

## Preface

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This Special issue of the *Journal of Adult Development* will focus on the measurement of positive changes during adulthood. Adult development has multidimensional threads (Commons, 1999). These threads are sequence of events that run throughout the whole course of adult life. Most of previous work on measuring change in adulthood examines deficiency and decline. There is now a substantial body of evidence, however, that positive forms of development can occur at all periods of the lifespan, including adulthood. The four major forms of adult development are positive adult development, directionless change, stasis, and decline. The first of the four forms, positive adult developmental processes, is divided into at least six parts: hierarchical complexity (orders, stages), knowledge, experience, expertise, wisdom, and spirituality. Change, the second of the forms, is divided into periods, usually defined by decades and seasons, that concern the themes in the life course. Over the last twenty years, there has been a rapid increase in measurement instruments that examine development during adulthood. The theoretical basis of adult developmental stages and how transition may be characterized is presented here in the first part. In the second part, many of these measures are presented. Golino, Gomes, Commons, and Miller, Skoe and Sjölander, Lindström, Ericsson and Kjellström describe their purpose, etiology, validity, and reliability, and explain the appropriate methodologies for their use in the domains of moral judgment, caring, physics, social and so on.

This special issue includes an article which presents the formal definitions and axioms of the Model of Hierarchical Complexity (MHC). This model is a breakthrough in the field of development as it is a general stage model that can be used to study development in any domain, including adult development. In addition, the first part of this issue includes articles on stages and other models which could be combined with MHC to develop better models for studying development. The second part of this issue is a compilation of articles on application of these models and instruments for measuring development.

The opening article of this issue formalizes the Model of Hierarchical Complexity by presenting its formal definition and axioms. The next paper discusses four different accounts of stage transition, each delineating how to obtain data on stage transition for each method. It also discusses how those methods might be interrelated. In third paper, Boom proposes a new model for studying strategy development by synthesizing Item Response Theory (IRT) and Latent Growth Modeling (LGM). This paper is followed

by a commentary in which I call for a need to combine this new model of Boom and MHC to generate a complete model of stage development. The fifth paper constructs a very useful correspondence table comparing the stages of five developmental stage models which cover the lifespan of an individual. In addition, this paper provides the translation of Colby and Kohlberg's (1987a, 1987b) 13 point scale into the other developmental scales that has not been done before. The five scales included in this table are MHC (Commons, Richards & Armon, 1984), Fischer and Bidell's (1998) Stages of Cognitive Development, Piaget and Inhelder's (1969) Stages of Cognitive Development, Colby and Kohlberg's (1987a, 1987b) 9 Point Scale of Moral Judgment and Colby and Kohlberg's (1987a, 1987b) 13 Point Scale of Moral Judgment. The sixth paper proposes that integrating MHC and the nonlinear model of the fractal transitional orders of hierarchical complexity can help develop a unified mathematical theory of behavioral development. To conclude the first part of this issue, we have included a paper on transition to meta-cross-paradigmatic stage, stage 15, of the Orders of Hierarchical Complexity.

The second part of this issue commences with the eighth paper by Golino on construction and validation of the Inductive Reasoning Developmental Stage (IRDT), an instrument based on MHC, used to identify developmental stages of individuals. The next paper provides supporting evidence for Defining Issues Test (DIT) as a measure of moral judgment development. The tenth paper shows how the Model of Hierarchical Complexity can be applied to physics. The eleventh paper reviews literature on how literature on corruption does not offer a multi-faceted and integrative understanding of the phenomenon. The twelfth paper goes on to apply the MHC to provide a synergetic, interdisciplinary framework for analyzing and evaluating corruption and the discourse dealing with it. The thirteenth paper presents a recently developed instrument of care-based moral development: The Ethic of Care Interview (ECI) and provides evidence for the importance of care-oriented morality for human growth, especially identity and personality development. The fourteenth paper uses MHC as a framework to study individual's stages of moral understanding. Finally, this issue concludes with the last paper on testing and validating the method for disclosing signal response patterns from questionnaire data and for classifying individual response profiles into a sequence of significant patterns. This method makes use of the MHC.

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