

**International Society for Research in Adult Development
2011 Program, March 29-30
Montreal, CA**

**Session One: Tuesday, 9-11
Development in Relation to Others**

- Planning for Florida hurricanes: Effective leadership and the Model of Hierarchical Complexity

[Dorothy Danaher](#)

This paper will focus on effective planning for Florida hurricanes using the Model of Hierarchical Complexity. The state of Florida is very vulnerable to hurricanes, tropical storms, tornados with the resulting wind damage, power outages, and flooding. Thorough planning prior to such events can help mitigate the consequences and speed up the recovery process. The Model of Hierarchical Complexity, applied in advance of such disasters before leaders and the general population are stressed by the disastrous events can be a highly effective coping tool for Floridians and our treasured visitors. Disaster preparedness needs to be undertaken by every member of our society who is able to function at the abstract stage of the MHC and above.

- Converging developmental issues of caregiving: Adult children to aging parents with dementia

[Megan M. Seaman, University of North Carolina at Greensboro](#)

Parental caregiving by adult children is an important issue facing individuals whose parents are getting older and beginning to experience the critical symptoms of aging. Oftentimes, the familial expectation is that adult children will take care of the needs of their aging parents in the final stages of life. However, often, they feel disconcertingly obligated to the responsibilities and changes that come with caregiving. Further complicating the issue are the emotional and practical adjustments to be made when caring for parents with dementia. Therefore, the goal of the program is to present information related to the converging developmental issues that impact adult siblings' experiences when collaborating to care for their aging parents with dementia. Attendees will gain insight about the challenges, the approaches, and the gaps in addressing the concerns of caregivers. Moreover, the presenter will demonstrate the need to implement information related to this topic in practice and research.

- Different methods of investigating transition from one stage to another

[Michael Lampert Commons, Harvard Medical School](#)

Piaget outlined what happens during stage transition in his dialectical theory of stage change. This symposium will discuss four different accounts of stage transition, each delineating how to obtain data on stage transition for each method. It will also discuss how the methods might be interrelated. Having a better understanding of what the transition steps are, as well as how to study them, should help educators and others to better facilitate development at all stages and in between them. The first section elaborates the original Piagetian model by systematizing the transition substeps using choice theory and signal detection. An examination of stage transition includes scoring interviews or other participant responses for statements that reflect each of these steps. The second section examines micro-developmental approaches. These approaches identify what may be potential subtask and sub-subtask actions that may occur during transition to the next stage. The third section describes and illustrates the use of Rasch analysis to quantify the extent to which a participant's performance on an instrument is transitional. This approach may numerically pinpoint where in the transition an individual is but it does not measure the difficulty of the specific task subtask actions (strategies). The fourth section presents a methodology for creating tasks and methods of support that directly measure transition.

Session Two: Tuesday, 11:15-1:15

Clinical/Developmental

- After all, depression can be reduced to just being down?

[Jose Ferreira-Alves, University of Minho; Michael Lampert Commons, Harvard Medical School; Andrew Richardson, Dare Institute; Raquel Silva, University of Minho](#)

The purpose of the current paper is to: a) Explore the possibility of whether classic depressive symptoms are associated with other mood disorders; b) Contribute toward a more multimodal model of depression. Methods: In this study items were collected from several different questionnaires. There were 128 participants: 52 (41.3%) males; 74 (57.4%) female; Age: $M = 50.3$; $SD = 15.7$. Using factor analysis, there were 10 items loading .75 to .85 on the first factor, out of the initial 144. The first component explained 28.3% of the variance of all the items. There were no clear 2nd and 3d factors. The 10 items that loaded .750 or above on the first component when factored on their own accounted for 68.6% of the variance. Discussion: A Rasch Analysis showed that there was a small variance for the items and large variances for the participants. The significance of these findings will be discussed and follow up research will be proposed based on these findings.

- Developmental alternative to the DSM

[Alice LoCicero, Simmons College, Boston](#)

Working as a clinician within the medical/disease model has reminded me of its shortcomings. The complex tug of war among insurance companies, medical entities, clinical guilds, and individual clinicians has led to an escalation of use of severe diagnoses when less severe ones would do, overuse of medication, lower payments by insurance companies, shorter sessions, less time for consultation or reflection. Clients pay the largest price for this, including medication complications, stigma, and unnecessary investment of time and energy. A possible alternative approach for most clients would be construction of a developmental profile where the specific areas in need of development could be delineated and corrective psycho-educational and relational experiences could be created or found.

- Developing Creatively: Using art to build trauma resilience

[Lori Ellison, Carol Smith, Marshall University](#)

The speakers share the specifics of a creative assignment used in a Graduate Trauma Therapy Counseling course. The purpose is to demonstrate how an academic assignment can facilitate personal development in adult students, and others, such as clients or consultees. The assignment allowed students to experience the power of creative expressions, especially symbolism, in the healing process. Students submitted a creative expression representing the healing process from a traumatic event, using any artistic medium. Example media included poetry, sculpture, music, drawings, film, PowerPoint presentation, dance, etc. Emphasis was on the dynamic developmental process of healing and resilience, not the trauma itself. Results of student's processing and learning, along with sample submissions will be shared, including how the assignment helped students to "get beyond their own stuff" in their work with clients. Presentation will present opportunities for application beyond student academic assignments. Participants will be asked to share their own relevant experiences and suggestions. They will also experience creating an example of healing using simple, provided materials.

- A reworked smaller set of axioms for the Model of Hierarchical Complexity (MHC)

[Michael Lampert Commons, Harvard Medical School; Robin Gane-McCalla, Dare Institute; Cory David Barker, Antioch University Midwest \(AUM\)](#)

The Model of Hierarchical Complexity (MHC) is a mathematical model based on the "Theory of Measurement" that has gone through a number of iterations as a measurement system (Commons, Goodheart, Pekker, et al., 2005; Commons & Pekker, 2008; Commons & Richards, 1984a, 1984b; Commons, Trudeau, Stein, et all, 1998). It sets forth the measurement system by which actions are put into a hierarchical order and each order is assigned an ordinal number. In this paper, the components of the Model will be described: Actions and tasks, measurement and operations, and the axioms, followed by an articulation of emerging properties from axioms, and then a description of orders of hierarchical complexity of tasks. These are a reworked smaller set of axioms that are more measurement-theoretical in nature. They also parallel the informal conditions underlying the kind of complexity that the MHC entails.

Session Three: Tuesday, 2:15-4:15PM Positive Development and Well-Being

- Occupational predictors of longevity: Lessons from traditional farming

[Rachel K. Baker, Susan A. Korol, Cape Breton University](#)

The goals of this presentation are to examine factors that promote adults' health and to determine how the modern western workplace should be modified as a result. We review research examining lifestyle, psychological, social, and occupational predictors of good health and longevity. Given that a significant portion of many adults' days is devoted to an occupation and the broader impact of work on our lives, we argue that the workplace is an important target to improve the health and well-being of the population. We identify one occupation, traditional farming, which exemplifies a number of longevity promoting factors. It is not possible for everyone to be a traditional farmer. We argue, however, that the longevity promoting factors found in traditional farming can be incorporated into other occupations. We use traditional farming as a template for our recommendations to employers regarding workplace modifications to enhance the health and longevity of employees.

- How are you today? Inter-individual differences in the structure of affect in a sample of older adults across 56 days

[Monica K. Erbacher and Karen M. Schmidt, University of Virginia; Cindy S. Bergeman, University of Notre Dame](#)

Accurately describing affect structure across the lifespan is crucial for investigating connections among emotion regulation, health, and well-being. Empirical support exists for several competing theories on affect structure; however, support mainly comes from cross-sectional investigations, examining affect levels, ignoring relationships among changes in positive (PA) and negative (NA) affect. Position, velocity, and acceleration of PA and NA across 4-day windows spanning 56 days were examined to detect complex PA-NA relationships. Relationships among PA and NA derivatives were calculated for each participant to examine inter-individual differences. Adults ($N = 288$; 53-91 years, $M = 68$) completed the PANAS plus additional items once daily for 56 consecutive days. Participants mainly reported high PA and low NA. Cluster analysis revealed two groups. PA and NA were uncorrelated for one group and strongly negatively correlated for the other. Graphical analysis indicated individual differences in affect structure were continuous. Age, life events, and arousal were unrelated to these.

- Developing wisdom among Canadian adults

[Michel Ferrari, Nic Weststrate OISE University of Toronto](#)

What is the personal experience of wisdom for younger and older Canadians? In this study, 80 Canadians from in and around Toronto answered open-ended questions about their own wisdom and wisdom in people they knew personally or had heard of historically. Participants also answered questionnaires designed to assess wisdom and satisfaction with life, including the 3D Wisdom Scale developed by Ardelt and the Self-Transcendence scale developed by Levenson. Men and women had very different stories about wisdom to tell, as did those who are young adults (age 21-30) as compared to elders (65-85). We also found that those who scored higher on the 3D Wisdom Scale showed more in depth autobiographical reasoning, greater self-transcendence, and greater life satisfaction.

Tuesday, 4:20-4:50 Feedback and Suggestions Meeting

Tuesday, 6-9:30 PM, Workshop on MHC

Society for Research in Adult Development

Workshop: The Model of Hierarchical Complexity: Scoring for Stage of Development, Creating

New Problems and Dilemmas, and Analyzing Social Problems

This *free* three-and a half hour workshop introduces core concepts and practice in two kinds of scoring. Attendees will learn the Hierarchical Complexity Scoring System. That is, they will learn to recognize the orders of hierarchical complexity, they will apply their learning to the creation of new instruments or problems in an area of interest to them, and they will learn the relevance of the model for analyzing social problems. The Model of Hierarchical Complexity provides a framework for scoring performance in any domain (problem solving, moral, social) as well as in any cultural setting. Unlike other models of development, such as Piaget's, this model posits that the observed sequence of development results from the fact that tasks in all domains form an order from simpler to more complex. We call the performance that is observed on these tasks, the "stage of development." The workshop will concentrate on stages of development from early school age into and including adulthood.

The MHC is a general theory describing the hierarchically ordered behaviors in any subject domain or cross-cultural setting. Developmental stages are based on how information is organized, rather than on content matter. MHC can be used to score any narrative or task or construct instruments (instruments do not need to be normed because the stages are absolute). Narrative scoring is useful for such data as interviews and written texts. Instruments are ideal for initial assessments in any domain and pre and post measures to test for increases in performance. No answers are incorrect; each represents a different stage of performance.

Workshop learning formats include the application of precision teaching to the learning of the model. Studies of this workshop show that almost everyone learns up to criteria. Planned learning outcomes are: a) describe what this general theory applies to; b) name and recognize the orders of hierarchical complexity of tasks and the corresponding stages of performance that may be exhibited by adults; c) score and justify the score; d) describe how vignette instruments are constructed.

Please bring your laptop because the instructional material is online. We provide the hook up

Session, Four, Wednesday 9:00-11:00 Spiritual, Moral and Personal

- A multicultural studies approach to the development of religion in athletics
[Lisa Miller, American Public University System; Carol Carpenter, Capella University](#)
The multicultural studies approach to teaching religion encourages knowledge beyond the basics of various religions by also infusing political, social, and cultural intersections through multiple viewpoints (Moore, 2007). Multicultural education in the nation's schools takes advantage of the diversity of students in the classroom or on the playing field. Topics of multiculturalism that are likely to be addressed in athletics are gender, race, ethnicity, and disability. Religion is another important dimension of multiculturalism to be discussed. To include a multicultural approach within athletics follows the guidelines of multicultural and social reconstructionist methods by extending the study of cultural pluralism and structural equality within other dimensions of a school community (Moore, 2007). The goal would be to promote equality and cultural pluralism through athletics to prepare student-athletes for promoting democratic ideals, moral agency, and pursuit of happiness within and beyond their current school community.
- A cross-scale model of systems co-development
[Janne J. Korhonen, Aalto University](#)
An individual's personality development transpires through distinct stages of increasingly higher orders of abstraction in a dialectical motion between differentiation and integration (Kegan, 1982). These punctuated dynamic equilibria are reflected in the stratified structure of organizations (Jaques, 1989) and "temporal segregation" (Maybury-Lewis and Almagor, 1989) of individualism vs. communalism in culture and social practices. However, few conjectures have been put forth to examine the co-causal underpinnings of cultural, organizational and personal development. This study embraces the ecological concept of panarchy (Gunderson and Holling, 2002) in constructing a cross-scale model that accounts for the structural-temporal co-development of systems at all levels of abstraction.
- Spiritual development in adulthood:A phenomenological exploration

Pninit Russo-Netzer, Ofra Mayseless, University of Haifa, Israel

Previous studies underscored the distinctiveness of spirituality (vis-a-vis religiousness), its becoming more central and important later in life, and its positive effects as reflected in higher well-being in adulthood (Wink & Dillon, 2002; 2003). Yet we know little about how adults incorporate spirituality in their lives, in particular following spiritual change. A phenomenological analysis of in depth interviews conducted with 20 adults, 8 men and 12 women (mean age: 45 years) who had experienced a spiritual change revealed that the developmental process could best be conceived as establishing a new identity.

The process included intensive inward examination and openness to experiences and explorations, aiming towards authenticity and meaning. These led to new insights and changes in self-perception and life priorities as part of constructing a new and multifaceted identity, and integrating it in the participants' daily lives.

These findings broaden our understanding of spirituality contributing to positive personal change in adulthood.

- Widening of the moral stage: Modern difficulties in moral self-evaluation

Thomas Swan, Siena College; Suzie Benack, Union College

Several features of the post-modern world create an environment in which evolved mechanisms of human moral functioning become problematic; ultimately, these problems can lead to moral anomie and to an inability to evaluate the self as morally good. Specifically, 1) social group membership has become largely an abstraction; 2) information about others' welfare is mostly received indirectly; 3) group norms change very quickly; and 4) distance between groups has drastically diminished. These changes in the morally relevant environment produce two challenges to the modern individual trying to do right and feel like a good person: moral intuition is super-satiated by constant exposure to more morally relevant information than one could reasonably respond to, and living in close proximity with "others" who do not share ones group membership and norms leads to the development of more complex forms of moral reasoning, which eventually become meta-reflective, leading to explicit consideration of metaethical questions and moral relativism. Both contribute to the modern individual's difficulty in achieving a relatively consistent sense of moral self-worth.

- Factors influencing reasoning errors: The relevance of environment.

Carol Y. Yoder, Trinity University

Although mainstream cognitive psychology tends to focus on reasoning errors inherent in many everyday and laboratory tasks, employing heuristics often provides time-saving and resource conservation benefits. Indeed, the reasons why we rapidly employ certain strategic solutions are a function of many ongoing aspects of our environment. Although cognitive ability is not related to biasing (Stanovich & West 2008), strength of belief about a targeted issue is a key factor (Stanovich & West 2007) in biased decision making; however, strong beliefs do not always increase errors (Yoder 2009). Nor is biasing uniform across age and other comparisons. We hypothesized that how one views the self, as well as prominent values within the culture, may influence understanding and utilization of these heuristics. In this study we focused on a number of my-side or confirmation biases, and sunk cost, and manipulated elements that alter attention to problem elements. Chinese and American samples were compared.

- Using raw scores to determine stage of a person performance

Michael Lampert Commons, Harvard Medical School and Andrew Michael Richardson, Dare Institute

Scoring stage of items using the Model of Hierarchical Complexity along with Rasch analysis is reasonably

straightforward. Rasch analysis also produces Rasch "person scores" for each person. The problem with these scores is that they are given in terms of the Rasch scale and do not have an obvious representation as "Person Stage" scores. Obtaining such a person stage score requires a large sample of participants with both item and person performance. This is because one needs to interpolate between adjacent orders of hierarchical complexity to find where the each person's Rasch score falls. This becomes clearer from the discussion in this presentation in which the calculation of Person Performance Scores will be illustrated for two different instrument types. For the decision instrument, such as a laundry-type problem, one takes the number of corrects at each order of hierarchical complexity. One

changes those number of corrects into proportion correct for each order. One multiplies that proportion correct for an order by the order number of hierarchical complexity for that group of items. That essentially gives the product a weighting by order value. Then one sums those products across all the orders. This gives you the total weighted raw score. Using regression, the total weighted raw scores are used to predict the obtained stage of performance for that person using the way one scores for stage using Rasch and interpolation. This yields an approximate stage from the raw scores. The resulting regression will yield two constants, one for slope, b which will multiply the raw score and one for off set, a, which will correct the off set so that the obtained number matches the obtained stage score. For the vignettes, the process is almost the same. But one just multiplies the ratings time the order of hierarchical complexity of the item and then sums those results across order of hierarchical complexity. The rest is the same. But the $y = a + bx$ will yield different a's and b's.

Session Five, Wednesday 11:15-1:15 Young Adult/Adult/Education

- Recalled peer relationship experiences in adolescence and levels of self-criticism and self-reassurance in young adulthood

[David C. Kopala-Sibley, David C. Zuroff, Michelle J. Leybman and Nora Hope, McGill University](#)

Numerous studies have shown that personality factors may increase or decrease individuals' vulnerability to depression, but little research has examined the role of peer relationships in the development of these factors. Accordingly, this study examined the role of recalled parenting and peer experiences in the development of self-criticism and self-reassurance. 103 female and 97 male young adults completed measures of recalled parenting, overt and relational victimization and prosocial behaviour by peers during early adolescence, and current levels of self-criticism and self-reassurance. Hierarchical regression analyses showed that parents and peers independently contribute to the development of self-criticism and self-reassurance. Specifically, controlling for parental care and control, overt victimization predicted self-hating self-criticism, relational victimization predicted inadequacy self-criticism, and prosocial behaviour predicted self-reassurance. As well, prosocial behaviour buffered the effect of overt victimization on self-reassurance. Findings highlight the importance of peers in the development of personality risk and resiliency factors for depression, and suggest avenues for interventions to prevent the development of depressive vulnerabilities in youth.

- Orders of complexity in the derivation of wave equation in a fluid in 1D

[Kristian Stalne, Lund University; Michael Lampert Commons, Harvard Medical School](#)

The derivation of the acoustic wave equation for a fluid in one dimension is presented as increasing orders of hierarchical complexity according to the Model of hierarchical complexity. The derivation is performed from order 8 concrete to 13 paradigmatic. The derivation is presented as a schema where it is specified how a certain order is created by coordinating elements from the respective previous order. The wave equation at the paradigmatic order is created by coordinating the three metasystematic relationships Newton's law of motion, the Constitutive equation and the Ideal gas law. These three relationships in turn coordinate the variables force, density and acceleration, all being systematic since they are functions of time and location. This result gives an understanding of how knowledge is organized in the acoustic domain and in adjacent domains such as classical and solid mechanics. It also serves as an illustrative example of the principles of MHC.

- Teaching for wisdom in high-school English class

[Michel Ferrari, Joan Peskin, Greg Allen, Anda Petro, Alistair Martin Smith, Cynthia Waugh, OISE, University of Toronto](#)

Thirty high school English teachers (15 expert, 15 novice) were asked to explain how they would teach three texts: A scene from Macbeth, the introduction to Bertrand Russell's autobiography, and the poem Bushed. Expert teachers had 10 years experience and were nominated by their principals as being exemplary teachers. Novice teachers were nominated by their Curriculum and Instruction teachers as having been exemplary in their practicum, but had not yet begun to teach. Participants were interviewed and given a set

of questionnaires to assess wisdom (Ardelt 3D Wisdom Scale) and life satisfaction (Diener). Experts and novices did not differ in level of wisdom, but differed in how they would use the curriculum to teach about life and about wisdom. Novices follow closely the exercises that they have been trained in as student teachers. By contrast, experts engage in personal reflection to teach for wisdom: Not in the trivial sense of conveying some specific life-lesson, but in the more profound sense of knowing how to have students engage the English curriculum to deepen their knowledge about life and to promote the development of personal wisdom. Both experts and novices who scored higher on the 3D wisdom Scale experienced greater life satisfaction as measured by the Diener Scale.

- A developmental study of the relationship between formal operations and postformal thinking from adolescence through adulthood
Samaneh Asadi, Department of Psychology, University of Isfahan, Isfahan, Iran, Shole Amiri, Ph.D. Department of Psychology, University of Isfahan, Isfahan, Iran, Hossein Molavi, Ph.D. Department of Psychology, University of Isfahan, Isfahan, Iran, Khosrow BAgheri Noaparast, Department of Psychology, University of Tehran, Tehran, Iran.

Postformal theories are based upon Piagetian theory, with expectations that postformal thinking evolve from formal operations. This kind of thinking is outlined as a cognitive level through which the adult comes to understand the contextual and contradictory nature of social life. The purpose of this study was to investigate the relationship between formal operations and post-formal thinking from adolescence through adulthood. The entire 150 participants were selected randomly ranging in age from 15 to 50 (in Isfahan a city of I.R. Iran) in 3 age groups (15-17, 25-35 and 40-50) with 50 participants per groups including different demographic characteristics. After signing a letter of consent, Demographic questionnaire, Logical Reasoning Test (LRT by Burney, 1974), Social Paradigm Belief Inventory (SPBI by Kramer, Calabugh and Goldston, 1992), and Postformal Thinking (PFT by Sinnott and Johnson, 1997), were administered among participants without any local or time restrictions. Data will be analyzed using SPSS16 and results discussed according to theories and literature compliances.

- Scaffolding more complex thinking skills: The implications of epistemological assumptions

[Susan K. Wolcott, Wolcott Lynch Associates](#)

Recent discussions within the MHC adult development community have highlighted the need to develop and use methods for scaffolding more complex thinking skills. This poster will summarize the influence of epistemological assumptions on the development of thinking skills and provide recommendations for integrating knowledge about epistemological assumptions into scaffolding efforts. The poster will focus on the epistemological assumptions from King and Kitchener's reflective judgment model and identify ways in which an individual's assumptions may both support and hinder development efforts. Strategies will be presented for using information about epistemological assumptions to provide stronger support for higher-level performance within post-secondary education and professional development programs.