Revision, Evolution, and Revolution in Cognitive Assessment: Beyond CHC Theory and the WJ IV

CHC theory builds on the shoulders of the intelligence and psychometric giants since the 1900’s. The past 20 years have seen an explosion of CHC-based cognitive-achievement research, structural theoretical research, and CHC-based test development and interpretation systems. The most recent operationalization of CHC theory is the WJ IV battery, which is a combination of revisions and (r)evolution in assessment as per contemporary CHC theory and research. CHC theory is moving forward structurally and by incorporating cognitive neuroscience constructs (Beyond CHC). At the same time older traditional statistical methods and models are providing new insights (Back-to-the-Future). Many of these developments have been incorporated in the WJ IV.

The WJ IV features an updated Cattell-Horn-Carroll (CHC) theoretical model, a carefully designed organizational plan with new tests and clusters, and new interpretive procedures that will help psychologists identify patterns of strengths and weaknesses among three co-normed batteries of cognitive abilities, oral language, and academic achievement. The three batteries can be used independently or together in any combination. Each of the three batteries includes new tests, clusters, and difference score comparison and variation procedures based on advances in CHC theory and contemporary assessment practice requirements.

This workshop will review updates in CHC theory and WJ IV changes and new features, with an emphasis on learning the theoretical and conceptual underpinnings of the WJ IV revision. It is assumed that the workshop participants are familiar with the WJ III battery.

CHC Theory @ 20 years: Back-to-the-Future and Beyond CHC

CHC theory is built on the shoulders of giants since the 1900’s. The past 20 years have seen an explosion of CHC-based cognitive-achievement research, structural theoretical research, and CHC-based test development and interpretation systems. This presentation will attempt to channel the intellectual restlessness of John Horn and Jack Carroll who would not have stood idly by and allowed for the “hardening of the CHC categories.” The presentation will highlight emerging CHC theoretical changes based on new structural and cognitive neuroscience research combined with new insights from the integration of contemporary (CFA) and more traditional (MDS) data analysis methods. CHC theory is moving forward structurally and by incorporating cognitive neuroscience constructs (Beyond CHC). At the same time older traditional statistical methods and models are providing new insights (Back-to-the-Future).


Feb. 19, 8:00 AM–9:20 AM—Invited Presentation.

A New Era of Assessment Practice: The Woodcock-Johnson IV

School psychologists will have to make decisions about purchasing and using the new versions of the measures overviewed in two special sessions (SS029 and SS030) presented during the convention. These sessions are designed to provide information to help you learn about the changes in the instruments and guide your choices for further professional development. Please note: These sessions are being presented by the publishers and authors, with the goal of highlighting the instruments' strengths and utility. The sessions do NOT provide an independent critique of the measures' strengths and limitations. The convention committee included these sessions on the program as an initial effort to respond to attendee feedback, which asked for opportunities to obtain information about new instruments as part of the regular program (not as workshops). We will continue to evaluate the best ways to respond to this feedback. Further, we recognize that there are other excellent assessments not included in these sessions, due to space limitations. Presenters: Frederick A Schrank, PhD, ABPP; Kevin S. McGrew, PhD; and Nancy Mather, PhD Learn about the updated and redesigned Woodcock-Johnson IV directly from the authors. This session will provide an overview of the WJ-IV system, the evolution of CHC theory, and the tests, clusters, and interpretive models that can be used for evaluation of intra-individual strengths and weaknesses as part of a comprehensive assessment. This special session is sponsored by the Convention Committee.

Feb. 20, 8:00-9:50 AM--Mini-skills session.

The WJ IV Tests of Cognitive Ability and Beyond CHC Theory

This presentation is an introduction and overview of the WJ IV Cognitive battery. The presentation will also present an updated Cattell-Horn-Carroll theoretical model (Beyond CHC) that served as the blueprint for the WJ IV (the cognitive battery in particular). Participants will learn how the design of the WJ IV is based on the integration of research and theory in CHC and cognitive neuroscience. The participants will learn the new organizational and interpretative structure, with an emphasis on new and revised tests and a number of new difference score variation and comparison procedures. New comparison/variation procedures that can be used to operationalize the pattern of strengths and weaknesses (PSW) approach to the identification of learning disabilities will be covered. Comparison of the WJ IV scores to other batteries (Wechslers, KTEA-II, WIAT-II, CELF-4, OWL, etc.) will be summarized.
Symposium Title: Applying the Cattell-Horn-Carroll (CHC) model across Psychology, Neuroscience and Health

McGrew’s presentation title: An Introduction to the CHC Taxonomy of Human Intelligence

Classification is arguably one of the most central conceptual exercises related to scientific work. Taxonomy, the specialized science and practice of classification of empirical observations, guides the search for information and truth in most all scientific endeavors. In chemistry, this standard nomenclature is reflected in the Table of Periodic Elements. During the past two decades a consensus psychometric taxonomy of human intelligence has emerged—the Cattell-Horn-Carroll (CHC) model of cognitive abilities. The CHC cognitive taxonomy provides a standard nomenclature that has facilitated communication among researchers studying human intelligence. This presentation will provide a description and overview of the CHC taxonomy, with an emphasis on how the taxonomy can facilitate the organization and synthesis of health related research focusing on cognitive outcomes.

July, 2015—2015 KIDS School Neuropsychology Summer Institute (July 8, 6-9 PM; Grapevine, Texas)—Keynote (recipient of a Friends of KIDS Lifetime Achievement Award).  http://www.schoolneuropsych.com/index.php?id=1

Beyond CHC Theory

Contemporary Gf-Gc theory originated in the work of Cattell, Horn, and Carroll, and a series of activities from circa 1990 to 2005 resulted in what is now known as CHC theory (v1.0). This presentation will attempt to channel the intellectual restlessness of John Horn and Jack Carroll who would not have stood idly by and allowed for the “hardening of the CHC categories.” CHC theory is moving forward structurally and by incorporating cognitive neuroscience, information processing, and brain network constructs. Dr. McGrew will summarize a recent fine-tuning of CHC theory (v2.0; Schneider & McGrew, 2012) and suggest refinements based on new exploratory and confirmatory structural research (v2.5). And because no theory remains static, Dr. McGrew will present his thoughts on the need to go “Beyond CHC Theory” in both theoretical research and applied assessment.


Raising Children with Learning Difficulties

(description is not yet finalized)