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The Evolution of Wechsler Intelligence Scales in Historical Perspective

Diane Coalson, Ph.D. and Larry Weiss, Ph.D.

David Wechsler's original views on intelligence continue to be validated through over 60 years of research. Although some writers have criticized the lack of a theoretical foundation in the Wechsler intelligence scales (e.g., Thorndike, 1997; Flanagan, McGrew, & Ortiz, 2000), a closer review of Wechsler's original conceptions and development of his scales provides important clues to his theoretical views.

At the time of the publication of the *Wechsler-Bellevue Intelligence Scale* (1939), Wechsler believed in a unitary construct of intelligence that could best be measured by assessing an individual's performance on a wide array of tests. He considered intelligence not only as a global entity but also as an aggregate of specific abilities that are qualitatively different. Wechsler explained that intelligence is global because it characterizes the individual's behavior as a whole. It is also specific because it is comprised of elements or abilities that are qualitatively different.

The primary purpose of intelligence testing at the time Wechsler published his original scale was still focused on the classification of individuals based on their overall level of cognitive functioning. Based on his considerable clinical expertise, Wechsler selected those subtests that he deemed to be the most clinically useful and ecologically valid for this purpose. Although it is true that he did not select subtests based on an explicit theory of intelligence, his choice of subtests for inclusion in his scales sheds light on the cognitive aspects of intelligence that he deemed most important to assess. The subtests Wechsler selected and developed tapped many different mental abilities, such as abstract reasoning, perceptual organization, verbal comprehension, quantitative reasoning, memory, and processing speed. All of these areas have been confirmed as important aspects of cognitive ability in more contemporary theories and measures of intelligence (Carroll, 1993; Horn, 1991).

In general, Wechsler's conception of intelligence as a global construct tapped by the measurement of different abilities is consistent with current research on intelligence. The last several decades of research have included factor-analytic studies of intelligence

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Conventions

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American Psychological Association **(APA)**, Chicago, IL 8/21–24/02

National Academy of Neuropsychology **(NAN)**, Miami, FL 10/9–12/02

Children and Adults with Attention Deficit/ Hyperactivity Disorder **(CHADD)**, Miami Beach, FL 10/17–19/02

National Association of State Directors of Special Education **(NASDSE)**, Portland, OR 11/10–13/02

Association for Advancement of Behavior Therapy **(AABT)**, Reno, NV 11/14–17/02

measures to determine the specific abilities measured by intelligence tests (e.g., Carroll, 1993). Although the terms used to describe the cognitive abilities vary with the researcher, results indicate that intelligence is comprised of specific narrow abilities that appear to cluster into higher-order ability domains. Although some have presumed that Wechsler assumed a two-factor structure of intelligence based on his split of subtests into verbal and performance tasks, Wechsler clarified the practical purpose of the split by noting:

> [The grouping of subtests into Verbal and Performance areas]...does not imply that these are the only abilities involved in the tests...The subtests are different measures of intelligence, not measures of different kinds of intelligence, and the dichotomy of Verbal and Performance areas is only one of several ways in which the tests could be grouped. [Wechsler, 1958, p. 64].

Evidence that the *Wechsler Intelligence Scale for Children* (WISC; Wechsler, 1949) and *Wechsler Intelligence Scale for Children-Revised* (WISC–R; Wechsler, 1974) subtests could be regrouped in several meaningful ways came quickly and was well accepted by practitioners as clinically useful (Bannatyne, 1974; Cohen, 1958; Kaufman, 1979). Perhaps the most important of these regroupings was the collection of Arithmetic, Digit Span and Coding. This composite was labeled "Freedom from Distractibility." The meaning of the third factor and its labeling have been topics of extended debate (Lutey, 1977; Osborne & Lindsey, 1967). While all of the views hold some validity, the most prophetic with regard to subsequent research in neuropsychology was the view expressed by Wielkiewicz (1990) in which he emphasized the role of executive processes underlying performance on the third factor subtests.

During the five-year development effort that preceded the release of the *Wechsler Intelligence Scale for Children–Third Edition* (WISC–III; Wechsler, 1991), researchers at The Psychological Corporation evaluated several new tasks designed to strengthen and clarify the interpretation of the elusive third factor. Ultimately, the Symbol Search subtest was created and selected for inclusion in the final battery. Unexpectedly, however, the introduction of Symbol Search caused the third factor to split into two factors, resulting in the now widely known four-factor structure of WISC–III. Arithmetic and Digit Span loaded together and this factor retained the name Freedom from Distractibility. Coding loaded with the new subtest Symbol Search and was given the label Processing Speed.

The Freedom from Distractibility Index (FDI) is mislabeled according to currently accepted interpretations. This index does not measure distractibility. As foreshadowed by Wielkiewicz (1990), this index is now understood in the context of the frontal executive functions, and would be better labeled as the Working Memory Index. Working memory is the ability to temporarily hold information in mind while performing some operation or manipulation with that information, or engaging in an interfering task, and then accurately reproducing the information or correctly acting on it. Working memory can be thought of as mental control involving reasonably higher order tasks and it presumes attention and concentration.

Digit Span backwards is an excellent example of a task designed to tap working memory. The Arithmetic subtest is an ecologically valid measure of working memory because we are frequently called upon to mentally calculate arithmetic problems in real life situations. However, working memory interpretations of the Arithmetic subtest are too often confounded with the examinee's numerical ability. Because purer measures of working memory were desired to better define the Working Memory factor, the research program leading to the publication of the *Wechsler Adult Intelligence Scale–Third Edition* (WAIS–III; Wechsler, 1997) included the development of a new subtest, Letter-Number Sequencing. Factor-analytic studies of the WAIS–III also resulted in a four factor model, with Letter-Number Sequencing joining Arithmetic and Digit Span on the more appropriately labeled Working Memory factor.

Similar to the WISC–III, the introduction of Symbol Search into the WAIS–III also resulted in a Processing Speed factor represented by the Coding and Symbol Search subtests. Performance on the Processing Speed Index (PSI) is an indication of the rapidity with which an individual can process simple or routine information without making errors. Because learning often involves a combination of routine information processing (e.g. recognizing letters during reading) and complex information processing (such as reasoning), a weakness in the speed of processing routine information may make the task of comprehending novel information more time-consuming and difficult. A weakness in simple visual scanning and tracking may leave an individual less time or fewer cognitive resources for the complex task of understanding new material.

The working memory and processing speed constructs measured by the WISC–III and WAIS–III are important to the individual's intellectual development. There are large and obvious age related trends in processing speed that are accompanied by age related changes in the number of transient connections to the central nervous system and increases in myelinization. Several investigators have found that measures of infant processing speed predict later IQ scores (e.g., Dougherty & Haith, 1997), and PSI scores have been shown to be potentially sensitive to neurological disorders such as epilepsy and traumatic brain injury. Perhaps most interestingly for school psychologists, researchers have found that the FDI contributes the second largest amount of variance, after the Verbal Comprehension Index (VCI), to the prediction of reading, writing, and mathematics scores on the WIAT and other measures of achievement (Hale, Fiorello, Kavanagh, Hoeppner, & Gaither, 2001).

Revisions of Dr. Wechsler's tests continue. Each new edition involves much more than a mere update of the American normative data. Each subsequent edition has included new tasks and indexes carefully designed to reflect

the most current thinking in cognitive-neuropsychological assessment. At the time of this writing, the development of the *Wechsler Preschool and Primary Scale of Intelligence–Third Edition* (WPPSI–III) is nearing completion. As with more recent editions of the Wechsler intelligence scales (i.e., WISC–III, WAIS–III), the WPPSI–III has incorporated new subtests to tap such constructs as fluid reasoning and processing speed. Similarly, the four-year research program leading to the future publication of the WISC–IV includes investigations of a new working memory task to replace Arithmetic. Another new task is under investigation to improve the measurement of processing speed. Finally, two new measures of fluid reasoning are under consideration, one verbal and one performance. As evidenced in the ongoing WPPSI–III and WISC–IV research programs, revisions to the Wechsler intelligence scales continue to reflect advances in the theoretical and practical foundations of intelligence assessment.

Despite the more recent focus on narrower domains of cognitive functioning, the Wechsler intelligence scales also retain a focus on general intellectual ability. Wechsler defined intelligence in ecological terms as the "capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment" (Wechsler, 1944, p. 3). He avoided the tendency to define intelligence in purely cognitive terms due to his belief that these factors only comprised a portion of what he viewed as intelligence. Wechsler was keenly aware that the results of factor analytic studies accounted for only a percentage of the overall variance of intelligence, and he believed that another group of attributes contributed to this unexplained variance. These nonintellective factors include attributes such as planning and goal awareness, enthusiasm, impulsiveness, anxiety, and persistence. Such traits are not directly tapped by standardized measures of intellectual ability, yet they influence an individual's performance on these measures as well as his or her effectiveness in daily living and in meeting the world and its challenges (Wechsler, 1975).

Because scores on intelligence scales summarize performance on a particular sample of discrete tasks, the scores and their meanings are tied to specific test content. It is widely recognized that individuals with similar test scores may not cope equally well with similar environmental challenges for reasons unrelated to their cognitive abilities. Thus the task of assessing an individual's intelligence necessarily involves more than simply obtaining the individual's intelligence test scores. As Wechsler noted:

> What we measure with tests is not what tests measure—not information, not spatial perception, not reasoning ability. These are only a means to an end. What intelligence tests measure is something much more important: the capacity of an individual to understand the world about him and his resourcefulness to cope with its challenges (Wechsler, 1975, p. 139).

References

Carroll, J. B. (1993). Human cognitive abilities: *A survey of factor-analytic studies.* New York: Cambridge University Press.

Cohen, J. (1959). The factorial structure of the WISC at ages 7-7, 10-6, and 13-6. *Journal of Consulting Psychology, 23,* 285-299.

Dougherty, T. M., & Haith, M. M. (1997). Infant expectations and reaction times as predictors of childhood speed of processing and IQ. *Developmental Psychology Vol. 33(1), Jan 1997,* 146-155.

Flanagan, D. P., McGrew, K. S., & Ortiz, S. O. (2000). *The Wechsler Intelligence Scales and Gf-Gc theory: A contemporary approach to interpretation.* Boston: Allyn & Bacon.

Hale, James B., Fiorello, Catherine A., Kavanagh, Jack A., Hoeppner, & Gaither (2001). WISC–III predictors of academic achievement for children with learning disabilities: Are global and factor scores comparable? *School Psychology Quarterly Special Issue; Vol. 16(1), Spring 2001,* 31-55.

Horn, J.L. (1991). Measurement of intellectual capabilities: A review of theory. In K. S. McGrew, J. K. Werder, & R. W. Woodcock, *Woodcock-Johnson technical manual* (pp. 197-232). Chicago: Riverside.

Kaufman, A. S. (1979). *Intelligent testing with the WISC–R.* New York: Wiley.

Lutey, C. (1977). *Individual intelligence testing: A manual and sourcebook* (2nd ed. and enlarged). Greeley, CO: Carol. L. Lutey.

Osborne R. T., & Lindsey, J. M. (1967). A longitudinal investigation of change in the factorial composition of intelligence with age in young school children. *Journal of Genetic Psychology, 110,* 49-58.

Thorndike, R. M. (1997). The early history of intelligence testing. In D. P. Flanagan, J. L. Genshaft, & P. L. Harrison (Eds.), *Contemporary intellectual assessment: Theories, tests, and issues* (pp. 3-16). New York: Guilford.

Wechsler, D. (1939). *The measurement of adult intelligence.* Baltimore: Williams & Wilkins.

Wechsler, D. (1944). *The measurement of adult intelligence* (3rd ed.). Baltimore: Williams & Wilkins.

Wechsler, D. (1949). *Wechsler intelligence scale for children.* San Antonio, TX: The Psychological Corporation.

Wechsler, D. (1958). *The measurement and appraisal of adult intelligence (4th ed.).* Baltimore: Williams & Wilkins.

Wechsler, D. (1974). *Wechsler intelligence scale for children-Revised edition.* San Antonio, TX: The Psychological Corporation.

Wechsler, D. (1975). Intelligence defined and undefined: A relativistic appraisal. *American Psychologist, 30,* 135-139.

Wechsler, D. (1991). *Wechsler intelligence scale for children–Third edition.* San Antonio, TX: The Psychological Corporation.

Wechsler, D. (1997). *Wechsler adult intelligence scale–Third edition.* San Antonio, TX: The Psychological Corporation.

Wielkiewicz, R. M. (1990). Interpreting low scores on the WISC–R third factor: It's more than distractibility. *Journal of Consulting and Clinical Psychology, 2* (1), 91-97.

Assessing Obsessive-Compulsive Disorder

based on* Clark-Beck Obsessive-Compulsive Inventory *manual by David A. Clark, Ph.D. and Aaron T. Beck, M.D. (May, 2002). Provided by Sandra Prince-Embury, Ph.D.

Approximately 1 to 2% of the general population will suffer from OCD at some point in their life (for reviews see Antony, Downier & Swinson, 1998; Rasmussen & Eisen, 1992). Subthreshold OCD or the frequency of OC symptoms within the general population may be even more prevalent although precise estimates remain unknown (Gibbs, 1996).

OCD may be under-diagnosed and under-treated for a number of reasons. People with OCD may be secretive about their symptoms or lack insight about their illness. Many healthcare providers are not familiar with the symptoms or are not trained in providing the appropriate treatments. Some people may not have access to treatment resources.

This is unfortunate because with proper diagnosis, assessment, and treatment, the suffering associated with OCD can be reduced and the risk of developing further difficulties lessened.

The disorder typically takes a chronic course of waxing and waning symptoms that can persist for many years prior to first treatment. There is little evidence of spontaneous remission of symptoms (Rasmussen & Eisen, 1992) and the disorder is usually associated with periods of marked distress and significant interference in psychosocial and occupational functioning. The idiosyncratic, varied and selective nature of individuals' obsessions and compulsions, the chronic but fluctuating course of the disorder, and its high comorbidity with other conditions, presents special challenges for assessment.

Purpose of the CBOCI

The 25 item *Clark-Beck Obsessive-Compulsive Inventory* (CBOCI) was developed to provide an efficient, yet comprehensive and precise, self-report screening instrument for obsessive and compulsive symptoms. At present, a short symptom screening instrument is not widely available that can be used with other self-report symptom measures to assist in the identification and differential diagnosis of OCD. The primary objective of the CBOCI is to provide a screening tool for obsessions and compulsions in order to fill one of the existing gaps in the assessment strategies available to clinicians. It consists of a 14 item Obsessions subscale and a 11 item Compulsions subscale, as well as the Total Score. This two dimensional structure to the CBOCI allows the instrument to provide a separate assessment of the main symptom features of the two primary components of OCD, obsessions and compulsions. By limiting the item composition to the core symptoms features of obsessions and compulsions, the CBOCI can be completed in 10 or 15 minutes depending on the severity of the respondent's OCD.

The authors were interested in developing a measure of OC symptoms that could be used in a complementary and integrative fashion with the existing Beck measures such as the *Beck Depression Inventory–II* (Beck, Steer & Brown, 1996), *Beck Anxiety Inventory* (Beck & Steer, 1993), *Beck Hopelessness Scale* (Beck & Steer, 1988) and *Beck Scale for Suicide Ideation* (Beck & Steer, 1991). Adopting a response format and structure that is similar to the existing battery of measures enables the use of the CBOCI along with the other Beck instruments to provide a more comprehensive assessment of psychopathology. By utilizing a broadly similar questionnaire structure, response differences across measures can be more readily interpreted as reflecting symptom differences rather than methodological differences in the measures themselves.This will aid the clinician in arriving at a diagnostic symptom profile that can assist in treatment formulation and evaluation.

Combined use of these inventories in an assessment battery is useful in differential diagnosis and the detection of comorbidity. The CBOCI includes a detailed explanation and examples of obsessions and compulsions to aid the respondent in distinguishing OC symptoms from other clinical phenomena. People with OCD often suffer from other psychological disorders like major depression or social phobia. Thus the ability to discriminate obsessions and compulsions from other clinical states is an important assessment issue.

One of the guiding principles in the development of the CBOCI was to represent the current DSM-IV diagnostic criteria for OCD so that the instrument could assist in the diagnostic process. Items were included and response options worded to assess the frequency and distress associated with common types of obsessions and compulsions, the degree of effort (resistance) and success at controlling the obsession, the sense of urgency associated with the compulsion, the prevention of anxiety or a negative consequence through performance of the compulsion, and the degree of interference in daily functioning caused by the obsessions and compulsions. However, the instrument also includes many items that assess symptom features of OCD that clearly go beyond the rather limited diagnostic criteria of OCD.

Another important objective for the CBOCI is to reflect recent advances in theory and research on the key cognitive and behavioral processes implicated in the pathogenesis of obsessions and compulsions. Thus items were included that assess the controllability and importance of obsessions, inflated responsibility, perfectionism, cognitive avoidance, mental neutralization, and indecision. These items reflect the empirical contributions of prominent cognitive-behavioral researchers like Rachman, Salkovskis, Freeston and the Obsessive Compulsive Cognitions Working Group. Because of its cognitive-behavioral orientation, the CBOCI is well-suited to assist in case formulation and treatment outcome evaluation of cognitive-behavioral interventions for OCD.

Administration of the WIAT-II Reading Comprehension Subtest

George McCloskey, Ph.D.

Users of the WIAT–II need to be aware of the fact that the norms for the WIAT–II Reading Comprehension Subtest were revised in November 2001. Revised editions of the Examiner's Manual and the Scoring and Normative Supplement that contain the revised norms have been published. If you have not received your Updated manuals, contact Customer Care at 1-800-872-1726.

The revision of the Reading Comprehension norms addressed the difficulties administrators were experiencing with the use of reverse rules when testing low functioning examinees. Analyses of the results of administration of the WIAT–II Reading Comprehension Subtest to examinees of varying age and reading ability indicate that the revised norms are very robust, even when the reversal rule needs to be applied to obtain a basal for an examinee.

The revised norms are based on an intermediate conversion of the obtained Total Raw Score into an ability estimate called a "Weighted Raw Score." The Weighted Raw Score is found by entering a table based on the obtained Total Raw Score and the actual Item Set administered to the examinee. This point requires some clarification to help administrators avoid errors in score calculation.

The WIAT–II Reading Comprehension Subtest is administered by item set rather than by traditional basal-ceiling procedures. The reversal rule is used to identify the appropriate item set for administration. Once the appropriate item set has been identified, all items in the set are administered. The reversal rule, therefore, does not establish a basal in the traditional sense. Also, no ceiling is obtained because testing always stops at the end of the complete item set administered, regardless of the number of items answered correctly or incorrectly. For any examinee, one item set-and only one item set-is used to obtain a Total Raw Score. (See the chart below for the specific reverse rules.)

The Grade Level designation of Item Sets is strictly for purposes of identifying a reasonable starting point for examinees enrolled in traditional graded classrooms, and are not meant to be used themselves as benchmarks for grade level performance as the actual reading abilities of students administered the same Item Set can vary widely.

In summary, the process for administering and scoring the WIAT–II Reading Comprehension Subtest is as follows:

- Begin testing with the Item Set that corresponds to the enrolled grade (or last grade completed) of the examinee.
- If the examinee does not earn at least 1 point for a correct answer to one of the questions from the first paragraph read, apply the reverse rule according to the chart provided.
- Do not give credit for Items not administered that precede the actual Item Set administered.
- Obtain the Total Raw Score by totaling points earned within, and only within, the single, complete Item Set administered.
- Convert the Total Raw Score to a Weighted Raw Score using either Table B.1 or E.1 based on the obtained Total Raw Score and actual Item Set administered (note that Tables B.1 and E.1 are identical as the weighted raw score conversion is not dependent on whether you are using age or grade norms).
- Use the Weighted Raw Score to enter the appropriate age or grade Standard Score norm table based on the examinee's chronological age or enrolled grade (or last grade completed).

It is recommended that all examinees begin testing with the Item Set that matches their current grade placement (or the last grade completed). When testing examinees with mental retardation or other obvious deficits, clinical judgment can be exercised, and the reverse rule can be applied before testing begins. A strength of the revised Reading Comprehension Subtest norms is that if an examiner misjudges the examinee's reading ability and they are able to perform much better than the examiner had anticipated, they will still be able to obtain an average or above average score using the reversal Item Set because of the overlap in ability levels across item sets. This relationship, which has been demonstrated empirically through test cases, only holds for the Item Sets that are linked by the reverse rule. For example, it would apply to the proper reversal from the Grade 6 Item Set to Grade 3 Item Set, but would not apply to a reversal from the Grade 6 Item Set to the Grade 4 Item Set.

Item Set Based on Actual Grade	Item Set When Reverse Rule is Applied	Items Used to Obtain Total Raw Score When Reverse Rule is Applied
Grade 1	None	None
Grade 2	Grade 1	1-27
Grade 3	Grade 1	1-27
Grade 4	Grade 1*	10-44
Grade 5	Grade 2	10-44
Grade 6	Grade 3	20-54
Grade 7	Grade 4	34-69
Grade 8	Grade 5	55-85
Grades 9-12	Grade 8	75-114
Grades 13-16	Grade 9	94-127

* Clinical Tip: Reading readiness items included in the beginning of the Grade 1 Item Set may overestimate reading comprehension scores for some 4th graders who reverse to the Grade 1 Item Set. In these cases, the examiner may use the Grade 2 Item Set to obtain the best estimate of reading comprehension for low functioning 4th graders who reverse. See the WIAT–II Examiner's Manual, page 59 for further information on this topic.

The Academic Intervention Monitoring System: Resources for Facilitating Classroom-based Intervention

Stephen N. Elliott, Ph.D. & James C. DiPerna, Ph.D.

The *Academic Intervention Monitoring System* (AIMS; Elliott, DiPerna, with Shapiro, 2001) has been designed to provide educational professionals with practical resources for developing classroom-based prereferral interventions. AIMS was developed in conjunction with an academic rating scale—the *Academic Competence Evaluation Scales* (DiPerna & Elliott, 2000)—and includes a Guidebook and brief intervention planning questionnaires. The ACES-AIMS approach to intervention is based on a belief that effective learning is both measurable and influenced by known instructional tactics, and this belief can be translated into practice through the use of a 5-step problem-solving process.

The AIMS Guidebook includes guidelines for implementing a variety of broad intervention strategies including coaching, modeling, behavior rehearsal, positive reinforcement, feedback, and activating prior knowledge. In addition, the Guidebook includes detailed descriptions of intervention tactics for specific academic skill or enabler difficulties. The Guidebook also reviews practical methods for evaluating progress. Goal Attainment Scaling is one such method that is efficient, individualized, criterion-referenced, and based on rating scale technology. Methods such as Goal Attainment Scaling quantify changes in target skills to determine the effectiveness of an intervention.

In addition to the guidebook, AIMS includes three brief intervention planning questionnaires (Teacher, Parent, Student) designed to identify possible intervention strategies and the amount of resources necessary for their implementation. The intervention strategies reflect many of those identified by researchers as being central to effective teaching (e.g., clear expectations for student learning and behavior, frequent progress monitoring, methods for increasing engaged time) and effective parenting (e.g., clear expectations for learning, frequent home-school communications, consistent behavior management strategies). Responses on the AIMS questionnaires are not scored; rather items are rated on two dimensions: Helpful and Possible (see Figure 1).

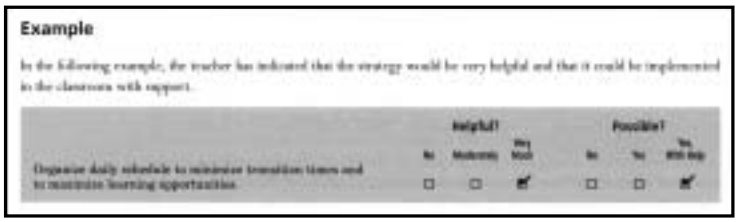

Figure 1. Example of the Two-Response Item Format of the AIMS Intervention Forms

AIMS, with its guidebook and questionnaires, offers a framework for intervention planning, guidelines for implementing research-based interventions, and practical methods for monitoring intervention effectiveness. It is consistent with IDEA and can be used in conjunction with ACES to incorporate multiple perspectives in the assessment process, facilitate early intervention, and document intervention plans and results. So use ACES and AIMS together to think solution for students experiencing academic difficulties and develop a comprehensive approach for implementing and evaluating classroom-based interventions!

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