

Book of abstracts

ESRAD 2016 Symposium



The Hague, Netherlands

May 26-27, 2016

Colophon

European Society for Research in Adult Development 2016

<http://www.europeadultdevelopment.org/>

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Welcome by the president

Within only six years of its existence, the ESRAD has developed into a remarkable scholarly organization with networks of scholars, conferences, workshops and publications. This is the achievement of many people working together. When I took over the presidency in Lund, Sweden, in 2001, I found we had in our hands a golden opportunity to establish the field of Adult Development in Europe. Six founding members in Lund were Michael Commons, Jose Ferrera-Alves, James Meredith Day, Kristian Stålné, Sofia Kjellström and myself. During the years new officers have joined, amongst them Oliver Robinson, Liisa Myyry and most recently, Cory David Baker.

Discussion of stage theories and models occupied the first years of ESRAD. Developments in the field of complexity theories have had strong impact on our organization. As ESRAD has evolved it has come to integrate other models of developmental progress with stage theories, creating a space for cross-disciplinary and cross-paradigmatic discussion. As president my aim has been to broaden our approach of Adult Development to encompass many fields and domains. ESRAD has to develop thematically to broaden its scope to many forms of human development and also, importantly, towards the adult learning processes. These two fields are overlapping and have many interconnections. Also, our officers and members have been active in scientific publishing. Vice-president Oliver Robinson has published his textbook on adult development, and this spring will be published my first-ever textbook on adult cognitive development in Finnish, and an international textbook with other editors is in development. In summary, it has been delightful to see how active ESRAD officers and members have been.

The number of members in our internet email discussion list has increased as the number of attendees of our symposiums. In 2016, we now have excellent opportunity again to refresh our scholarly network at the 5th ESRAD conference. I would warmly thank our hosts, Rebecca Hamer and Erik Jan van Rossum, who have devoted much time to organize the conference in great detail. It is clear that we are going to have another excellent and mind-thrilling symposium with lots of discussions and debates. To me, these are the best moments of conference life, and it is always possible in the atmosphere of ESRAD as we always have time to ponder relevant questions deeply.

I am looking forward to the conference and very warmly welcome you all to attend.

Eeva Kallio
President of ESRAD
Finland

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ESRAD 2016 Symposium Programme (draft)

WEDNESDAY 25 May

Time	Session title
13:00 - 14:00	Registration
14:00 - 15:30	Workshop - van Rossum & Hamer Part 1
15:30 - 16:00	Coffee/Tea break
16:00 - 17:30	Workshop - van Rossum & Hamer Part 2
17:30 - 20:00	Registration
18:00 - 20:00	ESRAD Pre-conference Social

THURSDAY 26 May

Time	Session title
8:30 - 12:00	Registration
9:00 - 9:15	Welcome by Eeva Kallio
9:15 - 10:15	<i>Leadership and positive development</i>
10:15 - 10:30	Short Tea/Coffee break
10:30 - 11:30	<i>Stage- and meta-theory</i>
11:30 - 12:00	Long Tea/Coffee break
12:00 - 13:00	<i>Adult cognitive development</i>
13:00 - 14:15	Lunch
14:15 - 15:15	Keynote - Prof. Michael Basseches
15:15 - 15:30	Short Tea/Coffee break
15:15 - 16:30	<i>Poster session</i>
16:30 - 17:30	<i>Qualitative studies</i>
17:30 - 18:30	ESRAD Business meeting
20:00-	Conference dinner

FRIDAY 27 MAY

Time	Session title
9:00 - 10:00	<i>Leadership in context</i>
10:00 - 10:30	Long Tea/Coffee break
10:30 - 11:30	<i>MHC (Model of Hierarchical Complexity)</i>
11:30 - 11:45	Short Tea/Coffee break
11:45 - 12:45	<i>Dialectical thinking</i>
12:45 - 13:30	Lunch
13:30 - 14:30	<i>Wisdom</i>
14:30 - 15:00	Long Tea/Coffee break
15:00 - 16:00	<i>Application of adult development concepts</i>
16:00 - 16:15	Short Tea/Coffee break
16:15 - 16:45	<i>Panel discussion</i>
	<i>Discussion: Why Adult Development matters?</i> <i>Michael Basseches in Q&A</i>
16:45-17:00	Closing

Venue

Hotelschool The Hague



Image: O Seveno

The Hotelschool The Hague is located in Scheveningen, a small seaside resort bordering The Hague, the governmental center of the Netherlands and its third largest city. The Hague is also home to all Embassies to the Netherlands, and many international organizations. It is well known as the residence of the International Court of Justice, the International Criminal Court, and it is the fourth United Nations city of the world. In 1995, Boutros Boutros Ghali, the then Secretary-General of the UN, referred to The Hague as the city of peace and justice, reaffirming an ambition that the city has aspired to since the opening of the Peace Palace in 1913.

The Hotelschool The Hague (HTH) is a founding member of the Hotelschools of Distinction, a global network of institutes of hospitality business schools in the world, including the schools in Lausanne and Cornell. It was founded in 1929 as a one-year course for personnel in hotels, restaurants and cafés. By 1959 the course developed into a three year course and the HTH was officially recognized as by the Dutch government. In 1966 the HTH acquired the location Brusselselaan in Scheveningen with female enrolment increasing to nearly equal participation in the nineteen-eighties, by which time the HTH had developed into a four year bachelor hospitality business degree course with wide international recognition. By 1989, about 90% of student internships were

completed outside the Netherlands: From the USA to Hong Kong, from Australia to Great Britain and as of today many large internationally operating hotel chains visit the school to present themselves and to recruit students.

In the 1997 the HTH implemented a developmental curriculum, referred to as Enterprising Learning. It is this new curriculum, in particular students' perceptions of it, that was described in Van Rossum and Hamer (2010). And many students and teachers are quoted in that study. In the early years of this century, the HTH opened a campus in Amsterdam bringing the number of hospitality business institutes in the Netherlands up to six. The fifth ESRAD symposium is located at the original The Hague campus of the HTH in Scheveningen.

Hotelschool, The Hague
Brusselselaan 2, 2587 AH Den Haag
<http://hotelschool.nl/en>

Abstracts

Pre-conference workshop

Wednesday 25 May: 14:00 – 17:30

Pre-conference workshop on scoring data using Van Rossum & Hamer's six-stage learning model

From the early 1980s onward, Van Rossum and Hamer have developed a six stage developmental epistemological model of student/teacher thinking. In 2010 they co-authored a book embedding their model in the broader field of epistemology, supporting their findings with a wealth of empirical evidence from a broad range of scholars active since the mid of the previous century. In 2013, Erik Jan van Rossum and Rebecca Hamer presented a keynote address at the ESRAD symposium in Freiburg, Germany, describing their model of student thinking, linking it to teacher thinking and adult development.

The model presented has been used to track epistemological development, to design a developmental curriculum, as a basis for teacher professional development and more recently as a background to the development of criterion based assessment models that aim to assess higher order thinking, personal development and many of the 21st century skills. However, whilst the model describes the experience of development in a way that is easily recognizable to teachers, students, counselors and the like, the model is based on collecting and scoring the qualitative data, following the phenomenographic approach using the whole-of-transcript approach (Bowden & Walsh, 2000). The whole-of-transcript approach aims to keep the whole of the narrative in mind when categorizing the response, which is very different from a traditional thematic analysis. Phenomenography, although ideologically distinct, has many characteristics of the Grounded Theory Approach in that it is thoroughly data driven, context specific and requires empathic reading of the underlying data, in this case full narratives. The literature shows that scoring this type of data is subject to a learning curve, not only regarding the analysis within one study or subject, but also in time.

This workshop will include a short introduction to the model including the most recent findings and the scoring method used by Van Rossum and Hamer. Participants will be provided with an extended scheme of signature utterances for the different development levels that they developed over the decades that includes their most recent findings, a shortened version of which is included in Van Rossum and Hamer's book *The Meaning of Learning and Knowing* (Sense Publishers, 2010). This introduction will be followed by pairwise group work, where participants will practice with some of the original data (in English) from a recent study to experience how to score narratives to the highest level of epistemological development.

To increase engagement, the second exercise will use the data generated by the participants. This means that participants have some homework to complete before the workshop. Participants are requested to write an elaborate essay response to the following questions. It is important that they describe their own position and experiences, in English (or in your own language, followed by the best translation you can manage).

1. What is understanding to *you*? When do you feel you have really understood something?
2. What does *your* ideal study book look like? What are important aspects of a study book that would support learning for (*your notion of real*) understanding?

Please send these to Rebecca Hamer by email by **18 May 2016** to **rebecca.hamer@ibo.org**.

This will give us some time to prepare and perhaps improve upon your translations if you feel that is necessary.

Biographies

Rebecca Hamer is an educational researcher with more than 30 years experience in studying student thinking and the effect on the quality of learning. After a career in policy research on a variety of areas including education, transport and governance, she became Research Director for the Dutch Platform for Science and Technology, and most recently as Manager Assessment Research and Design at the International Baccalaureate based in the Netherlands. Starting in 2012, the Assessment Research and Design team advises IB curriculum development regarding assessment for the IB programmes for 11 years and up.

Erik Jan van Rossum has recently retired from a lifelong career as university lecturer and educational researcher. Starting in the 1980s, Van Rossum and Hamer built up a considerable qualitative evidence base for a six stage epistemological developmental model. In 2010 he co-authored *The Meaning of Learning and Knowing* with Rebecca Hamer, reviewing more than 60 years of research into students' ways of knowing and linking it to teacher thinking. The model is supported by evidence from over 1200 students detailing the link between student and teacher learning-teaching conceptions to a range of concepts used throughout education and educational research.

Keynote Speaker

Prof. Michael Basseches
(Suffolk University, USA)
"Questions I've asked about
Dialectical Thinking"



Dr. Basseches will provide a panoramic review of his 45 years studying dialectical thinking and adult development. The journey began around 1970 with noticing commonalities in writings and explanations and using the term “dialectical thinking” to name these commonalities, but without being able to describe and explain them; it led to his interest in 2015 in the importance of the development of dialectical thinking for the success of social movements attempting to confront the planetary challenges of the current “global era.” The framework for this review will be explaining and inviting discussion of the series of questions which Basseches tried to address through formal and informal research and writing of the past 4 decades, since recognizing the relevance of dialectical thinking to the study of adult development. These questions include:

How can we describe what dialectical thinking is as a form of organization? How can we describe the relationship between 1) the organization of dialectical thinking and the equilibrium it provides and 2) the organization of formal operational thinking and the equilibrium it provides?

How can we describe dialectical thinking as a “third way” intellectual sensibility contrasting with both Universalistic Formal Thinking and Relativistic thinking? How can we recognize dialectical thinking when we see it? What were the relationships between the Dialectical Thinking model of Adult Development and then extant theories of adult development? What fosters the development of dialectical thinking in the contexts of (a) Higher Education?(b)The Workplace?(c)“Predictable Crises of Adult Life”? How, in the context of intellectual development, do we understand felt experiences of actions and emotions that seem inconsistent with one’s own “reasoning”? How can we understand all successful psychotherapy (across theoretical approaches) as fundamentally constituted by relational dialectical processes including (a)understanding what obstructs these processes in cases of ineffective or destructive psychotherapy and (b) understanding psychotherapy and supervision of psychotherapy as contexts for adult development?

Biography

Michael Basseches is currently Professor Emeritus of Psychology at Suffolk University, Boston, USA, and Visiting Professor of Psychology at Universidade de Lisboa, Portugal. He also maintains a private practice of psychotherapy and supervision in Cambridge and Gloucester, Massachusetts and in Lisboa. Born in Greenwich Village in New York City, he received his BA in Psychology and Philosophy from Swarthmore

College in 1972 and his PhD in Personality and Developmental Psychology from Harvard University in 1978 (dissertation title: Beyond Closed-System Problem Solving: A Study of Metasystematic Aspects of Mature Thought). His many writings and presentations include 3 books: Dialectical Thinking and Adult Development (1984); Psychotherapy as a Developmental Process (with M.F. Mascolo, 2010); and Toward a Socially Responsible Psychology for a Global Era (co-edited with E. Mustakova-Possardt, M. Lyubansky, and J. Oxenberg, 2014). In addition to 20 years at Suffolk University during which time he served as Director of Clinical Training for the PhD program in Clinical Psychology, he also served on the faculties of Swarthmore College, Cornell University, Massachusetts School of Professional Psychology, The Clinical-Developmental Institute and Harvard University Continuing Medical Education Programs as well as on the staff of Harvard's Bureau of Study Counsel. He welcomes email at mbasseches@gmail.com

An overview of adult development research and application in the field of leadership studies

Jonathan Reams

Background and Aim: Proponents of theories of positive adult development, while making progress in being applied to the field of leadership and management studies, as a whole still find themselves on the margins of research and application in the field. This presentation will first provide an overview of how research and literature in the field has progressed, both in terms of how such research has contributed to the field of adult development and some discussion of how it appears in relation to the larger field of leadership and management discourse. This will be followed by a brief survey of some of the more well-known approaches to applying adult development models to leadership development. To illustrate this, examples from client work done from this approach will be highlighted in terms of some preliminary research on the impacts on leaders sense of identity as well as leadership skills from utilizing an adult developmental model for leadership development programs.

Method: The method is primarily a survey of the state of application of adult development research in relation to leadership development. In terms of any kind of method, a narrative approach is used to draw on historical immersion in both fields over time.

Results: Primary results described are of work done by the author using the application of adult development to corporate leadership development work is described.

Discussion and Implications: The results of this inquiry are primarily that while the field has grown significantly, there is also a significant growth in less rigorous, casual applications of adult development that can harm the reputation of the field.

Now what? On how business leaders make sense of their ego development test results

Rob Bongaardt and Elaine Herdman-Barker

Background and Aim: Ego development tests are used in research and clinical practice as well as in business consulting settings. While much attention is paid to test outcomes and their predictive value for behavior or performance, research seldom addresses how the tested person responds to the test itself. Our research aims to explore how business leaders experience getting to know their ego development test results. What sense do they make of the results? And how?

Method: Participants were 46 corporate leaders partaking in a leadership development program. They had been tested using the Global Leadership Profile, a version of Loevinger's Washington Sentence Completion Test. They had already self-assessed and gathered feedback from work colleagues on their leadership profile. Data consisted of written responses to the following two sentences: "When I received my report I ..."; and "The questions I have or themes I'd like to discuss are ... " The responses were analyzed with descriptive phenomenological method concentrating on experienced meaning.

Results: Participants initially try to reconcile any differences between the report's assessment of their leadership development (action-logic), their self-assessment and that of their colleagues. The person's psychological self-understanding is then explicated through specific work events. Touched by any novel perspectives on self, the person considers their potential for development. This may come with uncertainty or anxiety about how to realize the potential, where to look for support and whether such development is worthwhile.

Discussion: We critically discuss three facets: The participants' seemingly uncritical acceptance of the report's assessment; the participants' engagement in a development discourse, rooted in society's conception of hierarchy and images of roads to perfection, as a potential source of anxiety; and the forms of dialogue that are initiated.

The ego development stage of school leaders in England and its implication for practice

Neil Gilbride and Chris James

Background and Aim: Adults' sense-making capabilities reflect the stage of their ego development. They: influences how individuals interact with those around them; shapes their construction of reality; affects others' experience them; and importantly configures how they act. The stage of adult ego development (AED) affects the practice of those in leadership positions in organisations. Arguably, modes of interpretation that are characteristic of the later AED stages are of most value for organising in complex environments. Such environments are: where the number of interactions is high; dynamic due to the changes that can occur, and in a constant state of evolution as they respond to organizational influences (Stacey 2008). School can be considered to be complex environments, indeed Hawkins and James (2016) characterise schools as CELLS – Complex, Evolving, Loosely Linked Systems.

However, despite its significance, very little research has been undertaken into the adult ego development of school leaders and its implications for practice. Hence the rationale for the research reported here.

Method: Five headteachers were assessed for their ego stage using the Washington University Sentence Completion Test (Hy and Loevinger 1998). The headteacher's were interviewed to explore their approach to leadership and management, their rationales for it and their understanding of context for their leadership focusing on critical leadership incidents. Interviews were also undertaken by those who have direct experience of the head-teachers' leadership practice including the school's governing body and senior leaders in the school.

Results: Case studies reflected how each head-teachers ego stage score could be observed within the triangulated critical incidents and thus begin to indicate how ego stage influenced the how the head teacher navigated the complex environment of the school.

Discussion and Implications: The paper will be significant to researchers interested in how ego stage influences sense making and interactions within a complex environment and the implications this has for adult development.

The dialectics of hard stage development. ‘Duality’ structures and spaces of action

Tom Hagström and Kristian Stålné

Background: Dialectical thinking and adult stage development constitute only partly overlapping fields of knowledge. General common features of both fields appear to concern development as related to basic opposing forces or contradictions. In hard stage development theory such overlapping features are recognizable in Piaget’s theory of logical reasoning, the Model of Hierarchical Complexity (Commins and colleagues) and the Subject-Object Theory (Kegan and colleagues), (Hagström & Stålné). In dialectical thinking the overlapping features can be traced among different world-outlooks elaborated in terms of dialectical schemata or thought forms (Basseches, Laske).

Aim: The aim is to discern basic dialectical features involved in hard stage development from an ‘agentic’, “transform-actional” perspective.

Approach to theoretical analysis: Three general features of hard stage development will be compared with three general features of dialectical thinking. The stage development features concern the interlinking of self-other, cause-effect and subject-object, conceived as ‘dualities’ meaning inseparable and contrasting parts of ‘wholenesses’. Taken together these are conceived as a coherence structure guiding agents’ actions. The dialectical features concern the interlinking of change, wholeness and internal relations, conceived as comprising ontological and epistemological aspects of different dialectical world-outlooks. Taken together these are conceived as comprising a transformational system.

Key conceptual points: The comparison appear to clarify the dialectical and basic motivational character of the hard stage development process as based on the coordination of the basic interlinked dualities. These appear to potentially generating stage transformative thesis-antithesis-synthesis processes triggered by agents’ conflicting experience trying to obtain desirable goals. This involves logical reasoning and enables stage wise expanding and abstract spaces of action, expressing the long term man-environment interaction.

Discussion and implications: Relations to organizational, open system and complexity theory will be addressed.

The development of value systems – a critical analysis of the Spiral Dynamics Model from an adult development perspective and meta-integrative perspectives

Kristian Stålné and Marc Lucas

Background and Aim: The recent development of the refugee crisis and the debate around it has uncovered a conflict and shift in value systems within European cultures, most notably in Germany and Sweden. Hence, there is a need for reliable and validated models in order to understand the dynamics of the cultural, societal and individual development. Spiral dynamics is a developmental model for value systems that has been widely applied in analysing cultural, political, organisational and economic development and conflicts (Beck and Cowan, 2001; Dawlabani, 2013). In addition to the few own and weakly validated empirical methods (Stein and Heikkinen, 2009), a critical analysis using more established adult development theories and theoretical framing within a renewed meta modelling are warranted.

Approach to theoretical analysis: The analysis has a theoretical design where the psychological implications and individual assertions of the Spiral Dynamics model are examined from the perspectives of two adult development theories, namely ego development theory and the model of hierarchical complexity. Additionally, two theories for values categories (Shalom Schwartz values theory and the competing values framework by Quinn) will serve as more typologically oriented theories related to the specific content of the field of research. The analysis focuses on identifying features of the respective theories that either imply supportive aspects for Spiral Dynamics, or can put into context or enrich and elaborate the understanding of the development of value systems.

Key conceptual points: The empirically based ego development theory's notion of frames of reference corresponds to Spiral Dynamics' axioms and normative content, although the former adds insights on aspects such as perspective-taking and individual's cognitive complexity. The complexity perspective opens a possible emphasis that the value system levels that drive individual actions are only strictly developmentally ordered historically and on the societal and cultural level. Within subjects they would only form a special combination of ontogenetically acquired and environmentally activated value systems, which are not necessarily developmentally ordered (which can be described in SD phrases as "centres of gravity" and "meme stacks"). This insight clarifies the importance of a more complex and more integrative model. Hence, the notion of tiers is not supported by any of the adult development theories. Schwartz' notion of priming can be seen as corresponding to Spiral Dynamics' concept of life conditions and can offer indirect empirical support (Strack, 2011).

Discussion and Implications: Adult development theories typically study the individual's development, often with limited regard to the cultural context. The rationale of this analysis is to relate the individual developmental aspect to the cultural, which is of significance in order to broaden the focus of adult development theories, and put them in a larger context.

Fractal phase calculus: Universal properties across development models

Cory David Barker and Sofia Ribeirinho Leite

Background and Aim: The background is the existence of a multitude of development theories, each contributing their own theoretical explanations for the architectures and processes of evolution, development, and increased complexity of actions across a broad spectrum of domains. Here, the aim is to summarize the accounting for, describing, and organizing of the pervading properties across these development theories.

Method: Transdisciplinary / Mixed methods analysis

Results: Four universal properties were identified that are hypothesized as required in the construction of any development model: multinamic (static/dynamic), recursivity (a successively repeating architecture), n-dimensions (trajectories of measurement), and indexing (content descriptive language that is domain or cross-domain specific).

Discussion and implications: Discussion revolves around whether these properties are, in fact, universal to all development models across all domains. The implications, if this hypothesis were true, is that processes of evolution, development, and increased complexity of actions across any and all domains, may be synonymized as reflecting a single, formulaic, fractal-like, algorithmic process of nature.

Development of university students' critical thinking skills: the case of Finnish students

Jukka Utraiainen and Eeva Kallio

Aim: Teaching in university should cultivate the growth of students' personal understanding (McCune & Entwistle, 2011), but achieving the key educational goal, such as critical thinking, during university education is challenging (e.g., Arum & Roksa 2011; Pascarella & Terenzini 2005). This study investigates the change in university students' self-assessed development of general thinking and learning of critical thinking skills, from third to fifth study year. Moreover, it explores how students' evaluations of teaching in third study year are associated with their perceived critical thinking skills and academic achievement in fifth study year.

Method: The participants (N=36) were university students from one Finnish university. The data consisted of participants' responses to on-line survey measuring their perceptions of teaching that supports critical thinking and personal understanding, participants' overall development of thinking and their learning of critical thinking skills. Survey was conducted both on their third (2009) and fifth (2011) study year. Additionally, participants' grade point average from year 2011 was used as an indicator for academic achievement. Dependent samples t-test and Spearman correlation coefficient were used as statistical tests.

Results: Results showed that participants' evaluation of the development of their thinking increased from third ($M = 3.9$, $SD = 1.2$) to fifth study year ($M = 4.5$, $SD = 0.6$). However, they showed no significant gain in learning of critical thinking skills. The more students perceived teaching supporting their personal understanding in third study year, the more they also had learnt critical thinking skills in fifth study year ($r = .48$, $p = .003$). Lastly, teaching that supported critical thinking in third study year had positive association with academic achievement instead ($r = .28$, $p = .024$).

Discussion: Results suggest that in general students perceived their thinking developing from third to fifth study year. However, their critical thinking skills did not increase, which resemble Arum and Roksa (2011) results. Furthermore, the results showed that in order to develop students' critical thinking, teaching supporting students' personal understanding seems to be efficient.

Crisis episodes and curiosity: Exploring a Piagetian driver of adult development

Oliver C. Robinson

Background and Aim: Piaget hypothesised that curiosity – a search for new information about self and world – was stimulated by cognitive incongruity and imbalance. Also, Erikson found that during periods of personal crisis, feelings of incongruity were heightened relative to stable periods of development. Based on these theoretical postulates, the aim of this study was to investigate whether four forms of curiosity – intrapersonal (curiosity about self), interpersonal (curiosity about others), perceptual (curiosity about sensory world), and epistemic (curiosity about knowledge) – are elevated during times of adult crisis.

Method: Participants were recruited from the UK via a recruitment company. The sample was stratified by gender, age and geographical region. It comprised 963 individuals aged 20 and over (425 male). Participants completed four curiosity measures: Intrapersonal Curiosity Scale, Interpersonal Curiosity Scale, the Perceptual Curiosity Scale and the I/D Epistemic Curiosity Scale, and completed a self-appraisal crisis question (Robinson & Wright, 2013). Data was analysed using a MANOVA with presence/lack of crisis and life stage as IVs, and forms of curiosity as DVs.

Results: A significant main effect of both crisis and adult life stage was found on all four forms of curiosity. All forms of curiosity were significantly higher in younger adults than older adults, and in individuals reporting crisis than those not reporting crisis (with the exception of epistemic curiosity in older adults, where the value was equal across the crisis / no crisis groups).

Conclusions: Increased curiosity in new knowledge may be a 'silver lining' of periods of crisis. The increased curiosity of those undergoing personal crisis may lead to learning new facts about self and world and thus facilitate developmental progress in unstable periods, as originally postulated by Erikson and Piaget.

Psychometric properties of the Epistemological Development in Teaching Learning Questionnaire (EDTLQ): An inventory to measure higher order epistemological development

Sofia Kjellström, Hudson F. Golino, Rebecca Hamer, Erik Jan van Rossum and Ellen Almers

Background and Aim: Qualitative research supports a developmental dimension in views on teaching and learning, but there are currently no quantitative tools to measure the full range of this development. To address this we developed the Epistemological Development in Teaching and Learning Questionnaire (EDTLQ), based on Van Rossum and Hamer's (2010) six stage developmental model of learning-teaching conceptions. Scales included statements regarding good teaching, classroom discussion, understanding, application, a good textbook (Van Rossum & Hamer, 2010, 2012, 2013) and responsibility for learning. The aim is to investigate the psychometric properties of EDTLQ.

Method: The sample consisted in 232 of teachers from a Swedish University. We analyzed the data via confirmatory factor analysis and the Rasch model.

Results: The items of the EDTLQ form a unidimensional scale, implying a single latent variable underlying the scales. Item and person separation reliability, showed satisfactory levels of fit indicating that the response alternatives differentiate appropriately. Endorsement of the statements reflected the preferred constructivist learning-teaching environment of the response group.

Discussion and conclusions: The main finding is that the items that are easiest to endorse in each scale reflect the midrange levels of epistemological sophistication, but after that comes the more advanced statements, which fits the experience in the adult development research field, but hitherto has not been shown statistically. This result enhances the adult development knowledge by showing how statements are endorsed within items.

Dr. Basseches will provide a panoramic review of his 45 years studying dialectical thinking and adult development. The journey began around 1970 with noticing commonalities in writings and explanations and using the term “dialectical thinking” to name these commonalities, but without being able to describe and explain them; it led to his interest in 2015 in the importance of the development of dialectical thinking for the success of social movements attempting to confront the planetary challenges of the current “global era.” The framework for this review will be explaining and inviting discussion of the series of questions which Basseches tried to address through formal and informal research and writing of the past 4 decades, since recognizing the relevance of dialectical thinking to the study of adult development. These questions include:

How can we describe what dialectical thinking is as a form of organization? How can we describe the relationship between 1) the organization of dialectical thinking and the equilibrium it provides and 2) the organization of formal operational thinking and the equilibrium it provides? How can we describe dialectical thinking as a “third way” intellectual sensibility contrasting with both Universalistic Formal Thinking and Relativistic thinking? How can we recognize dialectical thinking when we see it? What were the relationships between the Dialectical Thinking model of Adult Development and then extant theories of adult development? What fosters the development of dialectical thinking in the contexts of (a) Higher Education?(b)The Workplace?(c)“Predictable Crises of Adult Life”? How, in the context of intellectual development, do we understand felt experiences of actions and emotions that seem inconsistent with one’s own “reasoning”? How can we understand all successful psychotherapy (across theoretical approaches) as fundamentally constituted by relational dialectical processes including (a)understanding what obstructs these processes in cases of ineffective or destructive psychotherapy and (b) understanding psychotherapy and supervision of psychotherapy as contexts for adult development?

Home representation among Russian youth and adults

Ekaterina Braginetc, Alexandra Bochaver, Sofya Nartova-Bochaver, Natalia Dmitrieva and Sofya Reznichenko

Background and Aim: Existing research within environmental, everyday life and developmental psychology shows that home environment is an important source of the person's identity, well-being, and positive functioning¹. The attachment to home changes with person's maturity and personal home images as well. The goals of this paper are 1) to specify the components that form personal home concept, and 2) to find out the main psychological needs linked with this conceptualization among youth and adults.

Methods: 66 adults of 18-59 years old (Mage = 29) answered 9 open questions about their homes, ideas of home, and possibilities of the mutual alterations between the home and the habitant. Three experts have processed about 1100 elements using content-analysis and classifying the answers into groups according personal needs by A. Maslow. Distributions of different needs over the questions were compared using Fisher's ratio test and then two age groups (18-27 years and 28-59 years) were compared by ranking the described needs.

Results: We found four coexisting components of the personal image of home representation: general, everyday, dynamic, imaginary. Also we detected that the home perception from the perspective of the personal needs is relatively constant during the adulthood.

Discussion and implication: We showed the simultaneous existence of the different images of home and described the complex constellations of the personal needs satisfying by home that changes with maturity. Acknowledging the psychological multifunctionality of a home environment underlines a serious practical and psychotherapeutic potential of home studies. Home perception is constant during the adulthood, but the physiological needs are more important in youth than the aesthetic ones. It may be explained by development of self-awareness with maturity and improvement of the environment transformation skills by a person.

How the home attachment contributes to the mental well-being in youth and adults

Ekaterina Braginetc, Sofya Resnichenko, Sofya Nartova-Bochaver, Alexandra Bochaver and Natalia Dmitrieva

Background and Aim: Home attachment is defined as 1) an experience of person's deep emotional closeness to their home community, history, nature factors and 2) a perceivable signification of home as fateful and saturated with personal meanings placeⁱ. The goal of this paper is to study relations between home attachment and well-being in youth and adults. We assumed that 1) home attachment is positively connected with mental well-being, and 2) this connection is moderated by age.

Methods: 291 participants (30% male, 70% female) aged from 12 to 72 who were distributed into four groups: 1) adolescents, 2) youth, 3) early adults, 4) middleaged and elderly. To measure chosen independent and dependent variables we used the Home Attachment questionnaireⁱⁱ, The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)ⁱⁱⁱ, and the Sense of Coherence (SOC)^{iv}. Correlation and multi-regression analyses were applied.

Results: Correlation analysis has confirmed 1) a significant positive relation between home attachment and psychological well-being, 2) strong positive relationship between home attachment and sense of coherence. Were found that home attachment was a significant predictor of psychological well-being and sense of coherence; this impact is the highest in adolescents, less significant in youth, middle-aged and elderly, and is absent in early adults.

Discussion and implication: Hypotheses were not rejected. The research showed that home attachment was an important predictor of individual's mental well-being. Moreover, the sense of coherence has bind with feeling of closeness to one's own home and home attachment. It can be because both developmental resources and age tasks change with age. Thus, middle-aged respondents have no significant bind between SOC and home attachment because there is a number of different environments as important as home: work office, leisure-time places, etc.

The influence of relationships within family of origin and identity processes on the emerging adults' well-being

Angel Sorgente, Margherita Lanz, Semira Tagliabue and Sara Utano

Background and Aim: Nowadays is well-recognized the impact that family relationships (Amato, 1994) and identity (e.g., Berzonsky, 2003) have on emerging adults' well-being. At the best of our knowledge, no study has simultaneously tested the impact of both relationships and identity on well-being during emerging adulthood.

Methods: Data were collected from 218 Italian emerging adults (19-30 years; $M=23.32$; $SD=2.56$), most of them were female (80.7%). For the measurement of identity, family relationships, and well-being they respectively completed the *Utrecht-Management of Identity Commitments Scale* (Crocetti et al., 2008; 2015), the *Promotion of Volitional Functioning* (Manzi et al., 2012) and the *Comprehensive Inventory of Thriving* (Su et al., 2014). The sub-scales of the first (commitment, in-depth exploration, reconsideration) and second (promotion of autonomous thought, decision making and physical separation) instruments were tested as predictors of two sub-dimensions of well-being (subjective and psychological). Two multiple regressions were run, respectively on subjective well-being (SWB) and on psychological well-being (PWB).

Results: Identity processes equally impacted on SWB ($RR2=22\%$) and PWB (22.7%), while the family relationships affected more the PWB (16.6%) than the SWB (6.8%). In both regression models, the only identity process that is significant is the commitment ($\beta=.39$ for SWB, and $\beta=.35$ for PWB). About the relational dimensions, the promotion of autonomous thought is always not significant, while promotion of decision making and physical separation are significant in both cases (respectively, $\beta=.20$ and $\beta= -.20$ for SWB; $\beta=.27$ and $\beta= -.15$ for PWB).

Discussion and Implications: These results shown the central role of the commitment as predictor of positive outcomes, as expected (Berzonsky, 2003). Furthermore, the two significant predictors concerning the relationship with parents have opposite influence on well-being: emerging adults want to receive autonomy in decision making but also want parents shown them their desire to remain physically close.

Taming Turbulence: Transformative change calls for dialectical thinking

Janne J. Korhonen

Background and Aim: Turbulence is a relative condition. When *enterprise transformation capability* is operationalized as the viscous force of the organization to absorb environmental complexity, the ability to gauge environmental complexity and ETC is purported to enable predictions when information flow through an organization is orderly and when it is at risk of becoming turbulent.

The degree of uncertainty is a function of organizational levelⁱ and associated with the amount of information that must be processed. Information processing capability is requisitely stratified by the organizational levelⁱⁱ. As Chief Information Officer plays an important role in initiating, catalyzing, and managing enterprise change and transformation, the cognitive complexity of the CIO is posited to be positively associated with ETC.

Method: This poster summarizes a doctoral dissertation study that investigates this hypothesis. A construct for enterprise transformation capability was built and a respective survey instrument developed to measure it.

Results: Comparing the results of a survey to the independent concept of cognitive complexity, as measured by Career Path Appreciation, support was found to the hypothesis. It is further conceptually conjectured that ETC pertaining to full-system transformative change calls for fully-developed dialectical thinking.

Phase complexity: preliminary observations for a universal complexity model

Cory David Barker

Background and Aim: Phase complexity is a hypothetical integral architectonic process model that accounts for, describes, and organizes universal categories of action and all their possible states across any and all domains and the entities which they are composed. Whether the actions of subatomic particles, cells, organisms, social groups, or galaxies, phase complexity would be able to account for their actions and all possible states with scalable resolution.

Method: Transdisciplinary / Mixed methods analysis

Results: A brief outline of the foundation of this model will be given, an outline of the methods used to construct this hypothesis, then followed by an explicit description of the first six phases: 1) binary, 2) analog, 3) automata, 4) receptor-effector, 5) network, 6) cyber-network, with examples given across multiple domains and different scales of the building blocks of nature.

Discussion and implications: Discussion may revolve around the question of whether these phases of complexity are valid and applicable for all entities. If this hypothesis were valid, the implications would be a unified measurement system that could be used by researchers in any domain of knowledge for mapping the complexity and properties of action in and of any and all entities.

The association between identity, intimacy, and early generativity

Lisa Astrologo, Heather Lawford, Heather Ramey and Stine Linden-Andersen

Background and Aim: Generativity, defined as concern for future generations as a legacy of the self, is a priority in midlife following a focus on intimacy (Erikson, 1963). In contrast to a focus on intimacy, McAdams and colleagues have done extensive research linking generativity to identity process (McAdams et al., 1997). Moreover, recent research points to generativity as a meaningful construct in a younger population (Lawford & Ramey, 2015) though little has been established regarding predictive factors of early generativity. Thus, the purpose of this study is to examine the association of identity and intimacy with early generative concern in adolescence and young adulthood since few studies have considered these concepts simultaneously.

Method: Approximately 380 participants ($M_{age} = 19$ years; 21% male) completed surveys including the Loyola Generativity Scale (LGS; McAdams & de St. Aubin, 1992). Caregiving questionnaire (Collins & Freeney, 2000) was administered to assess their level of intimate relationships with peers and the Identity Style Inventory (ISI; Berzonsky, 1989) which assesses general decision making patterns (information-orientation, normative-orientation, diffuse-orientation, or commitment orientation).

Results: A stepwise regression analysis suggests that intimacy ($\beta = 0.107, p = 0.026$), commitment identity orientation ($\beta = 0.303, p = 0.000$), and information identity orientation ($\beta = 0.337, p = 0.000$) predict generativity. A mediation analysis demonstrated that when intimacy was included in the model, the predictive power of identity did not significantly decrease which suggests that identity and intimacy are independent factors in predicting generativity.

Discussion and Implications: We found that identity and intimacy both independently predicted generative concern which supports both Erikson and McAdams' theories in part. These findings point to the developmental relevance of early generativity.

The multidimensionality of thinking in the context of creativity studies: structural- dialectical approach

Anastassia Belolutsкая and Nikolay Veraksa

Background and aim: The methodological base of our work is a structural-dialectical approach elaborated in Russia since 1970-s (N. Veraksa, L.Bayanova, A.Belolutsкая, I.Shiyan, O.Shiyan and others) and introduced at all levels of educational process (preschool, school, university). We are going to present the main points of this research methodology in comparison with American and European studies.

The aim of our presentation is to introduce the concept of the multidimensionality of thinking as a characteristic that provides the variability of problem qualitative transformations. Besides, we are going to present empirical results concerning the correlations between the multidimensionality and such mental characteristics, as thinking flexibility, coping strategies, tolerance to ambiguity.

Method: structural-dialectical method in psychology; technique of diagnostics of multidimensionality of thinking (DMT).

Key conceptual points and results: The multidimensionality of thinking provides variability of the transformations of a substantial contradiction in a problematic situation by adults. This mental characteristic allows seeing the same object on the borderland of different structures. There is a specific level of creative transformation of a problematic situation. It allows to solve the problem, building structural relations between two or more formerly independent situations, and, by this means, projecting a metaconstruction featuring much greater development capacity than the initial components had.

The number of significant correlations between the multidimensionality and the flexibility of thinking, productive coping strategies and tolerance to ambiguity were found. These results were received with a help of original diagnostic tool (DMT).

Discussion and Implications: This research provides a new theoretical vision and empirical data concerning the interconnection of dialectical thinking and creativity. The results obtained will help to improve existing diagnostic procedures and to construct the developing and educational programs for adults more effectively.

Differentiating non-psychotic delusion from illusions using Model of Hierarchical Complexity

Michael Lamport Commons and Sarthak Giri

Abstract

Whereas psychotic delusions are scrutinized by the medical community, there are non-psychotic delusions which affect people at all stages. The stage range from Automatic Stage 1 to Cross Paradigmatic Stage 15. Unlike DSM, this paper asserts that delusion fall on a spectrum of seriousness. It looks at delusions and illusions from the behavioral stage of development perspective. This paper differentiates between: 1) Delusions which are described as fixed forms of false beliefs to which the person is not aware; 2) Illusions which are misrepresentations of sensory stimulus that compensate for and simplify the world around us. Two primary causes of delusions are stage limitations and abuse. An example of delusion caused by stage limitation would be people believing that they can pick stocks and beat the market. Such people are arrested at the systematic stage. Non-psychotic delusions often materially affect the lives of Individuals. It is possible for a person to learn of their delusions. However, individuals who have grandiose delusions are more resistant to change and less likely to realize their delusions than people with persecutory delusions. The paper might help in treating psychotic and non-psychotic delusions by taking into account the limitations of people arrested at their present stage of development in which the delusion occurs.

Intelligence development and the Process of Initiation – Two different developmental principles which overlap to the cognitive developmental process we observe

Oliver Kress

Background and Aim: Around the year 1990 Vienna was one of the centres of the rising international debate on evolution and cognition. The debate focused on Piaget as an empirical epistemologist and a biologist interested in human cognition but not on Piaget as father of stage theory and test methods as common in psychology. During this debate a model was developed called Process of Initiation (Kress 1993), which might be still helpful for today's debate on Positive Adult Development.

Approach to theoretical analysis: For this theoretical analysis facts and approaches from Cultural Anthropology, Cross-Cultural-Psychology, Humanistic Psychology and Evolutionary Epistemology were taken into account.

Key conceptual points: Piaget argues that intelligence development is an epigenetic process caused by the interaction between organism and environment. The subject-object-distinction is seen as the highest achievement of cognitive development. In contrast to Piaget's approach the Process of Initiation is based on the hypothesis that the subject-object-distinction is the result of long term cognitive disequilibrium on the basic level of the coordination of the need-satisfying actions. Therefore two different modes of thought with low or no subject-object-distinction exist, before („primary integration“) and after („secondary integration“) the long term cognitive disequilibrium. The phenomenon of „secondary integration“ is described by Abraham Maslow as „Self-actualizing people“, by Zen-Buddhism as „Beginner's Satori“ and by philosophical Taoists as „Wu Wei“. It is important to mention that experiencing „Beginner's Satori“ is only opening the door to a new mode of thought. For full enlightenment of the whole person a life long training and experience with this mode of thought is needed.

Discussion and Implications: Piaget defined intelligence development and the development of different modes of thought as the same process. In contrast to Piaget's approach the Process of Initiation makes it possible to separate the development of different modes of thought from the development of intelligence by epigenesis. It's argued that intelligence development is independent from the used mode of thought. Therefore a new definition of intelligence is required, which focuses on its evolutionary function and on the growing complexity of the thought processes.

Method of testing the dialectical thinking from preschool age to adolescence

Igor Shiyan, Nikolay Veraksa and Anastasia Belolutsкая

Background and aim: The methodological base of our work is structural-dialectical method in psychology and theory of dialectical thinking (Veraksa, Belolutsкая, Vorobyeva, Krashennikov, Rachkova, Shiyan O., Shiyan I.). We understand dialectical thinking – as a system of special dialectical mental actions that allow to operate productively with opposites. We consider the dialectical thinking as a mechanism for creativity. First signs of dialectical thinking can be noticed already in the pre-school age. At that moment dialectical structures are on the stage of active development and therefore are extremely sensitive to the pedagogical influence during all period of education from kindergarten to University. So the important research aim is to construct the testing procedure acceptable for measuring dialectical thinking in different ages. The goal of this presentation is to demonstrate some methods of testing of dialectical thinking in different ages - from preschool to adolescence.

Method: structural-dialectical method in psychology; diagnostics of development of dialectical mental actions; individual tests of dialectical thinking “What can be simultaneously?” and “Dialectical stories” (written version for adults; oral version for preschoolers). 100 preschoolers and 148 adults were involved.

Key conceptual points and results: “What can be simultaneously?” technique is designed to diagnose dialectical action of mediation (for any pair of oppositions a person finds or constructs an object where those oppositions are present simultaneously). The task is presented as a “What can be simultaneously?” question for several pairs of attributes: 1) black and white 2) big and small 3) light and heavy 4) alive and not alive 5) the other and the same. Answers containing the idea of development of an object, of transition from initial state to the opposite and pointing at the moment of transition in the development or the answers revealing opposite relations within the object are considered dialectical. The research data shows us that preschool children and adults produce a significantly better results in this test than do the elementary and senior school students.

The method “Dialectical stories” consists of 9 tasks. Each of them includes 2-6 pictures, according to those the test person should make a story or continue the story the tutor has begun. The stories proposed by tutor include contradictive situations, when somebody should be identified as the guest and the host in the same time or some object should be recognized as a gift and not gift in the sane moment, etc. The method is testing different actions of dialectical thinking (conversion, mediation, integration, changing of alternative).

Discussion and Implications: The methods of testing proposed in the study contributes to the description of functioning of dialectical thinking in different ages. These techniques may be effective in the researches, devoted to the genesis of dialectical (creative) thinking.

Fathers' Involvement in the lives of preschool-aged children in the northern and interior region of Portugal

Rosa Maria Ramos Novo and Ana Raquel Russo Prada

Background and Aim: Although widely accepted the role of fathers in the education and promotion of child development (Doherty, Kouneski, & Erickson, 1998; Featherstone, 2004), fathers' involvement is frequently omitted in the research field (Day & Lamb, 2004; Lamb, 2000, 2002, 2010; Palkovitz, 2002; Parke, 2000, 2002; Pleck, 2010). The purpose of this study was to characterize fathers' involvement with their preschool-age children.

Method: Data were gathered by a sociodemographic questionnaire and an adapted version of the Portuguese Parental Involvement Scale (Simões, Leal & Maroco, 2010) that included three domains of involvement (care, recreational activities and discipline).

Results: A total of 435 fathers of preschool aged-children from the city of Bragança, on the northern and interior region of Portugal, participated in the investigation. Fathers' ages ranged from 20 to 62 years. The majority were employed, married and spend few time with their children, although they were highly involved in recreational activities, followed by care and discipline. Furthermore, fathers' involvement didn't differ depending on marital and employment status. Fathers' age and the number of children predicted, respectively, involvement on care and discipline and on recreational activities. Besides, fathers were more involved with their daughters' literacy development by reading and exploring stories more often.

Discussion and Implications: These findings highlight the potential of fathers' involvement. Future studies should deepen the relationship between fathers' involvement and children's literacy practices. Our results confirmed a higher involvement on recreational activities that can be explained because they usually occur on a more flexible schedule. Moreover, fewer time spent with children didn't equal less paternal involvement. Additionally, it's worth of mention that despite the stereotypical view of fathers' involvement, subtle changes become already evident in younger parents. The findings can be used to enhance more knowledge on fathers' involvement and to develop practical measures.

“I am back to school!”- integrating work, family and student roles: a qualitative study

Cláudia Andrade and Marisa Matias

Background and Aim: Following the trends of other European countries, increasing numbers of female professionals are returning to higher education, both for undergraduate and graduate studies. There are many contributing factors to this decision: some want to invest in or to add value to their careers with an additional graduation, while others take this as an opportunity to acquire a qualification that allows the access to certain types of jobs. Others want to fulfill a “dream” that was put away due to either professional or familiar responsibilities. Research showed that adaptation of professional workers to higher education is associated with an appropriate management of different life roles, namely work, family and school roles (Adams & Corbett, 2010; Chartrand, 1990, 1992; Hammer, Grigsby, & Woods, 1998; Metzner & Bean, 1987; Ogren, 2003; Tinto, 1975, 2002). Because some of these women, who work full-time and study also have family responsibilities (e.g. are mothers), enrolling in higher education forces them to negotiate their occupational, familiar and professional demands. Research suggests that female student parents have been found to experience increased role strain and conflict to manage multiple roles when compared to male students (Sweet & Moen, 2007).

Method: This qualitative study examines the study experiences and work-family balance of professional women in two different career stages: early-career and mid-career. Using semi-structured interviews with a sample of twenty two working mothers enrolled in a master program, this study explores their experiences of combining the three roles and the role of support for a successful integration of work-family and school.

Results: Support from peers was found as a critical factor for successfully integrating work-family and school responsibilities. Differences in the use of partner and family support were found between early and mid-career women. Lack or limited support from the workplace was a barrier that emerged in both groups.

Discussion and Implications: Combining work and family with higher education enrollment is a challenge, especially for women, and despite mandates for promoting diversity and equity in lifelong learning, students who work and are parents are often overlooked. Higher education institutions must consider the distinctive needs of the work student parents’ population when creating programs and policies to promote lifelong learning.

Grandparenthood from adult grandchildren's perspectives

Ana Raquel Russo Prada and Rosa Maria Ramos Novo

Background and Aim: Demographic changes have prompted opportunities for longer bonds (Connidis, 2010) and lasting intergenerational relationships (Matos & Neves, 2012; Timoten & Arber, 2012). Based on the intergenerational solidarity model (Bengston, 2001) this study analysis adult grandchildren's perceptions of their relationship with grandparents.

Method: The study used a closed-ended questionnaire, administered online within the classroom context, to a non-probabilistic sample of higher education students (64 males, 64 females), with at least one living grandparent.

Results: Most participants were single, unemployed and ages varied from 18 to 37 years. Grandparents lived mainly in their own residence and had a reasonable or good health status. This dyad had a frequently or all the week face-to-face contact and a good or excellent relationship. Granddaughters reported greater preference for maternal grandmothers. Also, face-to-face contact and emotional perceived support from grandparents didn't vary by grandchildren's gender and age. More personal contact was associated with higher instrumental and financial support. Younger grandchildren and females perceived more grandparents as a role and influence in their actual lives. Moreover, granddaughters were more engaged in their caring. Grandchildren of divorced/separated parents had less face-to-face contact and estimated less emotional support from grandparents than those whose parents were still in a relationship. Those who lost one parent showed less instrumental and financial support than those whose parents were still together. Further, grandchildren strongly agreed that parents promoted their actual relationship with grandparents.

Discussion and Implications: Granddaughters demonstrated a matrilineal preference and a higher appreciation for grandparents in their current lives. Although both genders kept a regular personal contact, females were more implicated in caring for grandparents. A comprehensive understanding of the relationship between grandparents and adult grandchildren must recognize parents as promoters of their actual bond.

Relationships between real-life moral conflicts, age and burden among informal caregivers of chronically ill family members

Liisa Myyry, Mia Silfver-Kuhalampi and Kaisa Kauppinen

Background and aim: Informal caregiving is often regarded as a moral duty in society, and it is a crucial element of societal life (Vilkko, 2014). Caregiving is typically very binding. To provide care to a chronically ill family member increases the risk of caregiver burden, stress and decline in health (vonKänel et al., 2008). A study carried out in Finland examined what type of care-related moral conflicts caregivers have experienced, and are the dilemma types, caregiver burden and age related.

Method: The data, gathered by an national-wide online survey, consisted of 354 respondents, 93% females, mean age 53 years (sd=11.3, range 22 to 81 years). The moral conflicts were classified according to Wark & Krebs (1986) typology into five categories: reacting to transgression and to temptation; social pressure; reacting to the needs of others and to conflicting demands. In addition, three other dilemma types were found: internal pressure, conflicts concerning interaction with the care receiver and conflicts concerning coping. Caregiver burden was measured by short version of The Zarit Burden Interview (Bédard et al., 2001) with 12 items (Cronbach's alpha was 0.89).

Results: For analyzing purposes, the dilemmas were re-classified into four categories according to the socio-cognitive conflict (scc; Doise & Mugny, 1984) they involved. Burden was negatively related to the scc ($r=-.15$, $p<.01$). Age was marginally related to the burden, but younger respondents showed more burden in the high socio-cognitive conflict dilemmas than the older ones.

Discussion and implications: Research among university students has shown that high socio-cognitive conflicts were perceived more difficult to solve and they elicit more feelings of upset (Myyry & Helkama, 2007). These results imply that age might buffer and help to cope with the negative aspects of high scc situations. Based on the results, some new research questions will be discussed.

“The story of change – a phenomenographic study of a change journey”

Eva Norrman Brandt and Sofia Kjellström

Background and aim: A successful organizational and cultural change has been done in a biotech plant in Sweden during a 10 year period. The leadership has been “post-conventional” at the last part of this period, and the change process is a mix between bottom-up and top-down. The aim of this study is to analyze the conceptions of leadership, change, and organizational culture in the change journey.

Method: The study has a qualitative inductive research design, and a phenomenographic method was used. Semi-structured interviews, focusing on the conceptions of change, views on leadership and organizational culture, was conducted with 19 participants during 2015.

Results: The results show that there are qualitatively different views on change, leadership and culture among the participants. Despite this, all participants agreed on the creation of a participative culture as a result of the past years change work where directions were given from the site leadership team but the creation of a new organizational structure was built in a participatory setting where a larger group of employees did contribute.

Discussion: It becomes clear that although research shows that a transformational or post-conventional leadership promotes transformational change, there is a need for different types of leadership styles/interventions depending on the level of adult development in the participants. One style does not fit all. The interviews display that some of the participants felt uneasy with the leadership. The predominant view was that the visionary, involving and catalyst leadership had a very positive effect on the change process, and further research is needed on how these kinds of leaders interact with employees in change journeys.

Vladimir Putin as a political leader – challenges to an AD-informed analysis of political culture

Elke Fein and Anastasija Wagner

Background and Aim: Vladimir Putin's coming into power as Russian president in 2000 marked an important break in Russia's recent history. It was the beginning of important changes in both institutional and symbolic dimensions of Russian political life. While Putin's image of a strongman was initially hailed by many citizens, politicians and observers alike, his recent annexation of the peninsula of Crimea and his politics towards the Ukraine have led to widespread criticisms, especially in the west. Many now come to realize that the "strategic partnerships" which have been put into place between western political actors and Russia after the end of the Cold War lack a consensus on fundamental political values. Connected to this seems to be a lack of a common language and way of perceiving oneself, each other, politics and the world in general.

Political Science, Cultural and Leadership Studies have competing hypothesis as to the degree to which the personalities of leading political actors determine the making of politics and political decisions making. The paper discusses to what extent and which adult development (AD) models can be useful tools, which contribute to a more adequate, developmentally informed understanding of political leadership at the example of Russia's president Vladimir Putin and the political identity concept promoted by him.

Method: In a tentative case study, the paper analyzes both the Russian president's political goals and behavioral strategies and the conflicts that are currently resulting from them in several areas of Russian and international politics. It draws on extensive published materials, including biographies, interviews, speeches and public discourse, which are analyzed through the lens of a number of neo-Piagetian theories of adult development, in particular Kohlberg's, Kegan's and Cook-Greuter's.

Results, discussion and Implications: On the basis of our empirical analysis, we identify a leadership profile revolving around a concept of identity which has its center of gravity at the self-protective level. We discuss some major implications of this finding for both Russian and western politics. Moreover, we argue that both politics, political analysis and political leadership can benefit from developmental insights into the structures of reasoning and meaning making, as well as the underlying action logics of important political actors.

Organizations as adaptive hierarchical complex systems: A critical analysis of Stratified System Theory from adult development perspectives

Oskar Törnblom

Background and Aim: Organizations can be seen as adaptive hierarchical complex systems and adult development theory shows that individuals' abilities, attitudes, values and leadership capability both differ and evolve over time. Thereby, there is a need for a framework for organizational design in which theories of adult development is integrated with theories of structuring organizations. One model in this field is stratified systems theory (SST). The aim of this analysis is to explore SST from the model of hierarchical complexity (MHC) and the ego development theory (EDT) and current organizations.

Method: The analysis is performed by theoretically comparing the different levels of SST with levels of MHC and EDT, respectively, and discussing SST's possibilities and relevance in current organizations.

Results: The analysis shows that the EDT, MHC and SST to some extent can be considered comparable. MHC places SST in a complexity perspective and demonstrates that leadership complexity increase with organizational level. EDT places SST in an ego development perspective and shows that there are similarities between the two theories, but the ego development perspective has a much broader and more development-oriented approach to leadership.

Discussion and implication: Some aspects of SST need to be adapted to better fit with current ego development theory and the organizational landscape of today. The developmental-oriented approach to leadership in EDT might offer an explanation to why traditional organizations have problems attracting leaders that can operate at senior management and executive positions. There is a need for further research on how these three theories can fertilize each other in order to contribute to the development of theories and methods that meets the needs of today's organizations and individuals.

College students “with” and “without” ADHD: Where is the deficit?

Patrice M. Miller and Darlene Crone-Todd

Background and Aim: Most often, research on ADHD has focused primarily on deficits. This is despite that fact that, anecdotally at least, we know of several highly successful individuals who report “having” ADHD (e.g. Richard Branson; Michael Phelps). One of the general issues that individuals with ADHD seem to have is that they are less successful in school than other students. The purpose of the current study was to investigate this issue in college students. We were specifically interested in whether they had difficulties in general with their studies, or only in certain circumstances.

Method: We went about the study in a somewhat different way than previous studies. First, we recruited students widely, using posted flyers asking anyone who either had been diagnosed with ADHD or thought that they had ADHD to participate. Non-ADHD students also participated. There were 68 participants in all. Second, we asked students to report separately on courses in which they were being successful, and well as courses in which they were not being successful.

Results: While the overall Grade Point Averages of the two groups of students did differ, with ADHD students having lower GPAs, when we looked only at courses in which students felt they did well in, the GPA's were the same. Both sets of students reported using similar skills in courses that they did well in, although ADHD students appeared to use them more and/or more intensively. There was no evidence that ADHD students were taking easier courses.

Discussion and Implications: While we are currently replicating these results with a larger group of participants, if the results in the larger group are similar, it would appear that ADHD students do not differ in having appropriate study strategies; they may instead differ in when and how they deploy them.

An analysis of the Verbal Comprehension Index of the Wechsler Adult Intelligence Scale- Fourth edition (WAIS-IV) using the Model of Hierarchical Complexity (MHC): Why might stage be a better measure of "smarts" than verbal IQ?

Kyle Featherston

Background and Aim: While Intelligence Quotient (IQ) tests are the most common and largely accepted measurement of how “smart” a person is, whether they are the best measure of this construct is up for debate. This paper will discuss the relationship between IQ tests and their corresponding order of hierarchical complexity developmental stage scores based on the Model of Hierarchical Complexity (MHC).

Method: The verbal comprehension index (VCI) scales of Wechsler Adult Intelligence Scale- Fourth Edition (WAIS-IV) were used for scoring. This study used IQ data from Belgian participants to analyze this relationship. Items from the VCI were scored according for their Order of Hierarchical Complexity (OHC), using the Hierarchical Complexity Scoring System (HCSS).

Results: The study shows that, according to the HCSS, the WAIS-IV fails to test verbal intelligence beyond the formal stage. A Rasch analysis demonstrated that scoring the VCI of the WAIS-IV test from a developmental sequence using the HCSS was successful in explaining the majority of the difficulty in VCI items. Much of the additional difficulty of tasks came from the knowledge of rare items and noise. Almost all of the items used in this study were scored at an OHC of either abstract or concrete.

Discussion and Implications: The results suggest that there are a limited number of stages tested by this section of the WAIS-IV and there is no testing of higher stages. This demonstrates the ceiling effect of the Verbal Comprehension Index of the WAIS-IV test. This particular sample was a high IQ sample and only looked at the VCI subsection. Difficulties with scoring items and additional limitations with the IQ test and their implications will be discussed, along with why this study provides support that additional analysis of IQ from a behavioral developmental perspective is needed.

Using Model of Hierarchical Complexity to address terrorism and promote peace

Michael Lamport Commons and Dristi Adhikari

Abstract

The model of hierarchical complexity (MHC) measures a general, unidimensional behavioral developmental set of tasks that measure difficulty across different domains. MHC proposes that 17 stages of development can be measured. There is no difference in the stage sequence across cultures. One of the many domains to which the MHC can be applied is to address terrorism. Terrorism is “a) the use of force or violence, v) by individuals or groups c) that is directed toward civilian populations d) and intended to instill fear e) as a means of coercing individual’s to change their social or political positions (as cited in Marsella, 2003). The multiple reasons why our present policies fail in terms of terrorism are because of: a) the assumption that government are just organization that may be set up by anyone, b) it is culture that determines what happens in countries, c) the attitudes of people determine everything d) western ideas are either considered better or imperialistic d) people want and understand democracy. In the paper, it is asserted that societies have to go through each development stage. The higher stages depend on achieving the lower stage skills and understandings. There can be no stage skipping. Further, with increase in stage, there is decrease in violence and corruption.

Dialectical thinking and the possibilities of its development through positional method of teaching in the Universities

Igor Shiyon, Olga Shiyon and Irina Vorobyova

Background and aim: The methodological base of our work is a cultural-historical theory of Lev Vygotsky. Central concept of this research is “dialectical thinking” (N.Veraksa) - a special type of thinking that allows to operate productively with opposites. We consider the dialectical thinking as a mechanism for creativity. Our study is devoted to the role of dialectical thinking for understanding of scientific texts, and to the possibilities of development of the dialectical thinking. The goal of this presentation is to demonstrate some empirical data related to interconnection of dialectical thinking and understanding of scientific texts, as well as to efficiency of the positional method of teaching for students for development of dialectical thinking.

Method: structural-dialectical method in psychology; diagnostics of development of dialectical mental actions. In the first study we conducted individual diagnostic test using the test procedures blank. The study involved 82 subjects. In educational experiment the subjects were divided into control and experimental groups. The initial and the final diagnosis was carried out with the help of testing, intervention - in the form of specially organized seminars. This part of the study involved 55 students.

Key conceptual points and results: This research revealed significant correlation ($p=0,37$; $P < 0,05$) between the ability of students to understand dialectical structures within scientific content and the level of development of creative (dialectical) thinking. It means that development of dialectical mental actions is important for comprehension of scientific texts.

In the framework of our educational experiment we studied the possibilities of development of dialectical thinking through positional teaching (Shiyon, Shiyon). Positional teaching helps students to acquire such means of understanding of scientific texts as concept, thesis, scheme, symbol, etc. It is important that the mastery of the cultural means takes place in collaboration and discussion with fellow students and teacher. Research results demonstrated significant difference existing in the levels of development of dialectical thinking in the experimental group before and after the intervention ($P < 0,05$) and no significant difference in the control group ($P < 0,05$).

Discussion and Implications: This study contributes to the description of dialectical thinking as one of the mechanisms of understanding of scientific texts. Furthermore, it allows to make a conclusion about efficiency of positional teaching for development of dialectical thinking of University students.

Training in dialectical thinking to support adult development

Nick Shannon and Bruno Frischherz

Background and Aim: We work with business students and managers to help them expand their exploration of complex problems by giving them “tools for thinking”. The conscious application of tools for thinking is a form of “meta-thinking” which involves individual reflection on a person’s own thinking processes and modification of such processes.

Method/Approach: We define dialectical thinking in terms of the structure of thought (in contrast to its content) by reference to Michael Basseches’ thought form schema as refined by Otto Laske in his Dialectical Thought Form Framework (DTF). Our approach involves the teaching of methods for the qualitative analysis of interviews and texts, dialogical enquiry into the structure of peoples’ thinking, and reflection on an individual’s use of thought forms.

Results / Key conceptual points: The design and delivery of our dialectical thinking workshop facilitates adult development by teaching students and clients to reflect on their thinking, see limitations, and expand their use of thought forms in three stages:

1. Identifying thought forms
2. Using thought forms in dialogue
3. Reflecting on thought forms

We will present the structure of the workshop, examples of the thought forms, some of the thinking experiments and discuss observations about their impact on participants.

Discussion and implementations: We will bring forward our lessons learned and discuss the contents and didactics of the workshop as well as methods for assessing the outcomes. We will also outline future directions of our work to foster meta-thinking in our students and clients.

Interactive Session – Training in Dialectical Thinknig

N Shannon and B Frischherz

This session will engage participants in up to three forms of exercise that the presenters use to help adults acquire tools for dialectical thinking. The exercises, which may be performed singly, in pairs or in small groups, involve identifying thought form classes and individual thought forms; reflecting on one’s personal use of thought forms, and applying the thought forms in “mind opening” dialogues, for example in developmental coaching. Exercises at three levels of increasing complexity will be illustrated.

Multifaceted wisdom: Different research traditions, same phenomenon?

Eeva Kallio

Background and Aim: The study of wisdom overlaps with adult cognitive developmental research. Originally philosophical concept, it has raised strong interest during late decades in sciences. Currently there exist many research traditions in the field. Major question is how these various approaches can be understood in broader scope and if some major component(s) can be separated.

Theoretical approach: Presentation is firstly a *description* of current field of wisdom research: how wisdom is defined by different scholars. Secondly, *conceptual analysis and clarification* is used to demonstrate how the term is defined, and the connections, similarities and differences between definitions. Theoretical approach of this paper is holistic as it reflects “family” of models, and tries to analyze them on meta-level.

Key conceptual points: Some major schools of wisdom are discussed. E.g. for Erikson wisdom meant to understand life’s limits, acceptance of one’s life, and mature ego integrity. Wisdom as trait of personality is prominent in the later models, as with Sternberg and Baltes. The “postformal” (relativistic-dialectical, integrative) adult thinking is understood a cognitive sub-component of wisdom (contextualism, relativism of values, recognition and management of uncertainty, complex problem solving, tolerance of ambiguity, and dialectical thinking). Ardelt has created a three-dimensional model of wisdom. She defines it as an integration of cognitive, reflective, and compassionate personality characteristics. Grossmann et al. are interested of wisdom as holistic social-psychological phenomenon in human behavior in general, plus as cross-culturally understood phenomenon.

Discussion and Implications: Wisdom is seen mainly as personality trait and/or cognitive maturation, but also as self-transcendence, ego- and emotional maturity. Certain claims of essence of wisdom are common to several models, but also differences exist. Meta-theoretical analysis of different models is needed urgently.

Yin yang philosophy, wisdom and dialectical thinking

Oliver C. Robinson

Background and aims: The theory of yin and yang, which is embedded in the philosophy of Taoism, has defined the Chinese worldview for thousands of years. It encapsulates dialectical thinking in many ways, and so provides an important historical precursor to dialectical thinking in relation to adult development. It also defines wisdom in terms of dialectical balance, and so makes an important conceptual link between dialectics and wisdom. The aim of this talk is to describe the dialectical tenets of yin-yang philosophy, and how it relates to findings from a recent cross-cultural research study on the subject of admiration.

Approach to theoretical analysis: The account of yin-yang philosophy and its dialectical emphasis will in large part be taken from the philosophy journal article “Chinese Dialectical Thinking—the Yin Yang Model” by Xinyan (2013). The themes from Xinyan’s paper will be conceptually related to the recent study by Robinson et al. (2015).

Results: In the Robinson et al. (2015) study, young adults from China, Russia, Iran and the UK were asked to describe someone they admire. In Russia, Iran and the UK, participants described a person using a series of positive attributes and characteristics. In contrast, Chinese participants referred to a *mix of positive and negative* qualities. This finding reflects the yin-yang approach that an optimal state is to be a balance of both sides of a polarity. Admirable people in China show a realistic integration of strengths and limitations.

Discussion: In psychology, positive outcomes are generally considered as linear, non-dialectical variables. For example positive development is construed as *more* positive affect, *more* complexity, *more* health, or more of anything. This fits with our linear model statistics. In contrast, Chinese philosophy sees a middle-way between extremes as the optimal path. Interestingly, this same approach to dialectical balance was at the heart of Erik Erikson’s work. It has implications for how we go about doing psychology and what we consider to be positive development.

Wisdom, ethnic identity, and perceived life satisfaction among immigrant emerging adults

Melanie Munroe, Michel Ferrari and Divya Sharma

Background and Aim: The current study examined the relationship between culture, identity, and wisdom in immigrant emerging adults. It aims to assess whether ethnic identity might play a role in one's understanding of wisdom. In addition, this study aims to assess the relationship between wisdom and perceived life satisfaction across two different cultures (i.e., Canadian and Indian).

Method: Participants were 123 emerging adults (56.1% female) from Canada ($n = 50$, 50% female), India ($n = 30$, 51.7% female), and immigrants from India to Canada ($n = 44$, 65.9% female) who ranged from 18 to 30 years of age ($M_{age} = 23.35$, $SD = 2.80$). Participants completed self-report questionnaires on wisdom, ethnic identity, and perceived life satisfaction.

Results: Pearson correlations, split by group, and a MANOVA were conducted using group (i.e., Canadian, Indian immigrant, or Indian) to predict wisdom. Frequencies were used to determine the percentage of participants that fell into each ethnic identity status. ANOVAs were also conducted using group membership (Canadian, Indian immigrant, and Indian) and wisdom as the predictor variables and perceived life satisfaction as the dependent variable to determine whether wisdom and group membership interact to predict perceived life satisfaction. Results showed that all three groups differed in their understanding of wisdom and immigrant participants typically reported achieved identity status for their Canadian or Indian identities. In addition, group membership and wisdom did not interact to predict perceived life satisfaction.

Discussion and Implications: These findings suggest that Canadians, Indians, and Indian immigrants differ in their conception of wisdom, but do not differ in how wisdom affects their perceived life satisfaction. This study has significant implications for successful development during the immigration experience in emerging adulthood.

Fostering young adult growth toward self-authorship: Analysis of a weekend retreat experience

Daryl Dugas, Jeron Shelton and Bobbi Jean Geosling

Background and Aim: Growth toward self-authorship—reliance on internal resources for intra- and interpersonal growth and understanding (Baxter Magolda, Abes, & Torres, 2009)—is typically minimal during college and attained only by a small percentage of the adult population (Kegan, 1994). This is consistent with findings that the transition to adulthood in industrialized countries has become delayed in recent decades (Arnett, 2004). This proposal describes the impact of a retreat experience developed to support college students' growth toward self-authorship.

Method: Six undergraduate students attended a three day retreat designed to guide development toward self-authorship, including work on identity and understanding of relationships. The retreat was structured around a combination of small group meetings, where interactions were based on best practices in group processes and dynamics, informal group activities such as cooking meals and going on walks, and individual exercises and reflection. Participants described the retreat as a transformative experience (Mezirow, 2000), and interview data was collected to determine which retreat characteristics contributed to positive development toward adulthood. Narrative-based interviews conducted within two weeks following the retreat explored participants' significant experiences on the retreat. Interviews were coded for features that participants felt to be most impactful to their growth toward self-authorship.

Results: Participants described three impactful features of the retreat. *Experiencing their own and others' emotions in a new way* led to new understandings of intrapersonal and interpersonal processes. Open sharing of emotions was also key in promoting trust, creating space for the other impactful features. *Being put into uncomfortable situations* was described by participants as awkward but necessary, a push to see themselves in a new way. *Having their way of seeing themselves directly challenged* assisted participants in "stepping out" of their life story and taking it as an object for examination.

Discussion and Implications: Self-authorship has become increasingly necessary for individuals to meet the demands of life in modern societies (Kegan 1994, 2000). The outcomes of this retreat demonstrate that it is both possible to provide guidance in the transition toward adulthood and self-authorship, and necessary, since these shifts cannot occur without the appropriate social and cultural support (Côté, 2000). Future work will explore the long-term impact of this retreat and ways to engage college faculty in providing these types of supports to a broader population of students.

University of the Third Age: Seminars for adult development and professional learning

Zsuzsa Kovács and Orsolya Kereszty

Background and Aim: Along the very successful lectures on University of the Third Age hold by Eötvös Loránd University (Budapest), we have decided to develop a series of seminars that provide more active and participatory learning opportunities for elderly people. The seminars took place every second week in four groups. Two dimensions of adult learning emerged in this pilot programme: (1) the continuous support of positive adult development through engaging elderly people in active learning, and (2) also the professional learning processes of young, early stage university students and teachers who instruct these seminars. As a basis of the seminars we started to research the whole process based on the following research questions:

- a. How can we describe the learning processes of educators and participants?
- b. What are the experiences and findings from the seminars which could be used later as efficient methodological standpoints for supporting positive adult development?

Method: In our research we used semi-structured interviews, prompt feedback after every seminar to explore participants learning experiences and reflective journals and semi-structured interviews with the teachers.

Results: Both teachers and participants considered this pilot programme as a challenging and interesting learning experience that should be continued. In spite of expressed fears concerning traditional teaching and learning roles elderly people welcomed and soon got familiar with the methodology based on active learning and participation. Young teachers found necessary the weekly held methodological meetings for successful completion of teaching duties and professional development.

Discussion and Implications: Considering the success of the seminars it seems necessary to enrich the topics from other disciplines and to integrate new professionals in the project. We should also track from varied aspects the learning process of the elder people and teachers in order to fully understand this form of adult development.

Love relationships and modern life

Tony Dunderfelt

Background and aim: Most love relationships in the western world are based on the equality of genders and deeply felt love towards the other person. Still the divorce rates remain high. Writers like David Deida (“The way of the superior man”, 1997) and Esther Perel (“Mating in captivity”, 2007) have recognized that the reasons behind this might be the lack of attraction in long term relationships and superficial notions of sexuality. Even if the experience of love and respect for one’s partner is sustained, the feeling of “being in love” is easily lost in the stresses of modern life.

Other prominent writers seem oblivious to the needs of passion and sexuality in modern relationships. For example in the summing up of his forty plus years of a marriage counselor Harville Hendrix and his wife Helen LaKelly Hunt list ten central points of a successful marriage. (“Making marriage simple”, 2013). Most of them – the significance of childhood, learning to argue and understanding each others personality – are essential skills for a modern relationship. But the word “*sexuality*” is mentioned only one time in the book of 190 pages. Thus they give no advice or strategies for upholding a passionate and sexually satisfying long term relationship.

That said, this presentation aims to build a new more encompassing view of modern love by analyzing three central aspects of love: 1) intimacy, 2) attraction and 3) sexuality. All three should be understood, nourished and developed in a modern long-term relationship.

Method: The presentation is based on the author’s clinical and counseling work with individuals and couples and his involvement in the Finnish media (both TV, internet, radio and print) about issues of modern love relationships. It is question of clinical observations and conclusions made by that data.

Results: The new picture of modern love relationships created by the author will be presented. Modern couples want predominantly a loving and passionate relationship based on the equality of individuals and gender. This will be presented as the 2nd phase relationship. It is a huge step from the traditional 1st phase male dominated relationship, which was the norm before the modern times. A 3rd phase relationship model is presented, that incorporates the freedom and dignity of each person together with the conscious cultivation of intimacy, attraction and sexuality.

Discussion and implication: Love relationships and marriage (-s) are central areas of adult life and development. Many commonly held assumptions about love and traditional forms of marriage are being questioned in today’s modern society. Even if we live in the times of individual freedom, some people tend to have (usually unconsciously) traditional expectations about love and relationships. Also marriage counselling and philosophy of love follows well-trodden paths, at least in Finland. The clarification of the concepts of love, relationships and the viewpoints of masculine and feminine roles and psychological experiences are presented as preliminary and theoretical starting points for further idiographic studies.

Chair: Oliver Robinson.

Adult Development and Social Change

In our global era in which the destructive potential in humans' relationships with our planet and in our conflicts with one another are more vividly seen than ever, we can no longer see adult development, and the capacity to cope with intersystemic complexity, as a luxury to be enjoyed by the privileged few. Capacities for conceptual organization and emotional regulation must become widespread to limit this destructive potential. And yet, there is evidence for a 'dumbing down' of content and complexity in the media, education and politics, represented by the appeal of media organized around simple positions or clusters of attitudes as well as by some populist politicians. The effects of this oversimplification of complexity is amplified by smart technology introduced to tailor information to personal interests, which has the side effect of reinforcing existing perspectives on issues because contradictory information is filtered out. There is clearly a danger of collective fixation in lower stages of development in the current societal and political atmosphere.

In this discussion, keynote speaker Michael Basseches will briefly present his views of the implications of a dialectical thinking model for conceptualizing and addressing these challenges. Following this, there will be a facilitated panel discussion with questions and comments from the floor about these issues.
