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BOOK AND TEST REVIEWS

Nell, V., *Cross-Cultural Neuropsychological Assessment: Theory and Practice,* Lawrence Erlbaum Associates, Inc., Mahwah, NJ, 2000

Historically, the role of sociocultural factors in neuropsychological assessment has been largely ignored, if not misunderstood. Early classics in the field failed to address the potential role of such factors in affecting brain function and the measurement of its dysfunction. In the last decade, this paucity of information and interest has slowly begun to change. Furthermore, a resurgence of interest in classical clinical neuropsychology has refocused a Western-, male-, and White-dominated discipline. If indeed there is to be universal value to clinical neuropsychology, its generalizability to populations outside North American majority culture is undeniably critical.

Victor Nell's major contribution of his career comes at an auspiciously critical time in a manner that is provocative, informative, and colorful. The book is a well-written scholarly work that summarizes the research of Nell and colleagues. The book is an unusual contribution of both theoretical and clinical issues that questions traditional neuropsychological practices and provides several useful solutions.

The book includes 11 chapters organized in three major parts. The first part (chapters 1 and 2) approaches the problems of cross-cultural neuropsychological assessment from an academic perspective. Part 2 (chapters 3–6) sets out principles on which the issues and practice of cross-cultural assessment should be pursued. Part 3 (chapters 7–11) provides specific methods of how neuropsychological assessment should be pursued when limited or no norms are available. The monograph is supplemented with 13 appendixes, of which 7 provide test descriptions and instructions for their administration for non-test-wise populations. The book contains over 300 references and a variety of case descriptions and protocols, which add anecdotal support as needed.

Chapter 1 is devoted to the discussion of westernization of modern psychology (although, for all practical purposes the two are historically synonymous, for better or for worse). The author correctly emphasizes that most tests are produced and oriented toward Western consumers. He encourages the recognition of "culture-specific" differences instead of assuming the possibility of an ideological universalism. In chapter 2, the problem of culture in neuropsychology is addressed. Particularly interesting is the review of 24 studies of 13 countries on four continents using the World Health Organization Neurobehavioral Core Test Battery. Nell suggests that universality is impossible by citing the differences obtained across countries.

Vygotsky's cultural–historical approach, renamed by Nell as "radical environmentalism," is explained as psychological phenomena affected by individual origin and history that can be understood only through a study of its origin and history (chapter 3). The description of Luria's 1931 expedition to Uzbekistan and its sociopolitical consequences is intriguing. The results of Luria's study support the contention that abstraction and generalizaton are the products of cultural environment.

Chapter 4 addresses the origin of intellectual differences, assuming that they are not simply psychometric artifacts. Nell suggests that North American psychology has been ethnocentric in its approach and, further, that racial issues have marred an accurate assessment of cultural differences. The problems of validity and norms in cross-cultural settings are considered in chapter 5. A major problem is the lack of understanding of the underlying constructs that are to be measured. Two secondary sources for providing support to the limited use of norms in this situation are cited in the chapter.

Chapter 6 may be the central focus of the book in that it begs the question of what is the real subject of clinical neuropsychology; that is, what are we to measure. Nell provides a three-level description of practice using behavioral neuropsychological concepts. The

next several chapters address the importance of diagnosis and behavioral changes after traumatic brain injury. A discussion of Vygotsky's zone of proximal development by applying it to both assessment and rehabilitation is presented in chapter 9. The book finishes with a thorough description of a core test battery for non-Western cultures. Interestingly, the development of the battery comes almost exclusively from Western concepts and tests.

There is no question that Nell's book will be considered in neuropsychology, in general, and cross-cultural neuropsychology, in particular, as an important contribution. There are highlights of this throughout the book. The discussion on literacy is engaging and timely. The summary of Vygotsky and Luria is thorough and accurate, and the core test battery and its roots with the World Health Organization is heroic. However, at times the book could be considered potentially problematic. Here are five small samples. First, Nell sometimes relies on secondary references resulting in incorrect overgeneralizations. Second, the presentation of the IQ controversy is politically correct, but one wonders if all sides have been presented and without bias. Third, to say that "smart is not fast" is to negate a large number of psychological, pedagogical, neurophysiological, and neuropsychological studies and premises (which may not necessarily be such a bad idea). Fourth, can neuropsychological assessment be truly transferable, even within regions of a large country? Fifth, the book is excellent in developing an understanding of culture in South Africa, but what about its own transferability? For example, Hispanics are referenced only twice (and one is a book review). Maybe a subtitle would have been in order.

Also, at times one is left with a desire for more. Again, here are some questions for Nell: Tell us more about the difference between assessment and testing. How did you come up with the four components of diffuse brain damage? Prior attempts at cross-cultural neuropsychology were deemed inadequate as a result of "worthless" norms, but we are told it is acceptable to test without norms, especially because the book does not provide any of those norms. We are confused; again, tell us more.

Regardless of whatever shortcomings the book may have, it provokes further thinking in an area often misdirected and misunderstood. We are left with questions to ponder for another study, another meeting, and yet another book. What really is intelligence? Could intelligence be what neuropsychologists are attempting to measure? Furthermore, could neuropsychological performance be nothing more than an individual's capacity to understand, and relay that understanding to a third party, the culture in which they live? Could brain dysfunction simply be that person's inability to maneuver successfully in cultural situations? Thus, would neuropsychological tests really be nothing more than measures of cultural knowledge?

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R. A. Stern, D. J. Javorsky, E. A. Singer, N. G. Singer Harris, J. A. Somerville, L. M. Duke, J. A. Thompson, and E. Kaplan, *The Boston Qualitative Scoring System for the Rey–Osterrieth Complex Figure,* Psychological Assessment Resources, Odessa, FL, 1999

Since its introduction by Rey (1941) and the publication of a 36-point scoring system and normative data by Osterrieth (1944), the Rey–Osterrieth Complex Figure (ROCF) has enjoyed broad use as a measure of visuospatial memory and constructional ability (Corwin & Bylsma, 1993). In the intervening years, at least 4 quantitative and 11 qualitative (Stern et al., 1999) scoring systems have appeared. Why, then, do we need another?

The answer lies in the serious limitations of previous scoring systems and the substantial advances embodied in the Boston Qualitative Scoring System (BQSS). Most of the published quantitative systems are limited by their lack of attention to the wealth of qualitative, process-oriented data regarding the patient's organizational strategy when copying or recalling the ROCF. Although the various qualitative scoring systems incorporate more of these data, they too are limited by their focus on only a narrow aspect of test behavior. The BQSS is based on the efforts of Edith Kaplan to "avoid simplistic, unidimensional descriptions of human behavior, as well as her determination that psychologists employ a scientific approach to quantifying the important multidimensional, qualitative features of test performance" (Stern et al., 1999). As such, the BQSS is the first scoring system for the ROCF to provide comprehensive qualitative ratings and quantitative summary scores for the adult population.

The BQSS is based on the administration of ROCF copy, immediate recall, and 20- to 30-min delayed recall trials. For each of these trials, the BQSS provides 17 scores of a specific qualitative feature of the patient's production. For example, a Fragmentation score measures whether or not the individual elements of the figure are drawn as whole units. A Planning score is based on the overall integrity of the patient's production, the order in which elements of the figure are drawn, and the placement of elements on the page and within the figure. Through the use of scoring templates, the size reduction, vertical and horizontal expansion, and rotation of the figure are detected and quantified. For all but one of the qualitative indexes, the examiner employs a rating scale that varies from 0 (*extremely poor planning*) to 4 (*good planning*). The one exception is the Asymmetry score, which consists of a categorical rating of the distortion or omission of details on the right or left sides of the figure.

In addition to the 17 Qualitative scores, the BQSS provides six Summary scores derived from combinations of the Qualitative scores. For example, summing the Fragmentation and Planning scores yields an Organization Summary score—an index of the patient's overall organizational ability as reflected in the ROCF productions. To further facilitate scoring, the figure is divided into configural elements that form the main structure of the figure (i.e., the rectangle, bisecting lines, diagonal lines, and large triangle), clusters (i.e., secondary elements composed of shapes or line segments that form a coherent whole), and details (i.e., single line segments).

A qualitative scoring system is only as good as its scoring and interpretive procedures and guidelines. The BQSS developers have fortunately paid close attention to these aspects of their system. The BQSS Professional Manual (Stern et al., 1999) includes highly detailed scoring procedures and criteria, as well as a "walk-through" example. Virtually every page of the chapter on scoring criteria includes not only verbal descriptions but, most important, multiple pictured examples to guide the test administrator. Scoring templates are simply designed and easy to use. The Scoring Booklet is densely packed with information and is a bit daunting at first (and perhaps even second) glance. The level of detail in the Scoring Booklet is helpful when evaluating patient productions, but be warned, middle-aged examiners (the reviewer included) will need to adjust their bifocals when using the booklet.

The BQSS is standardized on a sample of 433 healthy adult men and women, ranging in age from 18 to 94 years, screened to exclude persons with neurological conditions and mental disorders. Although drawn from several cities in the United States and Canada, the sample is not representative of the populations of either country (nor is this claimed). More significant is the disproportionate representation of women from age 40 to 94, a weakness partially offset by the absence of any statistically significant Age × Gender interaction. However, it is troubling to have norms for males in virtually all age ranges on the basis of fewer than 35 individuals per age group. In addition, just under half of the standardization sample received their delayed recall condition at intervals up to twice as long as the 20 to 30 min recommended for the standard administration of the ROCF. All of the individuals receiving longer delayed recall trials were over the age of 40. Although analyses reported in the Professional Manual (Stern et al., 1999) suggested there is no statistically significant age by length of delay interaction for individuals over the age of 40, the lack of standardization across all age groups introduces a systematic bias in the normative tables that diminishes their usefulness for comparisons of individuals above and below age 40.

Reliability data reported for the BQSS are also inadequate. With a mean κ of 0.83 (Stern et al., 1999), the BQSS has good interrater reliability when raters score protocols from healthy participants. Interrater reliability derived from a sample that included both healthy and clinical volunteers looks promising, but the manual only reports kappa coefficients on the 17 qualitative scores from the copy trial of the ROCF. Kappa coefficients are not provided for the immediate and delayed recall trials, a surprising omission that raises questions about the reliability of scoring for these conditions. There does appear to be overall excellent interrater reliability for the Summary scores, which include data from all three ROCF trials. Finally, test–retest reliability cannot be measured validly because, inevitably, the participant is no longer naive with respect to the incidental recall condition. Hence, not surprisingly, only moderate reliability coefficients were obtained from a sample of healthy bisexual or homosexual men retested after 1 year (Stern et al., 1999).

The BQSS appears to have good convergent validity, as its various scores correlate highly with Osterrieth's (1994) original scoring system and modestly with a variety of tests of executive function (Stern et al., 1999). The manual also summarizes results from a number of discriminant validity studies. The BQSS correctly classified 81% of brain-injured

patients and 82% of controls in one study. Similarly, it correctly classified 75% of Alzheimer's and vascular dementia cases. Comparable or better classification rates are reported for HIV, attention deficit hyperactivity disorder, and simulated malingerer samples. Unfortunately, all of these studies use multivariate regression analysis with small numbers of participants, making it difficult to generalize the results beyond the study samples. Last, ecological validity, so often neglected in validating neuropsychological tests, has only been studied with a previous version of the BQSS and in a sample of schizophrenic patients and their controls.

In summary, the BQSS laudably systematizes and quantifies the rich qualitative data available from the standard administration of the ROCF. It represents a substantial advance over previous scoring systems and makes it possible for all neuropsychologists using this test to conduct the kind of process-oriented examination popularized by Kaplan and her colleagues. However, the collection of additional normative data and further study of the system's psychometric properties is essential before the BQSS can become a fully functional part of the neuropsychologist's toolkit.

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