

Editorial

Notes from the Editors of the International Journal of Developmental Science

“Hey! Ho! Let’s Go”

The Ramones

Welcome to the International Journal of Developmental Science (IJDS)!

As you may have already learned from the editorial of Issue 1/2, volume 5 (Scheithauer, Ittel, Malti, & Molenaar, 2011): The International Journal of Developmental Science formerly published as the European Journal of Developmental Science (EJDS) will reach an international audience more effectively working with the internationally established publisher AKA (internationally represented by IOS Press). The journal’s aim is to present the state of the art of research in the realm of developmental science conducted in multiple disciplines worldwide.

My co-editors and I are delighted to present the official “Inaugural Issue” of the IJDS which includes a collection of short essay reviews about the merits of developmental science from some of the most renowned developmental scientist in the field. As the field of developmental science has flourished in recent decades, the research is rapidly transforming our conception of human development. The IJDS will provide a platform for diverse forms of studies dealing with biopsychosocial mechanisms of change, human development, and psychopathology. Accordingly, we sent out a call for

papers to all of the Scientific Advisory Board members asking them to contribute a short essay review to this issue in which they present their own take on the field of developmental science and its future to you, our readers.

Our call resulted in 16 wonderful peer-reviewed essay reviews. All of them were thematically assembled: The first six essays deal with issues related to the interdisciplinary character of developmental science, and the importance of developmental science for the respective psychological or non-psychological (sub)discipline. Tomáš Paus (2012) describes new ideas on the relationship of developmental science, population neuroscience and the merging of genetics and epidemiology with neuroscience. Population neuroscience collects detailed information about an individual’s envirome, genome, epigenome, and (brain) phenome simultaneously in a large population-based sample. A central question is: “What is shaping our brains? This is a question for this century, one to be answered by pulling together the complementary strengths of genetics (genome), epidemiology (envirome), and neuroscience (phenome)” (p. 1). Alison Pike (2012) describes in her essay that many topics of interest to developmental scientists are informed by behavioural genetic findings and their implications. After having provided a brief introduction to behavioural genetic theory and methods, she illustrates how our assumptions about the role of families on developmental outcomes change, using examples from research on general cognitive ability (IQ) and children’s self-concepts. Werner Greve (2012) argues that although evolutionary perspectives have taken center stage of mainstream psychology for more than two

decades, developmental psychology still is a rather minor player in main stream evolutionary psychology. He illustrates the importance of evolutionary theory for developmental science – and vice versa. Related to this line of thought, Katja Liebal and Daniel Haun (2012) argue that integrating a comparative and developmental perspective can provide additional answers to central and elusive questions about human behavior in general and its development in particular: “What are the heritable predispositions of the human mind? What cognitive traits are uniquely human? Hence the growing difference between humans and other great apes across the human lifespan might build on an early head start based on superior social cognitive skills that allow privileged access to information provided by others. Thus, Comparative Psychology offers a methodological approach to take a more differentiated, more critical and historical perspective on the species-typical aspects of human development” (p. 1). Heidi Keller (2012) argues in her essay that a general understanding of human development needs a unified framework based on evolutionary theorizing, as well as cross-cultural and cultural anthropological approaches. In his essay reviewing the state-of-the-art of what we define as developmental science, Richard M. Lerner (2012) reviews historical roots of developmental science and its current foci. He also underlines the importance of “relational developmental systems models that emphasize that change across life occurs through mutually-regulative relations between individuals and their context” (p. 1).

In the next four essay reviews, methodological and conceptual issues of developmental science are discussed – either from a macro or a micro perspective. Arnold Sameroff (2012) discusses issues related to the prediction of behaviour. He argues from a macro perspective that prior emphases on deterministic predictions based on continuities in biological or psychological traits have given way to multivariate and multilevel probabilistic estimates based on environmental transactions at every level. “Continuity is now seen as an epiphenomenon of stable organism-environment relations. The study of discontinuities between levels over time provides the foundation for designing interventions to improve life trajectories by changing organism-environment relations” (p. 1). Lars R. Bergman (2012) votes for an individual (person-oriented) approach, that is, developmental science should be concerned with the understanding of the individual development, rather than developmental processes at the group level: “It is the individual and not the variable that develops” (p. 1). He prefers a shared

general theoretical framework in which the individual is regarded as a “functioning whole”: A systems approach. Peter C.M. Molenaar (2012), who has recently joined the editorial team of the IJDS, introduces himself to the readership of the IJDS by describing some high points in his scientific career. In accord with Bergman, he explains that developmental processes are non-ergodic, and thus, their analysis should be based on intra-individual variation (time series analysis). He describes the merits of multivariate time series in replicated time series designs and developmental systems theory for studies in developmental science: “These (...) will push Developmental Science to the next level and will help create new fields of application in which we can start thinking about optimizing developmental processes in real time under normal living conditions” (p. 4). Finally, taking a micro perspective, Christiane Lange-Küttner (2012) introduces the reader to the merits of reaction time analysis, which are still rarely reported in developmental psychology. This is surprising, given that they are an indicator of the neural maturity of children’s information processing system.

A third block of six essay reviews is devoted to the importance of developmental science for several of the psychological subdisciplines and vice versa. William M. Bukowski, Karen Li, Melanie Dirks, and Thérèse Bouffard (2012) introduce their conceptualization of developmental science by discussing the contingencies of successful developmental outcomes throughout adolescence. The authors propose that “careful distinctions need to be made between the life span approach (i.e., research focused on processes within one moment of the life course) and the life history approach (i.e., understanding stability and change across part of the life course)” (p. 1). Rainer K. Silbereisen (2012) introduces in his essay a model linking social changes at the macro level with individual development at the micro level. The model is illustrated by examples of German unification and the globalization of economy that followed as a case in point for social changes that have affected the lives of many. Monika Keller (2012) reviews about the past 50 years of research on moral development. She describes basic aspects of different approaches and a paradigm shift, also in light of moral developmental science. Peter K. Smith and Alice P. Jones (2012) summarize results emphasizing the importance of developmental science for studies in bullying and victimization. In their essay, the authors vote for a developmental science perspective on to this area of research. Susanne Wurm, Jochen P. Ziegelmann, and Clemens Tesch-Römer (2012) provide a review of research

findings to emphasize the importance of developmental science for ageing research. In their review, the authors show that our societal and individual beliefs about aging can have an influence on the aging process, conceptualizing old age as a result of a lifelong aging process (life-span developmental approach) that can be influenced by individual action. Elena L. Grigorenko (2012) argues that there is a lack of studies on the combined analyses of the changes behavior interventions introduce within and across specific developmental changes. In her essay she differentiates between Change with a capital “C” and change with a small “c”: “Change,” for a developmental change, driven by developmental processes; “change,” for a change triggered by an intervention, such as psychotherapeutic intervention. She summarizes, referring to the literature on child behaviour therapy (CBT), that “there is no empirically-based understanding (unless it is well hidden) of how CBT-imposed change is related to or nested within any developmental Change. In other words, it is largely unknown how therapy-triggered change impacts development and its inherent Change, and how particular specifics of developmental pathways circumscribe and contextualize therapeutic change” (p. 3).

In summary, we hope that this inaugural issue – bringing together the ideas of some of the most creative scientists in the field – will inspire your thinking and you work in the future. We also hope that you will use the IJDS as an outlet for your future work in the field of developmental science and we are looking forward to hearing from you in the near future.

The Editors of the International Journal of
Developmental Science,
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