

CHAPTER ONE

Introduction

Reconsidering the Nature, Measurement, and Uses of Vocational Interests

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SEVENTY-SIX YEARS AGO, E. K. Strong began his trailblazing work at Stanford University on the measurement of vocational interests. Few single constructs have so dominated a subfield of modern psychology as interests have preoccupied vocational psychologists. We can think of no better point of departure for this comprehensive volume on vocational interests than the timeless questions that Strong himself attempted to answer and with which vocational psychologists still struggle:

What are interests? What role do they play in human affairs? Can one's behavior be predicted if his [sic] interests are known? How do the interests of men and women, boys and older men compare? To what extent do men [sic] in different occupations differ in their interests? How significant are these differences in interests? Do they result from differences in training and occupational experience or do they arise rather early in life and condition occupational choice? (Strong, 1943, p. 3)

Although vocational psychologists have repeatedly addressed each of these questions during more than seven decades of research, few of us would claim to have the answers. This volume addresses Strong's initial questions as well as several that Strong could not anticipate. We hope to shed additional light on the nature of vocational interests and to catalyze further research into the origins, development, measurement, and interpretation of vocational interests. Whether we resolve the debate on the conceptual nature of interests, as Savickas (this volume) argues that we should, is less crucial than

reopening research into those questions we still have about interest theory, measurement, and practice. We must also continue to investigate differences in vocational interests between women and men (Lippa, 1998) as well as the pressing issue of the appropriateness of interest measurement across cultures and among minority groups within a culture (Fouad, 1993).

PLAN OF THE BOOK

To invigorate research on interest measurement and revitalize reflection on interest theory, the Society for Vocational Psychology dedicated its 1997 Biennial Conference at Lehigh University and this volume to the general topic of vocational interests, concentrating on three fundamental questions about conceptualizing, measuring, and using vocational interests: What are vocational interests? How can they be measured? How should counselors use interest measures in career intervention? The present volume devotes a separate section, containing five chapters, to respond in turn to each of these three questions.

Section 1: Conceptualizing Vocational Interests

The five chapters in Section 1 consider the definitions, determinants, and development of vocational interests. The opening chapter, written by Savickas, closely examines definitions and determinants of interest as a state and vocational interests as a trait. The next two chapters, written by Gottfredson and by Holland, provide a more in-depth examination of two putative determinants of vocational interests: genetic influences and personality. The fourth chapter, written by Rounds and Day, examines the structure of vocational interests. The final chapter, written by Swanson, examines how vocational interests develop—that is, change and continue—over the life span. As a group the five chapters in this section thoroughly analyze the nature of vocational interests. This grounding in interest theory should increase readers' appreciation for the issues that complicate research on the measurement of vocational interests, the topic of Section 2.

Section 2: Measuring Vocational Interests

In contrast to the opening section of this volume, which deals with conceptual definitions and theory, Section 2 concentrates on operational definitions and the measurement of vocational interests. The first chapter, written by

Crites, distinguishes between linguistic and empirical definitions of vocational interests and then discusses five operational definitions that researchers and practitioners can use to measure vocational interests. Two of these operational definitions, *inventoried* and *expressed*, have commanded the most attention from researchers. Accordingly, the next two chapters, written by Harmon and by Fouad, scrutinize the research on inventoried interests, whereas the final two chapters in Section 2, written by Spokane and Decker and by Hartung, peruse the research on expressed interests. As a group the five chapters in Section 2 provide a comprehensive summary of research on the measurement of vocational interests by inventories and verbal expressions. This information about the technical problems involved in measuring vocational interests provides a crucial background for appreciating the challenges inherent in interpreting the results of interest assessments and communicating these interpretations to clients, which is the topic of Section 3.

Section 3: Using Vocational Interests in Career Intervention

The chapters in Section 3 each address the importance of communicating interest inventory interpretations to clients in a manner that fosters their occupational self-efficacy, vocational exploratory behavior, and career decision making. The first chapter on counseling practice, written by Tinsley and Chu, reviews the research on interest inventory interpretation and charts directions for future research. After sifting through the research reviewed by Tinsley and Chu, as well as reflecting on his 30 years of experience as a career counselor, Zytowski offers five principles to guide counselors as they communicate to clients the results of interest measurement. In addition to interpreting interest measurements that identify what a client likes to do, many counselors also attend to what a client can do well. Accordingly, the next two chapters in Section 3 address the joint interpretation of interest and ability measures. The first of these two chapters, written by Prediger, deals with ability self-estimates that have objective, external referents, whereas the second chapter, written by Betz, deals with ability self-confidence measures that have more subjective, internal referents. The final chapter in Section 3 takes up the topic of encouraging clients to engage in vocational exploratory behavior. Blustein and Flum use a self-determination model to explain how vocational interests and occupational exploration interact in charting a career course.

Section 4: Current Status and Future Directions

Section 4 concludes the book by presenting two chapters that assess the current status and chart future directions for interest theory, research, and practice. In the first of these complementary chapters, Walsh states seven conclusions that can be drawn from the empirical literature about interests and then considers how the role of vocational interests in career decision making may change as North America becomes a postindustrial society in need of workers who are occupational generalists and team players rather than vocational specialists. In the final chapter Borgen describes a comprehensive model for linking domains of individuality to venues for living. He then uses this heuristic model to organize the book's major themes as well as propose future directions for interest research. Borgen ends his chapter and this volume with an important recommendation for the future of interest theory, research, and practice. He wisely suggests that practitioners and researchers view interests as the facet of individuality that enables people to passionately express their individuality in all of life's venues.

ENDURING QUESTIONS ABOUT VOCATIONAL INTERESTS

In responding to the three general questions that frame this volume, the chapter authors raise many specific questions. We identify these enduring questions as follows: Why are vocational interests a fundamental topic in counseling psychology? How should interest be defined? Do interests motivate or guide behavior? Are interests narrowly defined surface constructs or do they reflect deeper psychological structures such as personality? What is the underlying structure of vocational interests? Do interests change and develop over time? How reliable and valid are contemporary interest measures, especially across social groups and cultures? What is the meaning of disagreements between expressed and measured interests? How do different scaling and norming methods affect inventory results? How does research inform the interpretation of interest inventory scale scores and profile patterns? How can interest inventory interpretations be communicated to clients so as to ensure optimal outcomes? Each of these questions is now briefly introduced, as an advanced organizer for readers.

Why Are Vocational Interests a Fundamental Topic in Counseling Psychology

The nature of interests is one of the defining questions in vocational psychology—indeed in applied psychology generally (Spokane & Jacob, 1996). This topic arguably constitutes the primary difference between counseling and clinical psychology and embodies a set of understandings and capabilities unique to counseling psychology. As Leona Tyler (1992) once asserted, even if the extant specialties in psychology were merged or redefined, the unique roles enacted by counseling psychologists, such as “helping individuals to understand themselves, make important choices, and plan their lives” (p. 342), should be preserved. Career intervention in general and interest measurement in particular must be functions that continue to advance.

How Should Interests Be Defined?

During the first third of this century, before the unparalleled success of interest inventories, counselors measured interests in many diverse ways, including narratives, autobiographies, behavioral indicators, and objective tests (Crites, this volume; Spokane & Decker, this volume; Walsh, this volume). For example, Bingham (1937) wrote about objective interests as “interests manifest” and imagined observing the behavior of a person in a specially arranged museum, watching how much time he or she spent with each exhibit. He realized that this was inconvenient but concluded that “instead of relying solely on what a person says are his [sic] interests, observe, if possible, that in which he [sic] actually takes interest” (p. 67). Bingham then recommended the use of a “behaviorgram” or recorded data collected over time about an individual’s activities, he called these “notes of doings clearly indicative of interests.” Contemporary counselors’ reliance on inventories obscures other approaches to measuring interests. Ironically, Bingham founded the Division of Applied Psychology at Carnegie Institute of Technology that gave rise to the first standardized interest inventories through the work of Yokum and his seminar students Moore, Freyd, and Ream as well as Strong, who worked at Carnegie as the Director of the Educational Research Bureau (Bingham, 1923). It may be time to reexamine the usefulness of measuring vocational interests through tests, activity diaries, manifest behaviors, narratives, and expressed preferences. These

measures can augment interest inventories by providing additional perspectives from which to view and analyze clients' career motivation (Hartung, this volume). Furthermore, multiple measures of interests could advance interest theory by framing a comprehensive definition of vocational interests that subsumes operational definitions by inventories, tests, manifest behaviors, autobiographical narratives, and expressed preferences (Crites, this volume; Savickas, this volume).

Do Interests Motivate or Guide Behavior?

In a comprehensive chapter on the nature of interests, Savickas (this volume) notes that interests (a) focus attention, (b) arouse feelings, (c) steer a direction, and (d) involve activity. These motivational properties have been studied historically yet have received precious little attention of late. The exception to the lack of attention to the motivational properties of interests comes in the work of Betz and Hackett on self-efficacy (Betz, this volume; Hackett & Betz, 1981). Walsh (this volume) notes that interests direct constructive behavior, indicate motivation, and reflect a health-oriented, as opposed to pathology-oriented, view of the human condition—a perfect domain for counseling psychology.

In a different vein, Blustein and Flum (this volume) discuss the contextual influences on exploration and the mediating link among interests, contexts, and exploration. They view self-determination as the organizing construct through which individuals experience this mediating influence. Their chapter discusses, in a clear and compelling manner, the nature of interests and relates this driving or directing quality to extant theory on motivation.

Are Interests Narrowly Defined Surface Constructs or Do They Reflect Deeper Psychological Structures?

To the extent that vocational psychologists can relate interests to the mainstream of modern psychology (Savickas, this volume)—to personality theory, learning theory, and social psychology in particular—they can create a better opportunity to construct a comprehensive definition and conceptual framework for understanding vocational behavior and career development.

Holland (this volume) argues, in one of his more eloquent contributions, that vocational interests overlap substantially with personality and are differentiated only by the criterion base embedded in interest inventories.

McCrae and Costa (1997) urge psychologists to consider the possibility that a limited and fundamental set of underlying dimensions or constructs define the human personality. These dimensions are reflected in all personality measures to a certain degree. Emerging evidence suggests that vocational interests also reflect these dimensions (Costa, McCrae, & Holland, 1984; Lippa, 1998; Walsh, this volume). Furthermore, the link between interests and abilities, once believed to be considerable, is still under scrutiny (Prediger, this volume; Walsh, this volume). Prediger frames the most pressing question here: Even if interests and abilities are unrelated in correlational studies using pairs of interest and ability scores, researchers must ask whether using the two scores together provides any unique information. Moreover, Prediger asks whether the self-estimates of ability now embedded in several inventories are valid. Prediger's advice to counselors in combining interest and ability measures is both thoughtful and consistent with the research evidence.

What Is the Underlying Structure of Vocational Interests?

An unusually vigorous series of studies by Rounds and Tracey (Rounds & Day, this volume; Tracey & Rounds, 1995) rekindled enthusiasm for interest measurement research and theory (Lippa, 1998). To the unschooled eye, the understructure of interests may seem like a topic of minor importance. In fact, however, the "structural model" question is a fundamental one for vocational theory construction, psychometrics, genetic psychology, counseling, and research. The comparison of existing structures in Rounds and Day (this volume), then, deals with an enduring issue and provides seminal ideas for future research and practice.

Do Interests Change and Develop over Time?

Several valid methods exist for calculating whether the vocational interests of individuals and of groups remain stable over long periods of time (Swanson, this volume). The question posed here is not whether interests are stable for the majority of individuals over short and long periods of time. The long-term stability of vocational interests in group data was established in a compelling manner in the late 1960s (Campbell, 1971; Hansen, 1988; Swanson & Hansen, 1988; Walsh, this volume)—a finding that has never been refuted. Swanson (this volume) reminds us, however, that despite the overall stability of vocational interests across time, a small

but persistent “unstable minority” of individuals exists for whom interests change over time. In addition there is substantial accentuation of interests even within stable profiles and considerable evidence that significant changes in context or career choice induce parallel changes in measured interests (Spokane, 1991). What researchers have never fully examined is the degree of change or elasticity that is possible in vocational interests when they do change. How change is possible in constructs that are heavily genetically determined is yet to be determined. This question should be addressed in future research.

How Reliable and Valid Are Contemporary Interest Measures, Especially Across Social Groups and Cultures?

Can scales and inventories that have been developed on a largely homogeneous White, middle-class culture be bootstrapped to minority subcultures or to non-Western cultures? Of all the questions we pose in this volume, none is more crucial to the future of interest measurement than the question of cross-cultural validity. Most of the chapters discuss the topic of cross-cultural and multicultural validity in some way. The chapters by Fouad (this volume) and Harmon (this volume) are particularly relevant to the twin issues of reliability and validity. Fouad uses Messick's (1995) comprehensive, six-facet model of validity to evaluate interest inventories generally, and she addresses the sixth facet, consequential validity, with considerable clarity, extending her earlier observations (Fouad, 1993; Fouad, Harmon, & Hansen, 1994). Subich (1996) also underscores the importance of examining the cultural validity of vocational assessments. Although there is some disagreement on the applicability of interest inventories across cultures, much of the disagreement rests on the fact that compelling studies addressing the measurement issues involved are just beginning to appear. Thus it may be some time before we can fully appreciate the problems in this area and even longer before we can resolve them. For the present there is no reason to believe that these issues cannot be faced and overcome, as they seem largely psychometric rather than conceptual.

Many of these psychometric problems are sidestepped when counselors assess expressed interests. Hartung (this volume) explains that vocational card sorts offer counselors a culturally relevant supplement or alternative to interest inventories. Whether operationally defining interests with inventories or card sorts, vocational interests and their structure appear to be a valid concept

across cultures (Day & Rounds, 1998; Rounds & Tracey, 1996), although the content of those interests may vary from subculture to subculture.

What Is the Meaning of Disagreements Between Expressed and Measured Interests?

It can be argued that measured interests, by virtue of their indirect measurement, tap deep underlying structures, whereas expressed interests are a self-report that taps a more malleable personal preference. This assertion is addressed by Spokane and Decker (this volume), who review the considerable literature on expressed versus measured interests and the meaning of disagreements between these two operational definitions of vocational interests. Differential interpretation of expressed and measured interests should be discussed, because almost all of the major inventories now combine direct and indirect interest scales, and clients will receive information from both scale types. Hartung (this volume) reviews the advantages of using expressed interests in career interventions and describes a variety of specific approaches to helping clients explore the personal meaning of their expressed interests. Together, Spokane and Decker along with Hartung make a strong case for the value of assessing systematically both measured and expressed interests.

How Do Different Scaling and Norming Methods Affect Inventory Results?

Although there are striking differences in the item technology as well as scaling and norming procedures used in various interest inventories (Taber & Spokane, 1998), we know very little about the interchangeability of inventories employing different psychometric options. The Society for Vocational Psychology's biennial conference at Lehigh University provided an excellent opportunity to collect data pertinent to this question, as 118 career counselors completed the *Campbell Interest and Skills Survey*, the *Kuder Occupational Interest Survey*, the *Self-Directed Search*, the *Strong Interest Inventory*®, and the *Unisex Edition of the American College Testing Interest Inventory*. A moderate to high degree of convergent validity was found across the inventories (Taber & Spokane, 1998) despite their differences in construction. A similar conclusion can be drawn from a case study, also emanating from the Lehigh conference, showing how the same five inventories portrayed a single client (Spokane, 1998).

How Does Research Inform the Interpretation of Interest Inventory Scale Scores and Profile Patterns?

The field of interest measurement has, unequivocally, spent almost its entire effort in developing and establishing the psychometric properties of the instruments it has spawned. Research on how to interpret the meaning of interest inventory scale scores and profile patterns has lagged behind, especially during the last quarter century. Admittedly, during the middle of this century vocational psychologists conducted useful research on the correlates and implications of interest inventory scale scores and profile patterns. The then-popular view that vocational interests are dynamic phenomena that express a self-concept and manifest personality resulted in outstanding manuals for interest inventory interpretation, a few of which remain germane today (e.g., Darley, 1941; Gohetz, 1964; Goldberg & Gechman, 1976). Although contemporary vocational and personality psychologists share a renewed concern about the relation between personality and vocational interests (Tokar, Fischer, & Subich, 1998), they had not yet produced much research on interest inventory interpretation. Prediger (this volume) and Savickas (this volume) remind counselors about the importance of research on inventory interpretation—inquiry that links theory and practice—and illustrate that point by discussing the frequent error of interpreting profile elevation as indicating the strength of vocational interests. Hopefully the renewed enthusiasm for investigating relations between personality and vocational interests (Holland, this volume; Walsh, this volume) will prompt more research on the interpretation of interest inventory profiles, research that can only enhance career assessment.

How Can Interest Inventory Interpretations Be Communicated to Clients so as to Ensure Optimal Outcomes?

As Tinsley and Chu (this volume) document with such force and clarity, empirical research tells us almost nothing about how best to communicate to clients our interpretations of their interest inventory scale scores and profile patterns during the course of counseling and career intervention. Although guidelines exist (Tinsley & Bradley, 1986; Zytowski, this volume), the practice of communicating inventory interpretations to clients has rarely been subjected to empirical test. Tinsley and Chu call the situation “shockingly inadequate,” a conclusion we can only echo. This lacuna in the literature makes case conferences and published case studies particularly useful for

counselors who want to increase their skill at interest inventory interventions. For example, the case study (Savickas, 1998) emanating from the Lehigh conference provides a helpful example of how seven expert counselors interpret and use different interest inventories (Boggs, 1998; Prediger & Schmertz, 1998; Prince, 1998; Rayman, 1998; Spokane, 1998; Zytowski, 1998). After reading these case materials, along with the chapters written by Zytowski (this volume) and Tinsley and Chu (this volume), one quickly concludes that, despite their great usefulness, much more could be discovered about how to best communicate interest inventory interpretations to clients. If nothing else derives from our efforts in this volume, we hope that new research will be formulated and conducted to examine the functional utility (Hayes, Nelson, & Jarrett, 1987) of the measures we use so often in counseling.

TOWARD A REVITALIZED RESEARCH AGENDA

The goal for the Lehigh Conference and this volume is to stimulate new research, revised theory, and perhaps innovations in measurement models and inventories. In chronicling the recent accomplishments and current status of interest theory, research, and practice, the chapters collected herein also raise several important questions and offer many suggestions for future research. Although scholarship and practice regarding vocational interests continue to advance at a vigorous pace, more effort should be invested in intervention research, theoretical conceptualization, and construct validation, including mapping nomological networks. We hope this volume contributes to the current renaissance of interest in interests.

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