatively related to all but artistic confidence, and extraversion related to confidence in artistic, social, and enterprising domains. Because RIASEC interests have different patterns of relationships to personality in comparison with RIASEC confidence measures, an integration of personality with Holland interests and confidence would be a useful direction of research and theory. One direction to pursue is Bandura's (1977, 2008) view of self-efficacy as related to the tendency to approach or avoid a task. This suggests general personality dispositions, such as openness, extraversion, conscientiousness, and neuroticism (negatively), might motivate the approach to learning new tasks.

In more recent research, Hartman and Betz (2007) examined the relationships of the NEO-Five Factor Inventory (NEO-FFI; Costa & McCrae, 1992) to the Expanded Skills Confidence Inventory (Betz et al., 2003). Their results indicated conscientiousness and extraversion correlated positively with a broad range of self-efficacy domains, but neuroticism displayed a significant negative relationship with nearly all forms of career self-efficacy. These findings are consistent with Bandura's (2008) argument that positive affect raises perceived self-efficacy and negative affect lowers it. In addition, openness to experience correlated with self-efficacy for creative and intellectual pursuits, and agreeableness was not related to career self-efficacy.

More specific dimensions of personality were examined by Borgen and Betz (2008a), who found a number of moderate to strong relationships between Healthy Personality Inventory (HPI; Borgen & Betz, 2006) personality scales and career self-efficacy. Consistent with the Hartman and Betz (2007) findings that conscientiousness related to career self-efficacy, particularly basic confidence domains on the social, enterprising, and conventional (SEC) side of the Holland hexagon, the productivity styles scales in the HPI (i.e., confident, organized, detail-oriented, and goal-directed) showed strong relationships with basic confidence scales on the SEC side of the hexagon. Like the Hartman and Betz finding that extraversion strongly correlated with confidence scales on the SEC side of the hexagon, the scales in the HPI interpersonal styles group (i.e., outgoing, energetic, assertive, though not adventurous) correlated with confidence in activities within the SEC area.

### **Integration Using the Career and Personality Assessments System**

In considering together these diverse dimensions of self, it becomes clear that RIASEC interests have different patterns of relationships to personality in comparison with RIASEC confidence measures. Negative emotionality appears to play a role in self-efficacy but not interests, and positive emotionality has a more general role in self-efficacy versus interests. We suggest that self-efficacy, although not a substitute for measured ability, is a self variable moderately related to ability that contributes to initial approach versus avoidance behavior (e.g., choices) and, as theorized by Bandura, performance and persistence as well.

The increasing use of online career assessment and exploration systems (Betz & Borgen, 2009) suggests the possibility of providing examinees with integrated assessment results that include extensive information that is quickly integrated and communicated. The Career and Personality Assessments (CAPA) inventory is such a system and yields an instant set of college-major options based on joint considerations of interests and self-efficacy. Betz and Borgen (2009) developed algorithms, based on regression techniques, to

mathematically combine score patterns from interest and confidence inventories to yield “scores” for college-major clusters. The highest scoring majors are those with best joint fit to the individual’s pattern of interests and confidence. The online CAPA site administers the inventories and provides the majors suggestions. Ultimately, personality assessment will be added to help the individual refine choices. We envision a three-dimensional system—interests, self-efficacy, personality—of self- and career exploration using the following three inventories.

#### *CAPA Interest Inventory*

The CAPA Interest Inventory (CII; Borgen & Betz, 2008b) is a 292-item interest inventory that asks people to report their degree of interest in activities (e.g., “singing in the chorus of a musical”), school subjects (e.g., architecture), and settings (e.g., hospital). The inventory measures interests for the six Holland themes and for 35 specific interest areas. Some of these specific interest scales are displayed in the case study of Anna M. near the end of this chapter. (The CII also measures interest in six life engagement scales: extraversion, leadership, academic achievement, teamwork, wellness, and risk taking, but these broad personal styles are not covered in this chapter.) The specific interest dimensions are well connected to major field choices; many are in fact themselves college majors (e.g., mathematics, accounting, music), but almost all can be seen to be relevant to at least one if not several majors. Hence, measures of basic dimensions of interests are suggested to be uniquely useful to college major choice.

#### *CAPA Confidence Inventory*

The CAPA Confidence Inventory (CCI; Betz & Borgen, 2006; Borgen & Betz, 2008a) is a 190-item inventory measuring self-efficacy with respect to the six Holland themes and 27 basic dimensions of vocational activity. Some of these 27 basic vocational confidence scales are shown in our case study of Anna M. The confidence scales have important linkages to college major and career choices, and are related to domains of personality and interest. (The CCI also measures confidence in six life engagement scales: extraversion; leadership; academic achievement; teamwork; motivation; and risk taking.)

#### *Healthy Personality Inventory*

Enriching the study of personality has been the emerging field of positive psychology, which has had a significant impact on the conceptualization and measurement of personality (Bandura, 2008; Walsh, 2003). This focus within personality psychology suggests much greater attention to the measurement of positive personality traits in people—traits that are often said to constitute

the “healthy personality” (see Day & Rottinghaus, 2003). We built the 225-item HPI (Borgen & Betz, 2006) based on diverse adjectives that people might use to describe themselves.

The HPI contains 17 content-based personality scales that are positively oriented to identify strengths and adaptive personal dispositions. They are grouped within five kinds of personality styles: cooperative styles (trustworthy, generous), productivity styles (confident, organized, detail-oriented, goal-directed), interpersonal styles (outgoing, energetic, adventurous, assertive), intrapersonal styles (relaxed, happy, decisive, rested), and thinking styles (creative, intellectual, analytical). These five styles should not be equated with the Big Five personality domains; a study by Betz and Borgen (2010) clarifies these relationships. The 17 scales are intended to be homogeneous, focused measures of a specific content that is positively framed and readily interpreted by nonpsychologists. Borgen and Betz (2008a) published the first study of the reliability and validity of the HPI.

### **CAPA Integrative System**

The CAPA system (Betz & Borgen, 2009) integrates assessment of vocational interests and career confidence (self-efficacy) and uses results to suggest college major and career options to individuals. If there are no areas in which both interests and confidence are high, then the next areas for exploration are those of high interest but lower confidence, on the theory that confidence can be increased using interventions based on self-efficacy theory (Bandura, 1997).

The CAPA system provides online administration of all three inventories (see <http://www.CAPAExplore.com>). Composite scores based on the actual content of majors are used to generate the best majors. The system provides immediate online feedback, including profiles for both the interest inventory and confidence inventory and the top clusters of college majors for that individual.

Each major cluster contains from seven to 15 specific majors and is easily tailored to the majors at a specific college or university. Majors suggestions also can be provided separately for interest patterns alone or confidence patterns alone. The student can follow up these majors suggestions by going to the university/college website or departmental office for that major, and then, if a major seems like a viable option, begin planning the necessary coursework. Of course, any system of this type is best used in conjunction with an adviser or career counselor, but the CAPA system is designed to be self-interpreting if other resources are insufficient. An interpretive booklet (Borgen, 2009) is also available.

Betz and Borgen (2009) compared the effectiveness of the CAPA career exploration and the FOCUS (Career Dimensions, 2007) system in increasing the career decision self-efficacy and decidedness of 960 students enrolled in a program for undecided freshmen students at a large public university. Results indicated that both systems led to significant increases in career decision self-efficacy and major decidedness in these students. The CAPA system led to proportionately greater increases in Career Decision Self-Efficacy Scale (Betz & Taylor, 2005) scores in comparison with FOCUS for the total group and for women. The systems were comparably effective with African American, Asian American, and White students.

### THE CASE OF ANNA M.: THREE CAPA INVENTORIES

Anna M. is an 18-year-old White woman who is entering her sophomore year of college, majoring in Near Eastern studies. As young as 14 she was deeply interested in cultures throughout the world. The potential career of diplomat was one of the career choices she began to consider. We show some of Anna's results to illustrate the scales of our three inventories. Anna has a richly textured and integrated sense of self, and much of her career and life persona is reflected in the many diverse scales of the CAPA assessment system. For Anna, the three inventories display her individuality in 17 personality scales, 41 general and specific interest scales, and 35 general and specific confidence scales, and with even more nuance in the matches and mismatches among these scales. We show herein a fraction of Anna's profiles and rich life story. Other aspects of Anna's educational and career life are presented in the *Casebook for the CAPA Inventories* (Borgen & Betz, 2010).

Anna's results for the HPI are shown in Figure 9.1. Her personality strengths are shown in 17 scales, grouped under five personality styles. For nine of the 17 scales, she has scores of at least 4.0, reflecting her endorsement of those strengths. Her peak scores are distributed across the five personality styles. If those nine scales for Anna were ranked, we might say she describes herself as confident, intellectual, creative, outgoing, energetic, decisive, goal-directed, and assertive.

Note in Figure 9.1 that Anna has a differentiated pattern of strengths within each of the five HPI personality styles groupings. For example, under productivity styles she is distinctly confident and goal-directed, but definitely not as organized and detail-oriented. Just those four scales tell us much about the way Anna views her personality strengths. Similarly, she has quite different scores within each of the other sets of personality styles, and these differences augment how Anna constructs her persona.

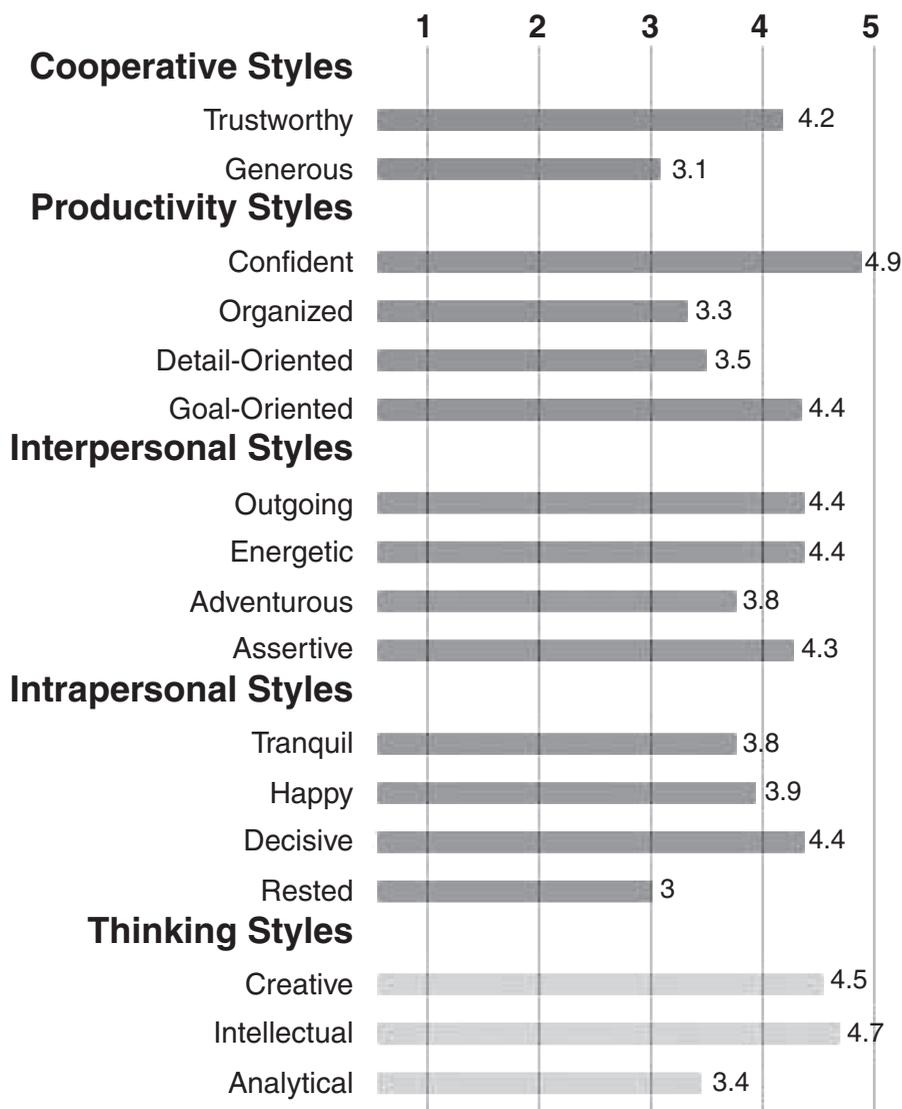


Figure 9.1. Anna's HPI results.

Figure 9.2 shows a portion of Anna's 41 general and specific interest scales. These are her top interests, based on a ranking of the six general Holland interest scales. Her three-point Holland interest code is EAS (enterprising, artistic, and social) and her specific interest scales are ranked within each Holland group.

Looking first at Anna's six general interests on the Holland dimensions, it is clear that her enterprising (3.9), artistic (3.5), and social (3.2) themes

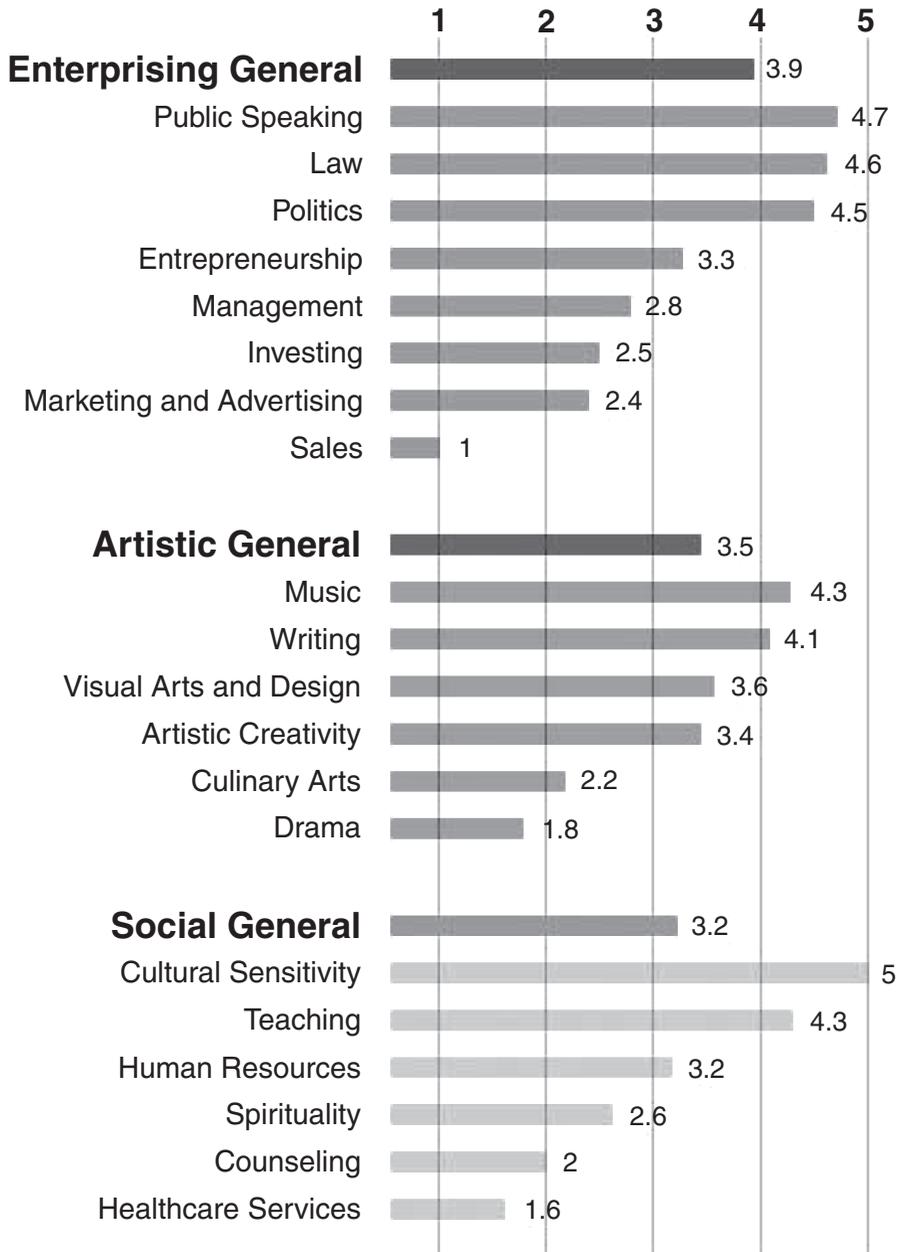


Figure 9.2. Anna's top interest scales.

are distinctly higher than her realistic (1.8), conventional (2.0), and investigative (2.1) themes. Anna's 35 specific interest scales richly amplify the way she describes her persona. That is where her personal narrative comes to life as she enters her sophomore year of college, majoring in Near Eastern studies. Her specific interests tell us many things about her that we cannot learn from her general Holland scales. Within most of the Holland themes, she has highly differentiated specific interests that are lost in her personal story when the specific contents of her interests are averaged within the six general themes. For example, consider her eight specific enterprising interests, where the average general enterprising score is midrange (3.9) even though it is her highest general interest. The eight specific enterprising interests tell quite a different story when they are disentangled from the general picture. Anna has three specific enterprising interests that are intense: law, politics, and public speaking, with scores of 4.6, 4.5, and 4.7, respectively. These are the persuasive components of enterprising, and these are drivers for Anna as she describes her passions and constructs a life plan. (Note also in Figure 9.1 her high scores on the assertive and outgoing personality scales of the HPI.) In contrast, she rejects the business components most people associate with the enterprising type.

We discuss all of Anna's interest profile in the *Casebook for the CAPA Inventories* (Borgen & Betz, 2010), but herein we touch briefly on her specific scores within her second highest theme, social (3.2). The social theme is usually attributed to helping and caring interests, but that is clearly not the case for Anna; her counseling interest score is nearly at the bottom of her six specific social interests. In an interview, Anna quickly ties her low counseling interest to her relatively low generous personality score on the HPI (Figure 9.1). She is distinctly not the average social prototype. What brings Anna's general social interests into a second-ranked Holland theme are her very strong likes for activities involving cultural sensitivity (5.0) and teaching (4.3). These are wholly consistent with her career and educational plans.

Figure 9.3 shows Anna's top three general confidence scales and the specific confidence scales associated with them. Like her interest profile, her results are ranked by the level of her confidence on the six general Holland confidence scales. Her confidence code is SEI (social, enterprising, investigative).

Looking at Anna's general interests on the Holland dimensions, it is her enterprising (3.9), artistic (3.5), and social (3.2) themes that are highest. Similarly, we could compare all of Anna's parallel specific scales to explore differences between her confidence and interest in specific activities. Each difference, or lack thereof, would amplify important details Anna could give about her life narrative. For example, in the core specific components of the investigative theme she shows decidedly more confidence than interest. Her mathematics confidence (4.4) is much higher than her interest (2.2),



Figure 9.3. Anna's top confidence scales.

and her science confidence (3.7) is higher than her interest (2.7). These large differences, which are fairly rare in any group of college students, are perfectly consistent with the way Anna sees herself, her educational history, and her future plans. She performs very well in math and science courses, and took many advanced placement courses in these subjects in high school. But she also decided while in high school that she would not pursue math and science as a career. Thus, even as a young teenager Anna was shaping her view of herself as confident in math and science but not intrinsically interested in them.

We learned from Anna's HPI personality profile that she views herself as supremely confident (4.9). Some college students, with such a level of

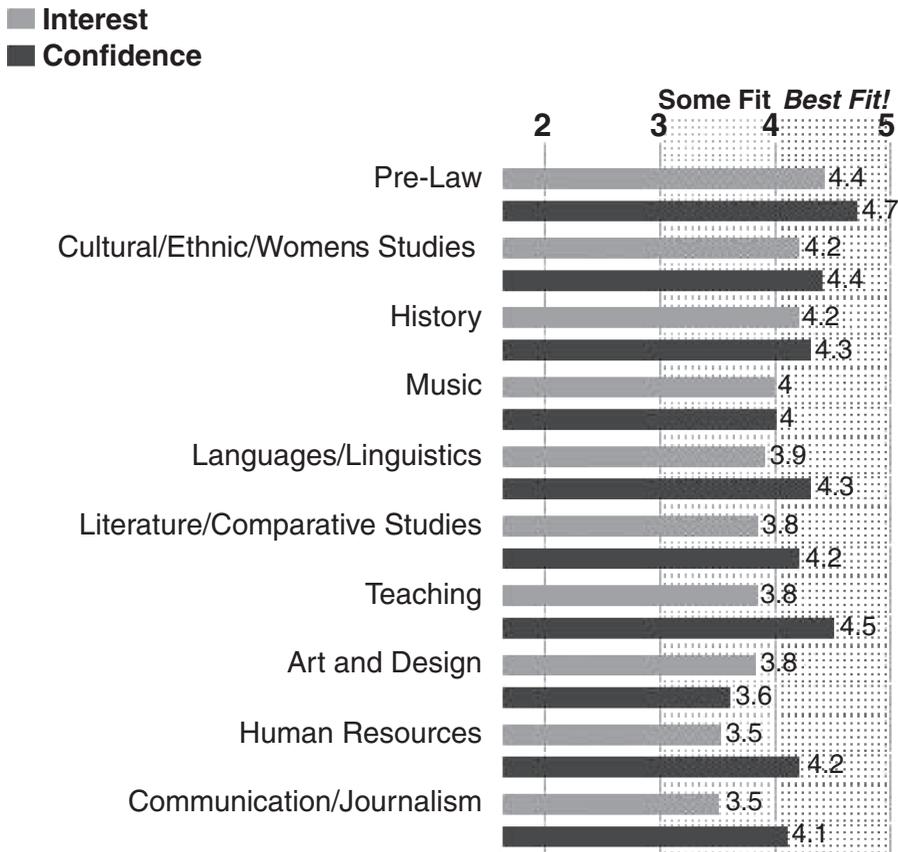


Figure 9.4. Anna's confidence and interest profile.

confidence, might respond to nearly all the 190 items of the CCI with high confidence, and thus yield a high, flat, and undifferentiated confidence profile. Such is not the case with Anna. Her 27-scale specific confidence profile (shown in part in Figure 9.4) is clearly differentiated. Within every Holland confidence theme, she has important large differences on level of confidence on some of the specific scales. Anna may have a supremely confident personality overall, but there are still 13 of the 27 specific confidence scales where she scores below 3.5.

### Clusters of College Majors With Best Fit

The CAPA system groups majors in 30 clusters, and for each cluster creates a linear composite for best fit based on specific interests. A parallel index of best fit for each major cluster is based on specific confidence scores.

The best college major options to explore are then displayed as in Figure 9.4 for Anna. These high-ranking options reflect Anna's peak scores on the specific interest and confidence scales. Many of her best options are in the humanities, reflecting her peak interests and confidence in writing, public speaking, cultural sensitivity, law, and politics. Fit of major clusters for both interest and confidence are displayed; sometimes they are quite different, giving added insight to how a student might approach such a major.

## INTEGRATION

Scores and stories are sometimes framed as incompatible when career theories are framed as competing paradigms (e.g., Savickas, 2005). We believe precision assessment and integrated self-understanding need both scores and stories. When a person responds to a single item in a typical content-based inventory, he or she is telling a story. For example, our confidence inventory asks with a single item how much confidence a person has to "solve problems using calculus." The inventory is structured so the response varies on a 5-point scale ranging from *none* to *complete*. Thus, we have divided the world into five groups based on how the individuals feel about calculus. In the process, we have done some injustice to their personal stories. We also believe those five groups have quite different psychological perspectives toward avoiding versus approaching calculus (Bandura, 2008). With varying emotional intensity, the groups are telling us, "I can't do that!" versus "I can do that!"

Our single confidence item about calculus permits the individual to give a mininarrative, although in a structured way. From single items we build scales following objective, clear-cut rules. Scattered throughout its 190 items, our confidence inventory has a total of seven such mathematics confidence items, and for a group of 1,000 college students, those seven items represent 7,000 personal stories. Typical college students spend fewer than 35 s to yield the mathematics confidence score with its seven items and its Cronbach alpha reliability of .88 (Betz & Borgen, 2009). We clearly have measured something with precision. At the group level we can study the validity of that scale to determine the real-world meaning of scores at different levels. For individuals, we can ask for an interpretation of the score; we can ask them to tell us their life stories about how they approach or avoid math tasks.

### **Narrative Assessment: Translating the Quantitative to the Qualitative**

We know that many dimensions of personality, interest, and self-efficacy tend to be moderately correlated across domains. A group statistic like a correlation, in typical nomothetic research, tells us about abstract actuarial

expectations: variable *X* tends to be associated with variable *Y*. These correlations rarely account for more than 50% of the agreement between variables. The story for the individual can be quite different. Individuals often reside in niches of psychological space quite different from the regression lines defined by moderate correlations. In practical assessment, we must be attentive to the story of individuality that the single person is expressing to know that person's richer phenomenology. This narrative mode translates the mixes and matches among scales from a quantitative to a more qualitative, linguistic persona.

The case study for Anna begins to illustrate many of these nuances. For example, her profiles conform to nomothetic expectations when she reports generosity is not a salient personality feature, and she has lower interest in counseling and helping. On the other hand, Anna's profiles illustrate pivotal instances in which her life story breaks from the nomothetic mold, and she has scale differences that would not be expected from the group correlation. Most striking is that she has high confidence in the math and science domains but little interest in pursuing them. These differences are at the core of Anna's life story. At 14 she was actively making choices about her persona. Although a gifted student in math and science, she was shaping her persona as a diplomat with global cultural sensitivities. Anna may be like many gifted teenagers who have mastered certain school courses but have made a decision to narrow their interests and focus away from those pursuits. Life stories such as Anna's can be seen in Reichenbach's (1938) context of discovery as stimuli to discover how many other individuals may have followed a similar life trajectory. Anna's story is a challenge to the nomothetic research that has concluded interests are stable beginning in adolescence (Low, Yoon, Roberts, & Rounds, 2005).

## CONCLUSION

Writers from the nomothetic, psychometric perspective have long seen the value of understanding individuality by better assessing diverse domains (e.g., Betz & Borgen, 2000; Borgen, 1986). Much of this has been stimulated by Parsons (1909) and Holland (1959, 1997). We have worked within this tradition as we have developed new inventories to assess personality, interests, and self-efficacy. Meanwhile, perhaps stimulated by Savickas (2005) most of all, there has emerged a constructivist perspective in vocational psychology suggesting a shift from scores to stories (Hartung, 2005; Hartung & Borges, 2005). Our agenda in writing this chapter has been to embrace both perspectives. We have reviewed some mainstream nomothetic literature, but we have also viewed Anna's story through the scores of three inventories.

The best line to illustrate the person–environment fit model is Schneider's (1987) classic article, "The People Make the Place." It also is a modern

metaphor for many of the other themes of this chapter. It fits with Bandura's (1977, 2008) active agency, wherein people are shaping cognitions, learning opportunities, and encounters with environments. It fits with the constructivist and narrative perspective (Savickas, 2005), wherein people are writing stories of their life and career selves. It fits with our view of complex psychometric space, defined by precision assessment, wherein people reside in niches of individuality.

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