Benton’s Neuropsychological Assessment

Even a quick look at this book would indicate that the largest areas of development have been in the construction of new tests and procedures. That is not true for the various tests associated with Arthur Benton. Additional and updated normative information has been made available (Sivan, 1992), but there have been no new tests or procedures. All the same, the Benton procedures continue to be used both clinically and in research settings. The continued utilization of the tests reflects the sound design and the fact that not many tests have been developed focusing on the functions of the right hemisphere.

Arthur Benton has made several large contributions to the field of neuropsychological assessment in terms of test constructions, the understanding of right-hemisphere function, in training, and in professional development. Benton’s approach to test construction is to take laboratory tasks that had been found to be sensitive to differences in cortical integrity and to apply them in a clinical setting. Although not all of Benton’s tasks actually derive from the laboratory, the construction of all of the tasks has the spirit of laboratory investigations. In addition, the procedures are well defined and standardized. Scoring is described explicitly, and the results are summarized in a quantitative score. A third characteristic of Benton’s tests is the use of norms that represent the influence of age and education. Benton was perhaps the first clinical neuropsychologist to have paid more than mere lip service to the confounding effects of age and education in the assessment situation. Finally, Benton was not bound by the left-hemisphere bias of traditional neuropsychology. Many of his tests are either sensitive to the effects of right-hemisphere impairment or, as in the case of the Tactile Form Perception Test, are designed to partial out the linguistic (left-hemisphere) effects from the more purely perceptual (right-hemisphere) effects.

Benton may be the person in this country most responsible for the rise of the flexible approach to neuropsychological assessment. His tests do not constitute a battery. Instead, the tests to be used in each assessment are chosen on the basis of presenting complaints, the type of referral question, or the results of previous testing. Therefore, a different set of assessment techniques is likely to be used on each subject. The tests were not normed on the same set of normative subjects, and therefore comparisons of scores across tests of the same individual are limited. However, the tests are extremely useful for the assessment of particular functions or when administered in conjunction with other assessment devices.

The tests included in the Benton conglomeration are the Benton Visual Retention Test; the Multilingual Aphasia Examination; and the tests of Temporal Orientation, Right–Left Orientation, and Serial Digit Learning. Benton’s perceptual and motor tests include Facial Recognition, Judgment of Line Orientation, Visual Form Discrimination, Pantomime
Recognition, Tactile Form Perception, Finger Localization, Phoneme Discrimination, Three Dimensional Block Construction, and Motor Impersistence. These tests are considered singly.

**RIGHT–LEFT ORIENTATION**

Right–left orientation has been interpreted as indicative of spatial impairment and as being associated with linguistic impairment. The Benton Test of Right-Left Orientation requires the patient to respond with rudimentary motor responses, a requirement that minimizes the influence of aphasic symptoms on the test results. The test consists of 20 commands that are presented in increasing order of complexity. The first set of commands requires the patient to point to right or left parts of his or her own body. The second set of commands requires the patient to point to lateralized parts of his or her body with either the right or the left hand. The third set of commands requires the patient to point to lateralized parts of the examiner’s body. Finally, the fourth set of commands requires the patient to point to lateralized parts of the examiner’s body with the right or left hand.

There are alternate forms of the test. Form B is identical to Form A except that the words right and left are interchanged. The responses are scored for whether the patient uses the correctly lateralized body part or the correct body part. In addition, errors are separated on the basis of whether the command required the subject to point to his or her own body or to the body of the examiner. Formal investigations of the alternate-forms reliability of the test have not been conducted. However, because of the similarity between the two forms, equivalency can probably be safely assumed. Form R is for patients who cannot use their right hand, and Form L is for patients who cannot use their left hand. Because Forms R and L are sufficiently different, the alternate-forms reliability of these two forms needs to be investigated.

The test was normed on a sample of 234 male and female subjects who had no history of brain impairment. Statistical analyses indicated no significant differences due to age, sex, or level of education. Distributions of scores for the impaired subjects are also presented in the manual (Benton, Hamsher, Varney, & Spreen, 1983). The impaired subjects consisted of 34 patients with bilateral brain impairment, 20 patients with right-hemisphere lesions, 20 aphasic patients with left-hemisphere lesions, and 20 nonaphasic patients with left-hemisphere lesions. The interpretation of results is based on the similarity of the type of error made by the patient in reference to the normative data. Although interpretations of Forms R and L are referred to the normative data, formal evaluations of the validity of these two forms need to be conducted.

Knowledge about relationships to other tests (concurrent validity) will help us to understand the nature of the deficit underlying poor performance on this test. Information regarding the internal consistency reliability and the test–retest reliability would also enhance the clinical utility of the test.

**SERIAL DIGIT LEARNING**

Benton’s Serial Digit Learning Test is a standardized form of digit supraspan. (The reader is referred to the discussion of supraspan procedures elsewhere in this book.) One of