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*Journal of Career Assessment* 2000; 8; 379

DOI: 10.1177/106907270000800407

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## The Cultural Context of Career Assessment

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In this article, we propose that the major challenge facing career assessment scholars and practitioners in the 21st century is the need to affirm cultural diversity. Beginning with a discussion of social constructionist theory, we suggest that existing career assessment practice needs to embrace the "local" realities that exist within diverse cultural contexts. We then present the unificationist perspective as a conceptual lens with which to consider career assessment. Building on the need for psychometric tools that can address the changing cultural context of career assessment, we also advance generalizability and item response theories as viable approaches to developing culturally affirming measures and practice standards for diverse clients. The article concludes with an integrative view of how these conceptual and methodological tools can enhance career assessment in the 21st century.

*Keywords:* Career assessment; vocational counseling; multicultural perspectives; cultural diversity; psychometric theory

As the career development field enters its second century, nearly coinciding with the new millennium, it seems timely to reflect on the future of career assessment. In our view, one of the major challenges for career assessment is the evident need to embrace the cultural pluralism that is characteristic of the global context of the 21st century (Leong & Blustein, 2000). Many notable scholars have written eloquent statements about the moral imperative of developing a fully inclusive and affirming set of theories, practices, and tools that can be applied without bias across the diverse gamut of the human population (e.g., Helms & Cook, 1999; Leong & Brown, 1995; Richardson, 1993; Savickas, 1993). Our goal in this article is to add our voices to the growing call for greater cultural affirmation and acceptance in the field of career assessment (cf. Leong, 1995; Subich, 1996). In this article, we focus primarily on career assessment tools (i.e., tests and inventories) as opposed to interviews and counseling interventions. Our

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rationale for this focus is that the ethical and moral use of tests within a culturally diverse context offers perhaps the greatest challenge for career practitioners of the 21st century.

The issues we are raising in this article are clearly not new; in fact, many excellent contributions have focused on the cultural challenges in career assessment (e.g., Bingham & Ward, 1997; Leong & Hartung, 1997; Subich, 1996). In this context, we were faced with what we call the *Passover* question. The first of the famous "Four Questions" of a Passover dinner (known as a seder) begins with the youngest member of the family asking how this night differs from all other nights. Given the strength of previous statements on cultural issues in career assessment, we believe there is a need to apply the Passover standard to this work by identifying clearly how our article will differ from other articles and book chapters on career assessment. Building on the strengths of these contributions, we seek to add to this discourse by focusing on three interrelated issues that have the potential to add new knowledge and improved practice in career assessment. First, we examine career assessment in light of theoretical innovations in social constructionist thought, which are highly relevant to the present discussion (e.g., Cushman, 1995; Gergen, 1991; Richardson, 1993). Building on the social constructionist critique of traditional psychological theories and methods, we then propose the unificationist perspective (Ellis & Blustein, 1991a, 1991b) as a means of enhancing the relevance of career assessment in a multicultural context. In order to furnish career assessment with the conceptual and technical infrastructure that will facilitate greater cultural sensitivity, we introduce item response theory (IRT; Harvey & Hammer, 1999) and generalizability theory (GT; Hoyt & Melby, 1999). These three perspectives, when considered collectively, offer career assessment researchers and practitioners a means of affirming cultural differences as opposed to viewing cultural differences as a factor that must be either ignored or interpreted from an ethnocentric vantage point (cf. Helms & Cook, 1999; Leong & Hartung, 1997).

### **Social Constructionist Theory and Culturally Affirming Career Assessment**

Social constructionist perspectives have provided a powerful cultural critique in psychology (e.g., Cushman, 1995; Gergen, 1991). In short, social constructionist theorists propose that the goal of determining objective truth for many of the questions facing psychology and other social sciences is ultimately an unproductive and potentially fruitless endeavor. The rationale for this position is that human beings are viewed as engaging in an ongoing process of self-constructing and interpreting the world around them; from this perspective, individuals create meaning based on their culturally bound construction of reality (Cushman, 1995; Young & Collin, 1992). Following the assumptions of social constructionist thinking, "truth" and "reality" are seldom universal. The determination of "reality" is inherently local, with meanings shifting in accordance with cultural norms, historical shifts, and idiosyncratic relationship patterns (Blustein & Noumair, 1996; Cushman, 1995).

In the realm of career assessment, the social constructionist challenge merits careful consideration. Recent research in various domains of career assessment has revealed that many notable cultural variations exist within

the assessment of interests, abilities, and personality variables (e.g., Carter & Swanson, 1990; Ridley, Li, & Hill, 1998; Suzuki & Kugler, 1995). Rather than attempting to infer dispositional or genetic differences among various cultural groups, which are replete with implicit and explicit racist assumptions, the social constructionist perspective suggests that these differences may be understood as a manifestation of varying worldviews and life experiences (Cushman, 1995; Richardson, 1993). Applying social constructionist thinking to the domain of traditional test-based career assessment would suggest that more localized assessment tools and measures would be useful in a society that seeks to affirm cultural differences. Thus, the social constructionist perspective may offer a critical bridge between the deterministic views of career assessment that were typical in the 20th century and the more relativistic and pluralistic views of career assessment that are indicated in the 21st century.

Although the social constructionist position does provide a broad and compelling conceptual lens with which to view the challenges within career assessment, we realize that career practitioners are still left with clients who present with pronounced needs for self-exploration and career decision making. Although a radical social constructionist position might imply that we ought to discount any possibility of using a psychometric instrument in career practice, our position is a bit more moderate. We believe that many of the tools of existing career assessment may still offer utility under different circumstances than are the norm in current practice. In our view, the social constructionist critique needs to be addressed as it underlies the entire enterprise of career assessment. We are acutely aware that the history of psychological testing in the 20th century is replete with examples of direct and indirect racism and sexism (see Marshall & Tucker, 1992, for a review of this unfortunate history). As such, we believe that test users and developers need to acknowledge that most psychological principles are indeed local to a given time and place. Given the reality of local norms and social mores, we propose that our field needs to develop new approaches to career assessment. In this context, we present the unificationist perspective (Ellis & Blustein, 1991a, 1991b) next as a means of considering the current reality of career assessment practice and tools in the context of affirmative cultural pluralism.

### **The Unificationist Perspective and Culturally Affirming Career Assessment**

The unificationist perspective represents an attempt to “place the entire question of theory at the foreground of the test’s existence, instead of it being a secondary question...” (Ellis & Blustein, 1991a, p. 553). Central to the unificationist perspective is the notion that all test scores represent inferences about a given person and that an individual’s behavior, attitudes, or knowledge that must be examined in light of empirical observations and theoretical predictions. One of the central tenets of the unificationist perspective is that one ought not to assume that a given test is valid in a cultural context that differs markedly from the cultural background of the normative and test development samples.

In our view, the unificationist perspective offers a means of enhancing cultural knowledge and sensitivity within career assessment. The unificationist perspective emphasizes the notion that a test represents a

means of defining a theoretical construct. As in any theory-driven endeavor, a test user or test developer would need to have a sound theoretical rationale and supporting evidence to buttress claims about the relevance of a given test (or construct) in a specific population. Therefore, practitioners who use ability and aptitude tests need to demonstrate that the constructs being assessed are indeed meaningful in a particular context (cf. Suzuki & Kugler, 1995). The unificationist position is consistent with the arguments advanced by such scholars as Helms (1992) and Suzuki and Kugler in that it is not sufficient to simply modify existing instruments to control cultural influences. Rather, we argue that test users and developers need to test their inferences about a construct in a given context in a manner that is intellectually compelling and affirming of cultural differences.

A closer examination of the unificationist perspective in light of social constructionist thinking reveals important areas of conceptual overlap that are informative to the present discussion. One of the central tenets of social constructionist theory is that individuals have culturally bound perceptions of the world that influence the entire fabric of their life experiences (Cushman, 1995). The unificationist view affirms this assumption in its adherence to the notion that each test (or construct) would need to be evaluated carefully in divergent cultural contexts. When considering the unificationist and social constructionist perspectives in tandem, it is possible to envision culture as a major variable in a given set of psychological premises that needs to be explicitly included in conceptual and empirical considerations. In order to attain the culturally affirming view of career assessment we are proposing in this article, we realize that existing psychometric tools may not be sufficient. To this end, we introduce two critically important recent conceptual innovations (namely generalizability and item response theory) in psychometric theory that have the potential to expand the potential of career assessment across the culturally divergent landscape that characterizes counseling practice in the 21st century.

### **Psychometric Theory and Culturally Affirming Career Assessment**

To understand how and why generalizability theory (GT) and item response theory (IRT) are better suited to a unificationist perspective, we initially contrast them to classical test theory. Although we often use the term "test", we mean to encompass all forms of assessment and measurement (e.g., Messick, 1995). We frame this discussion in terms of partitioning variance, as in explained and error variance (see Kerlinger & Lee, 2000). We further assume the test developer has articulated a well reasoned argument and explicated hypotheses for the measure (Tracey & Glidden-Tracey, 1999; Wampold, Davis, & Good, 1990).

Due to space limitations, we offer a very brief introduction of GT and IRT. Our intent is to entice readers to seek out more in-depth resources on these indispensable topics (for GT see Brennan, 1992; Hoyt & Melby, 1999; Shavelson & Webb, 1991; for IRT see Drasgow & Hulin, 1990; Fox & Jones, 1998; Hambleton, Swaminathan, & Rogers, 1991; Harvey & Hammer, 1999). In addition, software for these procedures is becoming increasingly accessible and user friendly, such as GENOVA (Crick & Brennan, 1982) for GT and BILOG 3 (Mislevy & Bock, 1990) for IRT.

## Classical Measurement Theory

We assume that readers are familiar with classical measurement theory, which is the typical approach that most counselors have learned in career assessment training (for a review, see Anastasi & Urbina, 1996). The traditional approach to test construction, reliability, and validity has been based on classical test theory (see Feldt & Brennan, 1989; Messick, 1989). Classical test theory is predicated on several important assumptions including the following: (a) reliability is separate from validity, (b) total score variance is partitioned into error variance and true score variance, (c) all items use the same rating scales (e.g., 7-point Likert scale), (d) the same items are administered in the same order under the same conditions to respondents drawn from the same population that was used in the development of the measure, and (e) scores (i.e., measurement data) are equally precise across the full range of scores. In addition, classical test theory offers measure-based statistical and psychometric data (e.g., internal consistency reliability).

## Generalizability Theory

Classical measurement theory has been found lacking in many ways (e.g., Ellis & Blustein, 1991a; Feldt & Brennan, 1989; Messick, 1989). Two such deficiencies of the conception of reliability are the ambiguous nature of the concept of "true scores" and the multiplicity of sources of error (Feldt & Brennan), both of which are contingent on the theorizing and constructs underlying the measure and scores (Ellis & Blustein, 1991a, 1991b; Hoyt & Melby, 1999). Given that the classical approach is incapable of conceptually or statistically addressing these issues, GT evolved to advance the conceptualization of reliability and validity and to provide the requisite methodological and statistical procedures.

In short, GT is the application of factorial research designs and variance partitioning statistical procedures such as analysis of variance (ANOVA) to measurement generalizability (i.e., reliability or replicability; Shavelson & Webb, 1991). In effect, classical reliability is to generalizability theory as a simple correlation is to factorial ANOVA or multiple regression. GT permits test developers to partition systematic and error variance into component sources depending on the theoretical assumptions of the measure. That is, various sources of true score and error variance can be identified and incorporated into the GT research design as independent variables. As in ANOVA, the main effects of and interactions among independent variables can be partitioned and tested simultaneously. For example, error variance can be partitioned into error variance, sampling bias variance (e.g., comparing scores for men and women), items variance (comparing sets of items), setting variance (e.g., comparing scores across inpatient and outpatient settings), cultural context variance (e.g., comparing scores across diverse groups), and the interaction of these variables. When applied to observer ratings or coding procedures, variance can be partitioned to test for rater bias and item bias as well as bias due to the objects being rated (Hoyt & Melby, 1999).

GT is entirely contingent on the theoretical context and purpose of the investigation, which would affect how a researcher defines true score variance and error variance. Hence, the researcher or test developer is obligated to make explicit the salient sources of both systematic and error

variance and provide a compelling reasoned argument to justify these decisions (Tracey & Glidden-Tracey, 1999). With a little forethought, investigators can readily incorporate and affirm cultural factors when designing a measure or gathering validity data about scores.

### **Item Response Theory**

Although GT represents a major advancement in measurement theory and application, it nonetheless is subject to many of the limitations that beset classical measurement theory (CMT). An alternative approach is IRT, which has the potential to reshape many of our assumptions about psychological and career assessment (see Drasgow & Hulin, 1990; Fox & Jones, 1998; Hambleton et al., 1991; Harvey & Hammer, 1999). IRT is a family of conceptual and statistical models developed for the design, construction, and evaluation of psychological and educational measures (e.g., Rasch Modeling; Fox & Jones, 1998). In effect, IRT is a modern alternative to CMT, hence its classification as “modern test theory.”

Although IRT has existed for several decades, the advent of the personal computer and related software has propelled this technology forward as a powerful component of modern assessment theory and practice. IRT was originally developed for standardized aptitude, ability, and achievement tests with “right and wrong” scoring; it is in this arena that IRT is most widely known. In the past decade, IRT has been successfully applied to virtually any type of measure including measures that yield dichotomous data (e.g., forced choice items; Harvey & Hammer, 1999), nominal data (Fox & Jones, 1998), and ordinal data (e.g., Likert-type scales; see Fox & Jones, 1998). It is important to realize that open-ended or free-response items can be used so long as the data can be quantified somehow (e.g., to yield a dichotomy, or ordered categories). Given that career assessment typically involves gathering aptitude, achievement, interest, and attitude scores, IRT seems especially well suited to revising these measures towards a culturally affirming position. In fact, we propose that IRT is the optimal means by which to achieve cultural fairness in assessment and measurement (e.g., see Hambleton et al., 1991).

Although IRT is more complex conceptually and procedurally, it offers numerous advantages over classical measurement approaches. Unlike CMT, items do not have to use the same rating scale (e.g., one can mix dichotomous and multiple choice items, use a mix of 2-, 5-, and 7-point Likert type scales). Items are not simply summed such that each item is treated as having equal utility (i.e., items are weighted such that the better performing items receive more weight). Individuals responding to a measure do not have to be presented the identical items in the same order. In fact, respondents do not have to be administered the same set of items; that is, the measure can be specifically tailored to the particular individual and setting (e.g., computerized adaptive testing).

As the name implies, IRT takes a much more item-level focus in comparison with CMT, which takes a test-level focus. One of the chief advantages of an item-level focus is that it provides a unified framework for investigating and conceptualizing bias at the item level, such as bias due to cultural and contextual factors (Hambleton et al., 1991). Next, estimates of the underlying construct may be obtained that are independent of the particular set of items. Hence, scores from two different measures of the

same construct may be directly compared, assuming that IRT was used to create them. IRT ranks both people and items, as in Guttman scales (see McIver & Carmines, 1981, for a review of Guttman scales). This permits people to be directly compared with one another as well as comparing items to one another in terms of their performance.

In contrast to CMT, IRT provides standard error estimates for each person and each item. In IRT, the standard error of measurement (or conversely the precision of measurement) is presumed to vary across the full range of scores. That is, IRT does not assume that a measure is equally precise across the entire range of possible scores as in CMT. Thus, for a particular situation or sample of people, one can select the optimal set of items for a given range of scores. Unlike CMT, item-response models are falsifiable models, which are a central component of the unificationist perspective. As such, IRT models can be empirically tested with the intent to disprove that the item fits the hypothesized model.

The limitations of IRT are that the underlying construct and scale must be unidimensional, usually large sample sizes are required (i.e.,  $n > 200$ ), and it is more complex both conceptually and procedurally. As with any psychometric approach, IRT will not overcome the deficiencies of a poorly conceptualized and designed measure nor poor quality items, especially in terms of affirming cultural diversity.

### **Applications of Generalizability and Item-Response Theories**

Counseling professionals have become increasingly cognizant of the cultural context of the person and of the assessment tool in career interventions (e.g., test, measure, rating procedure; Leong & Hartung, 1997; Ridley et al., 1998). However, the unbridled application of an assessment tool with persons from cultures that are outside of the cultural boundaries of the existing validity and psychometric data is inappropriate (Leong & Hartung, 1997). In this vein, GT offers a means to test for and affirm cultural differences. Inferences about scores from two or more cultural groups (samples) can be systematically tested as well as testing the suitability of the items and scores to the groups. GT also provides more appropriate and theoretically based procedures to analyze and test a variety of psychometric and substantive inferences about the assessment data (e.g., test scores).

The implications of IRT in culturally pluralistic contexts are also compelling and relevant to our overall goals in this article. Using IRT as a framework, a measure can be adapted for a given cultural context, assuming the measure was developed to do so. Items can be replaced or changed as additional psychometric and validity data are gathered as well as to accommodate evolution in theory and one's understanding of the constructs being measured. In this vein, Harvey and Hammer (1999) provided a good example of using IRT to revise and update an existing measure (i.e., the Myers-Briggs Type Indicator; MBTI; Myers & McCaulley, 1998).

GT and IRT are imminently applicable for developing new or revising existing career measures and rating-coding protocols, especially to affirm cultural pluralism. We hope that readers do not regard GT and IRT simply as novel statistical procedures or fashionable research methodologies. Rather, IRT and GT represent new ways of conceptualizing and theorizing about cultural issues and potential mediating and moderating constructs



while also identifying how these factors impact career development and career assessment. GT and IRT facilitate the testing of cultural inferences about assessment data that can and should be evaluated before using a measure in a different cultural context or with a person from a culture that is different from the normative or derivation samples. Ultimately, the responsibility rests on counseling professionals to use the measure and its scores in an unbiased manner and as a means to affirm cultural differences.

### **A Journey Into a Culturally Affirming Future in Career Assessment**

In order to furnish readers with an integrative view of the various theoretical threads that we are weaving in this article, we have elected to present an idealized view of career assessment in the year 2050. As we explore this futuristic case vignette, we will highlight the various ways in which social constructionism, unificationist thinking, and the new technological tools provided by GT and IRT can transform career assessment. We shall assume that by the year 2050 the profession and, indeed, society are well on their way to embracing a culturally pluralistic value system that seeks to affirm as opposed to denigrate differences between people.

A client, Carlos, is seeking career counseling to explore ways to find more satisfaction in his work life. Carlos is a 33-year-old man whose family was born and raised in Puerto Rico. He was raised on the mainland of the United States, with most of his early childhood years and education taking place in urban areas in the Northeast. Carlos has a 4-year degree in business administration from a well respected university and also has considerable skills in computer technology. His recent positions have consisted of a series of short-term assignments in various computer-based companies. Carlos is aware that short-term work is the norm at this point; however, his dissatisfaction emerges from a lack of intrinsic interest in business and in computer technology. The counselor, Martha, an African American counseling psychologist who specializes in work-related issues, believes that Carlos would benefit from intensive and focused self-exploration and a careful reassessment of his goals.

Initially, Martha explores with Carlos his experiences of work and the way in which work has been viewed by his family and peers. She develops a sense that Carlos has viewed work in a culturally pluralistic fashion, extracting values from various traditions, including most overtly his Latino culture. Martha then explores with Carlos how he has felt about his nonwork life such as his personal relationships. Consistent with the overall trend of her training and the leadership provided by counseling psychology over the past few decades within the helping professions, she seeks to integrate personal and career counseling (cf. Blustein & Spengler, 1995), thereby, helping Carlos to take greater ownership of his overall life course. In exploring Carlos' interests, values, and beliefs, Martha finds that she feels stuck in identifying new directions and options. Her recommendation to Carlos is to use some computerized assessment tools in conjunction with her counseling interventions. Carlos agrees with this suggestion and schedules time at the computer banks located in an adjoining office. In Martha's estimation, Carlos would be best served by testing that would fill the precise developmental needs that have emerged in the initial sessions, primarily pertaining to interests, values, and abilities (cf. Super, 1983).

It is important to note that the actual measures Carlos takes are difficult to define as they do not exist currently. However, the various theoretical and technological ideas that we have presented thus far help us to extrapolate some ideas about the measures that will be used and how these measures will be understood. In this idealized scenario, the various measures used in this assessment would have been designed based on GT and IRT. In addition, the measurement tools will reflect the tenets of unificationist thought in that test users will be held to an ethical and moral standard wherein they will need to use items and measures that are valid within the cultural context of their clients. One of the interesting attributes of this futuristic tour is that the tests would be individualized based on input provided to the test software about Carlos' cultural background by Martha and by Carlos in the initial phase of testing. Therefore, assuming that Carlos takes an interest inventory, it is conceivable that he will receive a highly individualized set of items that are tailored for him based on his culture and his family's background as well as his own individualized construction of work. Indeed, the test would actually be further constructed by the software as Carlos progresses through the items. The software will be able to determine further information about Carlos based on his responses, thereby, further focusing the items so that his cultural values and beliefs are clearly affirmed.

In the realm of assessing abilities and achievements, which have evoked enormous debate in the field, Carlos and Martha will talk initially at great length about how Carlos has viewed his scholastic and work-related tasks and skills. She will then tailor assessment activities that will include a number of features such as a review of his academic record in high school and college as well as the use of narrative material describing his most important achievements (similar to the Quick Job-Hunting Map; Bolles, 2000). In addition, Martha may use a computerized test that will be normed and validated on a population that is analogous to Carlos' family and community. Unlike current tests that rely on global concepts such as intelligence or the 'g' factor, the ability tests of the future will be able to identify core elements of success and adaptiveness that are comprised of relevant elements from one's culture along with predictive factors that have been identified within circumscribed work settings. Thus, notions of aptitude and ability will be recast in local terms (cf. Cushman, 1995), thereby reducing the inherent pain and distress that current discussions about intelligence and the 'g' factor have engendered in our society. The enormous technical challenge of this process will be far more possible with the advent of high speed computers that will use IRT and GT in test construction and test adaptation.

The counseling process that Martha engages in will also reflect a commitment to cultural affirmation. The test data will be explored in a tentative fashion, with Carlos being encouraged to react openly to the results based on his life experience. Using an activist stance in her work, Martha seeks to combat the null environment (Betz, 1989). Thus, Martha will help Carlos explore options that, although initially inconsistent with his self-concept, may reflect outcomes of the cultural and gender-based socialization processes. Assuming that Carlos generates some new options, he then will be encouraged to explore these options both via real-life experiences as well as via a technology that we probably cannot even imagine yet. Although some readers may react to this case by suggesting that we are overly idealistic, it is important to note that the conceptual and

technological roots are in place for this optimistic type of future. Indeed, our intention in this article is to advance these tools so that scholars, test developers, and counselors can begin to think about career assessment in very different ways.

## Conclusion

The advent of the social constructionist critique has clearly engendered a healthy debate about the extent to which ideas, concepts, theories, and measurement tools are relevant across cultural boundaries. As we have suggested in this article, the social constructionist perspective has encouraged a more affirmative position with respect to cultural differences while also identifying the implicit (and often explicit) sources of racism, ethnocentrism, and sexism that exist in current psychological discourse. Building on the social constructionist framework, an explicit application of the unificationist perspective to career assessment buttresses our position that clients deserve services that are theoretically valid and culturally appropriate for a given setting. Finally, the inclusion of GT and IRT furnishes our vision with the necessary tools for a more just future. As we have attempted to propose in this article, the future of career assessment is ripe for major conceptual and technological transformations. Our hope is that this contribution, in conjunction with the other important statements in this field, will help to generate the needed commitment from career practitioners and scholars to ensure that these changes occur in a culturally affirming and ethical fashion.

## References

- Anastasi, A., & Urbina, S. (1996). *Psychological testing* (7th ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Betz, N. E. (1989). The null environment and women's career development. *The Counseling Psychologist, 17*, 136-144.
- Bingham, R. P., & Ward, C. M. (1997). Theory into assessment: A model for women of color. *Journal of Career Assessment, 5*, 403-418.
- Blustein, D. L., & Noumair, D. A. (1996). Self and identity in career development: Implications for theory and practice. *Journal of Counseling and Development, 74*, 433-441.
- Blustein, D. L., & Spengler, P. M. (1995). Personal adjustment: Career counseling and psychotherapy. In W. B. Walsh & S. H. Osipow (Eds.), *Handbook of vocational psychology* (2nd ed., pp. 295-329). Mahwah, NJ: Erlbaum.
- Brennan, R. L. (1992). *Elements of generalizability theory* (2nd ed.). Iowa City, IA: American College Testing Program.
- Bolles, R. (2000). *What color is your parachute?* Berkeley, CA: Ten Speed Press.
- Carter, R. T., & Swanson, J. L. (1990). The validity of the Strong Interest Inventory with Black Americans: A review of the literature. *Journal of Vocational Behavior, 36*, 195-209.
- Crick, J. E., & Brennan, R. L. (1982). GENOVA: A generalized analysis of variance system [FORTRAN IV computer program and manual]. Dorchester: Computer Facilities, University of Massachusetts, Boston.
- Cushman, P. (1995). *Constructing the self, constructing America: A cultural history of psychotherapy*. Reading, MA: Addison-Wesley.
- Drasgow, F., & Hulin, C. L. (1990). Item response theory. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial & organizational psychology* (2nd ed., Vol. 1, pp. 577-636). Palo Alto, CA: Consulting Psychologists Press.
- Ellis, M. V., & Blustein, D. L. (1991a). Developing and using educational and psychological tests and measures: The unificationist perspective. *Journal of Counseling and Development, 69*, 550-555.

- Ellis, M. V., & Blustein, D. L. (1991b). The unificationist perspective: A context for validity. *Journal of Counseling and Development, 69*, 561-563.
- Feldt, L. S., & Brennan, R. L. (1989). Reliability. In R. L. Linn (Ed.), *Educational measurement* (3rd ed., pp. 105-146). New York: Macmillan.
- Fox, C. F., & Jones, J. A. (1998). Uses of Rasch modeling in counseling psychology research. *Journal of Counseling Psychology, 45*, 30-45.
- Gergen, K. J. (1991). *The saturated self: Dilemmas of identity in contemporary life*. New York: Basic Books.
- Hambleton, R. K., Swaminathan, H., & Rogers, H. J. (1991). *Fundamentals of item response theory*. Newbury Park, CA: Sage.
- Harvey, R. J., & Hammer, A. L. (1999). Item response theory. *The Counseling Psychologist, 27*, 353-383.
- Helms, J. E. (1992). Why there is no study of cultural equivalence in standardized cognitive ability testing? *American Psychologist, 47*, 1083-1101.
- Helms, J. E., & Cook, D. A. (1999). *Using race and culture in counseling and psychotherapy: Theory and process*. Needham Heights, MA: Allyn & Bacon.
- Hoyt, W. T., & Melby, J. N. (1999). Dependability of measurement in counseling psychology: An introduction to generalizability theory. *The Counseling Psychologist, 27*, 325-352.
- Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioral research* (4th ed.). New York: Harcourt.
- Leong, F. T. L. (Ed.). (1995). *Career development and vocational behavior of racial and ethnic minorities*. Hillsdale, NJ: Erlbaum.
- Leong, F. T. L., & Blustein, D. L. (2000). Toward a global vision of counseling psychology. *The Counseling Psychologist, 28*, 5-9.
- Leong, F. T. L., & Brown, M. (1995). Theoretical issues in cross-cultural career development: Cultural validity and cultural specificity. In W. B. Walsh & S. H. Osipow (Eds.), *Handbook of vocational psychology* (2nd ed., pp. 143-180). Hillsdale, NJ: Erlbaum.
- Leong, F. T. L., & Hartung, P. (1997). Career assessment with culturally different clients: Proposing an integrative-sequential conceptual framework for cross-cultural career counseling research and practice. *Journal of Career Assessment, 5*, 183-202.
- Marshall, R., & Tucker, M. (1992). *Thinking for a living: Education and the wealth of nations*. New York: Basic Books.
- McIver, J. P., & Carmines, E. C. (1981). *Unidimensional scaling*. Thousand Oaks, CA: Sage.
- Messick, S. (1989). Validity. In R. L. Linn (Ed.), *Educational measurement* (3rd ed., pp. 13-103). New York: Macmillan.
- Messick, S. (1995). Validity of psychological assessment. *American Psychologist, 50*, 741-749.
- Mislevy, R. J., & Bock, R. D. (1990). *BILOG 3: Item analysis and test scoring with binary logistic models* (2nd ed.). Lincolnwood, IL: Scientific Software International.
- Myers, I. B., & McCaulley, M. H. (1998). *Manual: A guide to the development and use of the Myers-Briggs Type Indicator*. Palo Alto, CA: Consulting Psychologists Press.
- Richardson, M. S. (1993). Work in people's lives: A location for counseling psychologists. *Journal of Counseling Psychology, 40*, 425-433.
- Ridley, C. R., Li, L. C., & Hill, C. L. (1998). Multicultural assessment: Reexamination, reconceptualization, and practical application. *The Counseling Psychologist, 26*, 827-910.
- Savickas, M. L. (1993). Career counseling in the postmodern era. *Journal of Cognitive Psychotherapy, 7*, 205-215.
- Shavelson, R. J., & Webb, N. M. (1991). *Generalizability theory: A primer*. Newbury Park, CA: Sage.
- Subich, L. M. (1996). Addressing diversity in the process of career assessment. In M. L. Savickas & W. B. Walsh (Eds.), *Handbook of career counseling theory and practice* (pp. 277-289). Palo Alto, CA: Davies-Black.
- Super, D. E. (1983). Assessment in career guidance: Toward truly developmental counseling. *Personnel and Guidance Journal, 61*, 555-562.

Suzuki, L. A., & Kugler, J. F. (1995). Intelligence and personality assessment: Multicultural perspectives. In J. G. Ponterotto, J. M. Casas, L. A. Suzuki, & Alexander, C. M. (Eds.), *Handbook of multicultural counseling* (pp. 493-515). Thousand Oaks, CA: Sage.

Tracey, T. J. G., & Glidden-Tracey, C. E. (1999). Integration of theory, research design, measurement, and statistics: Toward a reasoned argument. *The Counseling Psychologist, 27*, 299-324.

Wampold, B. E., Davis, B., & Good, R. H., III. (1990). Hypothesis validity of clinical research. *Journal of Consulting and Clinical Psychology, 58*, 360-367.

Young, R. A., & Collin, A. (Eds.). (1992). *Interpreting career: Hermeneutical studies of lives of context*. Westport, CT: Praeger.