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NEW AVENUES FOR DEVELOPMENTAL SCIENCE AND ITS APPLICATION

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Introduction to New Avenues for Developmental Science and its Application

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Policymakers reiterate the significance of research focusing on global issues in order to better understand their far-reaching impact on human development. This special section of the Bulletin concentrates on issues of global relevance around three major topics. These areas, which will be even more important in developmental science in the near future, are trauma, migration, and climate. Setting the stage with an introduction and brief overview of the topics covered by Marcel A.G. van Aken, we present these contributions written by members of ISSBD, on behalf of the society, for the International Consortium of Developmental Science Societies (ICDSS). Suman Verma, Jeanette Lawrence, and Ann Sanson are the first authors for these articles. The contributions aim at providing useful frameworks for future research directions and policymaking.

We have an informative submission from Macedonia in our Country Focus section highlighting the scope of Macedonian research on cognitive vulnerability to depression in the developmental period of adolescence. In a prior communication, the author of the paper particularly emphasized focusing on this area, given the current state of social and political unrest in the Republic of Macedonia and the rising incidence of depression and anxiety among the adolescents there.

This issue of the Bulletin publishes two fascinating special reports on ISSBD workshops over the years and their long-term impact. The first one (Serpell, Nsamenang, Verma, and Petersen) presents an impact evaluation of ISSBD regional workshops held in Africa from 1992 to 2015 and showcases the enriching contribution made by these workshops in varied areas including capacity building. The second report (Santo and Cunha) looks back at the ISSBD regional workshop held in Brazil in 2007 and gives a memorable account of the significance of the workshop in guiding career paths of the participants and advancing their professional and personal development.

We hope the members find this issue of the Bulletin diverse in its content yet relevant and representative of the current global scenario. We are also optimistic that the workshop reports, highlighting their long-term impact and collaborations, serve to inform our readership regarding their importance and encourage greater participation in the future. Please do let us know your viewpoints and suggestions on areas needing more focus for the forthcoming issues of the Bulletin.

Introduction to three contributions for the International Consortium of Developmental Science Societies

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In this section of the ISSBD Bulletin, you will find three contributions, written by ISSBD members to the International Consortium of Developmental Science Societies (ICDSS). This consortium was initiated in 2012 among several founding societies in the area of developmental science, and ISSBD was one of them. The goals of this consortium are to facilitate collaborative developmental research across topics and age groups, to share lessons learned on the management of developmental science societies, and to assemble and disseminate research of relevance for global policy. With this last goal in mind, a consensus conference was held in Utrecht, on February 24-25, 2017.

As preparation for this consensus conference, the participating societies were invited to give input on three topics that were chosen as the focus of efforts to develop collaborative research and policy recommendations on: disasters/trauma, immigration/migration, and sustainability (including global climate change). Also, the ISSBD membership was asked to contribute to these three topics. This resulted in the three extensive and highly interesting papers in this section of the Bulletin.

In the first contribution, on optimizing development following disasters and traumas, Suman Verma and Catherine Cooper describe a set of conceptual frameworks and key studies and findings from these frameworks. They show how to mitigate the costs of disasters and traumas and help to optimize development afterwards. They present evidence that the costs of disasters and traumas are often generalized across domains of functioning, but also that promising interventions exist, and should be examined further.

In the second contribution, on a developmental science approach to migration, Jeanette Lawrence, Colette Daiute, and Marilza De Souza describe migration as a developmental issue, since large numbers of people under the age of 18 are involved, and their development can be seriously impeded. This analysis of migration and its consequences, both for migrants and for their host communities, is therefore fundamental for policymaking in this field. In addition, the authors call for broader units of analysis. Migration affects global systems, and therefore a developmental science is needed that accounts for change at multiple levels.

In the third contribution, on the role of developmental science in responding to the climate crisis, Ann Sanson addresses the imperative to prevent or mitigate climate change. She describes the interplay between the (changing) environment and individual development, adaptation and action, and the danger of discounting or ignoring the need for urgent action. Sanson also suggests ways to buffer children against the negative consequences of climate change.

Sanson nicely illustrates how the three topics of disasters/trauma, immigration/migration, and sustainability are intertwined: Global climate change will lead to more frequent and serious natural disasters, forcing large numbers of people to migrate to safer areas. She says that, for all three topics, emphasis on the person and the environment as mutually acting forces is important, as are interdisciplinary research and resiliency-enhancing interventions.

It becomes clear from these three excellent papers that developmental scientists can advance policy discussions on the pressing issues that the world faces. The contribution by ISSBD-member Ann Sanson on developmental science's role in responding to the climate crisis was picked by the organization of the consensus conference to be presented. It led to a lively and interesting discussion among those present. Similar discussions regarding trauma and immigration took place. At the moment, for all three topics, summaries of policy statements, briefs for the general public, and/or research agendas are being written by the participants of the consensus conference. In addition, the secretariat of the ICDSS is thinking about additional topics to be addressed, so that the voice of developmental science will be heard on global policy.

Optimizing Development Following Disasters and Traumatic Experiences among Children, Adolescents, and Adults: Useful Frameworks and Promising Research Directions

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Researchers define *disasters* as mass events of natural origin, including tsunamis, earthquakes, hurricanes, fires, floods, and drought, as well as those of human origin, including terrorism, war, and genocide. Interdisciplinary research traces the nature and impact of *traumatic experiences* across intersecting levels of analysis: individual, relationship, community, cultural group, and global. This overview considers how building on a set of conceptual frameworks, key studies and findings, and methodological advances can help prevent and mitigate costs of global disasters and traumatic experiences and optimize developmental pathways for children, adolescents, and adults worldwide.

Useful Conceptual Frameworks

Several frameworks offer complementary strengths for this interdisciplinary and international challenge for research, practice, and policy, with advances emerging from aligning frameworks. Three productive tensions have emerged: a) goals of universal theoretical models vs. addressing variations in the lived realities of particular disasters as well as in national and international infrastructures, cultural communities, NGOs (non-governmental organizations), families, and individual children, adolescents, adults, and elders; b) needs for standardized measures vs. engaging collaboration of children, adolescents, adults, and elders within and across cultural communities; and c) building translational research through feedback from programs and policies to strengthen theories and research.

Risk and resilience theories (Masten, 2014; Masten & Narayan, 2012) have traced how resilience arises from normative functions of *human adaptational systems*, with the greatest threats compromising these protective systems (Lerner et al., 2013). We note the usefulness of this framework and research for illuminating effects of natural and human-made disasters, particularly on dose effects, mediators and moderators, and individual and contextual differences in risk and resilience among children and youth, as well as biological responses to extreme stress.

Perceived coping self-efficacy. Social Cognitive Theory (Benight & Bandura, 2004) has been useful in assessing the role of *perceived-coping self-efficacy* in recovery from traumatic experiences. Studies across a range of traumas support the centrality of enabling and protective functions of belief in one's capacity to exercise some measure of control over traumatic adversity. This framework is consistent with several individual and group intervention approaches described below.

Children's meaning making. Refugees' multinational and bidirectional identity pathways challenge one-way models of immigrant acculturation, although acculturation was found to predict resilience among the Qiang after the 2008 Chinese earthquake (Han, Berry, Gui, & Zheng, 2015). To address this gap, Goodnow (2014) integrated research on the *interplay of children's meaning making with family, school, cultural, and policy contexts* for the growing numbers of refugees, asylum seekers, and displaced children (in 2015, the UNHCR reported that forcibly displaced people exceeded 60 million). Their experiences include upheavals and violence and time in detention centers, refugee camps in "transitional" countries, illegal status, and further expulsions. Children are separated from families, travel unaccompanied, and face bureaucratic obstacles forcing them to return to violent settings or become stateless. Key findings focus on age and gender patterns, costs of disrupted schooling, and how ethnic/cultural and school identity pathways reflect capital, alienation, and challenges with brokers and gatekeepers (Cooper, 2011). Further work is needed on policy-imposed social categories; "second chances" identity pathways; reunions after family separation; family-, school-, and narrative-based interventions for children's preparation for and recovery from negative experiences; transcending children's reticence about their experiences (Brough & Otieno-Hongo, 2010); and insights from prior waves of refugees.

The Ambiguous Loss Framework (Boss, 2009) has stimulated research involving traumatic experiences of war refugees and those affected by immigration policies and deportation. The Lost Boys of Sudan, who were separated from families by civil war and lived in Ethiopia, Kenya, and the U.S., were interviewed about their separation from their

parents, experiences of ambiguous loss, and coping strategies they used when they did not know if other family members were dead or alive. All reported the importance of emotion- and problem-focused coping strategies, support from peers and elders while they lived in refugee camps, psychological presence of parents who were physically absent, and hope for parental reunions for their long-term educational resilience and college pathways (Luster, Qin, Bates, Johnson, &Rana, 2009; Rana, Qin, Bates, Luster,& Saltarelli, 2011).

Key Topics and Studies

We now highlight key topics and studies on the nature, determinants, process, and means of coping with disasters and traumatic experiences of diverse forms. These studies provide evidence that posttraumatic reactions are often generalized across domains of functioning; that recurring reactions can seriously impair child, adolescent, adult, family, community, and occupational functioning; and that promising individual and community-level interventions—with culture-sensitive implementation—merit further investigation (Benight & Bandura, 2004).

In **resiliency research,** studies of protective strategies for children and youth that promote resilience are advancing, with further insights needed on how different types of disasters affect children and families; how disasters affect children of different ages, experiences, cultures, and contexts; and how exposure to disasters affects developmental pathways. Amidst evidence of effective clinical interventions, studies are needed to follow up on evidence of the importance of schooling and academic resiliency for the future orientation of children, families, and communities (Perez, Espinoza, Ramos, Coronado, & Cortes, 2009; Sagi-Schwartz, Seginer, & Abdeen, 2008; Verma, 1999). In non-school settings, child work, especially on the streets, results in varied forms of traumatic experiences such as sexual exploitation, trafficking, and other illicit activities. Compared to boys, girls report higher scores on depression and mental health problems, are more likely to internalize violence, and are at greater risk of continuous abuse (Sharma & Verma, 2013). Resiliency-enhancing interventions, with opportunities to engage in productive work, can serve as buffers for street and working adolescents (Verma, Sta. Maria, & Morojele, 2011). Interdisciplinary studies, with multiple-level perspectives on resiliency and preventive intervention (Masten, 2015), can help address complex patterns of risk and trauma.

Research on the **psychology of terrorism** ranges from first response to basic science, from epidemiological to cross-cultural to case studies, and from controlled clinical trials to rigorous qualitative methodologies. Bonger (2007) suggests that long-term impacts of the use or threat of weapons of mass destruction (WMD) are difficult to predict. Current disaster experts have no models for predicting long-term needs for psychological assessment or treatments. Devilly and Cotton (2004) conclude that no randomized clinical trials of ***Critical Incident Stress Debriefing*** (CISD) demonstrate its efficacy as an intervention. Key topics for further research include: risk assessment, perception, and communication; individual, social, and group dynamics in disasters; decision-making dynamics in crisis and stress management; and the sense of security as a psychological asset. Intervention research more often addresses individual psychopathological responses rather than strategies for community and nation-level stress reactions and resiliency mechanisms; this gap has resulted in missed opportunities for building individual coping, social support, and community cohesion among diverse groups (Flynn, 2004).

The current refugee influx in many EU countries presents urgent challenges. For example, regarding refugees in Germany, despite well-organized health systems, youth services, and volunteer networks, few professionals working with refugees are trained in diagnostics (e.g., PTSD) or therapy (e.g., Cognitive Behavioral Therapy). Professional development, implementing effective diagnostic and treatment tools, and sharing good practices in refugee centers are urgently needed. For example, Akoury-Diyani, Sahakian, Hassan, Hajjar, and Asmar (2015) reported pre/post-test data on *Psychological First Aid* (PSA) training of NGO staff serving Syrian refugee communities in Lebanon.

Studies of perceived coping self–efficacy, drawing on Social Cognitive Theory (Benight & Bandura, 2004), have clarified its role in mediating posttraumatic recovery across diverse types of disasters and trauma. Consistent with this research, Dalgleish (2004) reviewed studies of factors precipitating PTSD and variation in PTSD with equivalent exposure to trauma and concluded that PTSD reflects three aspects of cognitive representation: a) associative networks in which prior stressors activate memories and rehearsed cognitive pathways; b) verbal representations through which events are processed; and c) beliefs about oneself and others that lead either to feeling helpless and hopeless or to self–efficacy and coping. The range of risk factors identified for PTSD includes developmental, familial, situational, and genetic factors (Brewin, Andrews, & Valentine, 2000; Ozer, Best, Lipsey, & Weiss, 2003). Two key findings justifying further research are that only some exposed to trauma develop short-term symptoms, and that only a minority of those with acute symptoms develop chronic and severe PTSD.

Challenges for developing countries. A large body of research examines how families and households in developing countries cope with disasters and aggregate shocks (Skoufias, 2003). The poor suffer disproportionately because missing credit and formal insurance markets limit their ability to smooth aggregate shocks. Informal risk-coping strategies break down when all members of a risk-sharing group are affected (Morduch, 1999). Consequently, transient shocks can have permanent effects by preventing families from providing their children nutrition or schooling (Ferreira & Norbert, 2009; Maccini & Dean, 2009) or repurchasing productive assets, such as livestock, that are sold to smooth consumption (Carter, Peter, Tewodaj, & Workneh, 2007). Initiatives in developing countries are exemplified by the collaboration of the United Nations Development Program (UNDP) and the Government of India in launching the Disaster Risk Management Program, which galvanized policymakers, service-providers, civil society representatives, NGO's, and the most-affected community members. An estimated 30 million people in disaster-prone regions of India are working to achieve the program objective of sustainable reduction in disaster risk in India's most hazard-prone districts. Ongoing interventions include awareness-raising programs, training communities

and volunteers, human capacity building of people, and regular mock drills (UNDP India, 2008).

Mental health policies and programs. Post-conflict/disaster recovery and development require support from strong and adequately resourced commitment to policy and programs addressing identified child, family, and community needs. Reviewing frameworks and effective strategies for mental health policy and programs, Raphael (2004) argues that beyond infrastructure funding and workforce development, policies should focus on mental health impacts in conflict-affected societies and those damaged by other complex emergencies. In the immediate post-disaster phase, evidence indicates children and families benefit from community-wide ***Psychological First Aid*** (PFA) programs bolstering family and social support, providing news and information, and returning them to normal roles and routines (Akoury-Dirany et al., 2015). Basic knowledge is needed about appropriate treatments and interventions supporting psychological and social resilience in children and families, with evidence of the importance of early intervention. For children and adolescents with persisting posttraumatic symptoms, early and focused ***Cognitive Behavioral Therapy*** approaches (CBT) have the strongest evidence for reducing such symptoms (Balaban, 2004). Although some reviews advise against psychotherapy approaches (such as CBT) without signs of individual psychopathology, and worry PFA lacks clear randomized clinical trials evidence and is implemented in different ways, CBT is still advised, with culture-sensitive implementation (Dieltjens, Moonens, Van Praet, De Buck, & Vandekerckhove, 2014; Fox et al., 2012).

NGO (Non-Governmental Organization) models. The Movement for Global Mental Health (www.globalmentalhealth.org) is a network of individuals and organizations seeking to improve services for people with mental health problems and psychosocial disabilities worldwide, especially in middle- and low-income countries, where effective services are often scarce. Principles of scientific evidence and human rights are fundamental to this work (Comellas et al., 2014; Makhashvili et al., 2015; Patel et al., 2007).

Social impact analysis of disasters. A World Bank report (2011) reviews impacts of disasters, tools, and guidelines for post-disaster social impact analysis. It focuses on early recovery and reconstruction actors from governments, the international community, and civil society, and how disaster relief and recovery efforts affect assets, capabilities, and ability to recover across SES. Such variation is evident in how and why groups recover their livelihoods, including markets, debt and credit, and land, and how households cope with the impact of disasters, including reducing expenditures and migrating. The report highlights cultural issues and post-disaster social analyses from Myanmar and the Philippines across age groups.

Promising methods, tools, and training to assess impacts of disasters and traumatic experiences. These include:

- Designs comparing mechanisms of coping with traumatic events on child, family, and community levels with consideration of cultural factors
- For culturally sensitive research on trauma assessment and treatment, both standardized (etic) and culturally appropriate (emic) measures in regions where disasters occur
- Linking variable- and person-focused approaches
- Engaging community-based and non-governmental organizations serving refugee youth and engaging youth themselves as research partners (Lawrence et al., 2015)
- Identifying risk factors for developing PTSD and predicting good response to treatment
- Identifying and distinguishing effective and ineffective treatments
- Assessing resiliency and recovery in individuals affected by trauma
- Mapping use of social media (http://www.nytimes.com/2015/08/26/world/europe/a-21st-century-migrants-checklist-water-shelter-smartphone.html?_r=2)

In closing, we invite all readers—particularly those from the majority world—to contribute to this urgent global collaboration.

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A Developmental Science Approach to Migration

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Global movements are part of 21st century life. Migration is not a new human activity, but some features of the contemporary world have brought changes to people's global and national movements, and to what those movements mean to developing people of all ages in all regions. People migrate from one location to another in diverse ways and with diverse reasons for uprooting the family or leaving the family behind. In 2015, 244 million people were living in countries other than those in which they were born, and another 740 million were internal migrants within their own country (International Organization for Migration: IOM, 2015). Developmental scientists would be ignoring legitimate demands for up-to-date developmental analyses if we were to confine our attention to migration patterns that follow from natural disasters or human violence.

Beyond recording geographic and demographic statistics, analyses of migration trends have focused on two motivating forces: the push of homeland circumstances that prompt people to leave; and the pull of destination circumstances that encourage them to come. Violence, disaster, and extreme poverty are constantly brought to our attention in commercial and social media as major push factors of people's transitioning. Forced displacement reached its highest global level in 2015, coming on top of a steady annual rise. According to the IOM, 8.6 million people were newly displaced in 2015 alone, with large numbers leaving the Syrian/Iraqi region. Of particular concern is the large number of people under the age of 18 who are migrating on their own, being left as their parents migrate, or becoming isolated during hazardous migration journeys. An understanding of these young people's transitional and settling experiences is critical to policy and intervention decision-making, but also is sparsely available (Lawrence, Kaplan & Collard, 2016; Wernesjö, 2011).

Global movements also are motivated by pull factors of bettering one's life and the life of one's children and grandchildren. Most mobile people improve their income, educational access or personal security (Münz, 2013). People on the move toward better lives form the background of the shift to cities. Fifty-four percent of the world's population now live in urban settings, with an identifiable set of cities as preferred destinations (IOM, 2015).

Complex migration patterns also involve circular migration whereby people return to their homelands after being foreign workers or being trafficked (Solé, Sordé Martí, & Nita, 2016), or the return migration of diasporic peoples (Silbereisen, Titzmann, & Shavit, 2014). Inter-generational relations are varied and dynamically interactive in the adjustments that people make and do not make to their acculturation experiences (Goodnow & Lawrence, 2015).

Political circumstances such as civil wars, and economic circumstances such as land-grabbing by government-supported corporations, cause internal displacements within the home country. Women and children, who often are indigenous people, make up the largest percentage of internally displaced persons (UNHCR, 2010). People tend to move from rural lands where self-subsistence characterized centuries of livelihood, to crowded cities where poverty and hunger abound due to the lack of jobs and healthy sustainable modes of life.

To take one example, over several decades internal migration has significantly altered the balance of rural and urban populations in Brazil. Currently fewer than 20% of Brazilians live in rural areas, with movers to the city being younger than in the past and predominantly women. According to Zago (2016), reduced agricultural lands, low income and adverse work conditions explain the progressive migration of undergraduate university students to urban areas. Social and cultural factors contribute to the decision to move, particularly gender-related inequalities in income distribution and poor opportunities for leisure. Ferreira-Batista and Cacciamalli (2012) investigated the impact of relocation on children in São Paulo, Brazil. Children of recent migrant parents, between 10 and 14 years old and living in urban areas were more likely to work due to economic difficulties, with the high probability of child labor resulting in school dropout in single-parent families headed by women.

On the basis of a careful analysis of population movement from 1960 to 2000, Czaika and de Haas (2015) pointed out that, contrary to popular belief, global migration overall has not increased. Instead, migration is linked to changes in geography and economic shifts, and is concentrated in regional directional hubs. Migration has changed its directions, with Europe in particular being transformed from a global source of emigrants to the South, into "a global migration magnet" (p. 314).

Whether people's movements cover long or short distances, are forced or voluntary, permanent or temporary, aimed at asylum or economic stability, their migrations are significant not only for their own development, but also for the development of their children, their siblings, and their elders. Like violence (Daiute, 2016), migration casts a long shadow.

In light of the changing patterns of migration, and in the face of the changing and spreading flow-on effects of migration across population groups and within families, developmental analyses of migration continue to be fundamental to understanding contemporary life, underpinning developmental science's engagement with policy-making and sustainability goals (Goodnow & Lawrence, 2015).

As an international and interdisciplinary society of developmental scientists, ISSBD is well positioned to address migration and the multiple issues it raises for people developing in complex sociocultural worlds.

Uncertainty and Contemporary Migration

Uncertainty and unpredictability are inherent in the current migration crisis. Thousands are risking dangerous journeys across the Mediterranean Sea, or the Pacific or Indian Ocean to become strangers in new places. Local residents alarmed by the thousands of new arrivals are worried about what to do with these strangers at their doors (Bauman, 2016). Although many people in receiving communities, according to Bauman (2016, p. 2), are approaching "refugee tragedy fatigue," these mass movements will not cease.

Settled and unsettled families wonder what to do with the attitudes and behaviors of their children who may leave the new country to join ISIS, become terrorists or ultra-nationalists, go on rampages in their own localities, or shield themselves from unpleasant realities in social media and shopping. Humanitarian and security organizations, and a range of government departments and civil agencies in host countries deserve to be included in our developmental analyses. We need to investigate how sociopolitical organizations and interventions are related to the developmental changes and life trajectories of people and families from both migrant and host communities.

Neither political/structural analyses nor developmental/individual analyses in isolation provide definitive interpretations or bases for intervention and program development. We need collaborative analyses integrating macro-level and micro-level circumstances, meanings, and effects over time and situations. The focus must be global. Causes transcend local conditions, and affect those whose lives are changed as receivers as well as those whose lives are changed by the receiving. Developmental science has a proper place at the table, because developmental concerns are fundamental to human experience, and because developmental experiences are intertwined with geopolitical and sociocultural phenomena.

Developmental Science taking an Interdisciplinary Approach

ISSBD strongly endorses an interdisciplinary and intercultural approach to understanding developmental issues. There has been a shift from traditional concentration on individuals towards also considering the collective structures that either support or impede development (e.g., Daiute, 2013; 2016).

In contemporary developmental analyses, the person and the environment are considered systemically; so that macro-social and micro-individual activities are treated as mutually co-acting forces (e.g., Overton, 2015). Migration patterns cannot be divorced from the normative and exceptional experiences of developing persons from all interest groups across the whole of their lives.

Because human development foundationally is a social process, developmental inquiries should now incorporate such broader units of analysis. We need a developmental science that accounts for systems of change at multiple levels (Daiute, 2013; Overton, 2015). Migration is embedded in broader global systems and in local relationships (such as environmental circumstances, collective attitudes and values, and engaging uses of language). The dynamic quality of practice-based research designs—how displaced children and communities engage with and reflect on their circumstances—reveals potentials of human thought and action, to the extent that people's strengths, rather than their vulnerability and inability, are taken as the starting point (Daiute, editor, 2016).

Increasingly, developmental scholars focus on relations across multiple facets of human development, such as political structures, cultural groups, families and generations and the individuals who must address diverse relationships throughout. Developmental relational systems integrate theory and method (Goodnow & Lawrence, 2015; Overton, 2015), with case studies illustrating relations in activity-meaning systems across global contexts (e.g., Daiute, 2010; Daiute, 2013).

Developmentalists pride themselves on understanding children. Yet we have not always been great at listening to children's voices – nor to understanding what family movements and cultural beliefs mean to them in their own terms. Children see, attend, make inferences, and when given an enabling hand, express their views about migration (Lawrence, Kaplan & Dodds, 2015). Many developmental researchers continue to parachute methods across cultures. Many still consult parents and teachers as their primary sources. Many still isolate children's contributions to knowledge to laboratory sandboxes without accessing the systems where children are active.

Whether or not the world is engulfed in a "migration crisis," as Bauman (2016, p. 71) points out, there is "little if anything unprecedented in the social/political responses to it." People strive to become strangers, and people meet strangers with resistance or with welcome. Social structures expel strangers, put them in cages, or in fewer cases, welcome them into their schools and streets. Developmental scientists have a chance to contribute to the world's understanding of migration, and how political, educational, and familial structures can support the development of people and communities.

Hot topics

- Developing persons as agents in relational systems, engaging with social structures at diverse levels in migration and resettlement.
- Documenting patterns of cultural and linguistic meanings by which developing persons across the life-span engage with, reflect upon and change political and cultural systems in relation to migration.
- Family separations when members are in different countries, or are divided by disparate meanings and activities in acculturation.

- Resilience and relational resilience among particular groups caught up in migration and refugee trends: e.g., unaccompanied refugee minors; migrant families.
- Comparison of normative developmental experiences for children and young people with the exceptional experiences associated with migration, and refuge and asylum seeking.
- Affirmation of children's rights to participation and development of methods to support children's agency and rights in migrant, refugee, and asylum seeking situations.
- Generational differences and challenges for mainstream populations in relation to waves of migration, refuge and asylum seeking.

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Developmental Science's Role in Responding to the Climate Crisis

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"Denying climate change is stealing the future from our children"
Jane Goodall

The Climate Crisis

Climate change has been described as the dominant moral and social crisis of our time, and 2015 saw world leaders belatedly recognizing the urgent challenge that it poses. US President Obama (2015) said "We're the first generation to feel the impact of climate change and the last generation that can do something about it." The Pope in his Encyclical (Franciscus, 2015) stated that "the problem is . . . whether civilization as we know it can be extended beyond the next 100 years." The Paris Agreement, signed by leaders of 195 countries in December 2015, reflected the global acknowledgement that "climate change represents an urgent and potentially irreversible threat to human societies and the planet," noting the necessity for the widest possible cooperation by all countries in order to achieve the required deep reductions in global emissions.

Climate scientists reported that in 2015 the planet had already warmed by 1 degree Celsius since pre-industrial times, with record levels of greenhouse gas concentrations; 2016 looks set to break previous records (http://www.nasa.gov/feature/goddard/2016/climate-trends-continue-to-break-records). The effects of climate change are already evident in sea level rises forcing some island communities to relocate, changes in growing seasons, and an increased frequency and severity of extreme weather events such as hurricanes, floods, droughts, and wildfires.

Even in the best scenarios (staying below 1.5 degrees of warming), climate change will create significant changes to our environment and lifestyles, and the next generation will need to live differently–in a zero-carbon world. This has huge implications for the developed world's consumer-driven, growth-oriented economy, for how we live, travel and work; and for the nature of sustainable development in the developing world.

If we experience 1.5 degrees Celsius (C) of warming or more (as is inevitable without drastic action now), far more catastrophic changes in our lives and environment are predicted—e.g. widespread food and water shortages, more frequent and serious natural disasters, millions of climate refugees seeking new homes as a result of famine, floods, droughts or rising sea levels, the loss of many plant and animal species, and the conflicts and compounding intensifications of each of these factors as they interact with each other. Besides major effects on physical health from disease, malnutrition and disasters, Clayton, Manning, and Hodge (2014) have noted the predicted diverse and serious psychological impacts of climate change on human well-being.

Poorer countries, especially those at low latitudes and those with low elevation, are expected to bear the greatest impacts of climate change, despite the fact that they contributed least to its causes. Climate change will exacerbate the 'underlying social, economic and ecological determinants of global illness and premature death' (Costello et al., 2009).

Climate science indicates that we must rapidly move beyond fossil fuels and eliminate man-made emissions of greenhouse gases almost entirely by mid-century if we are to avoid an increase in global temperatures of 1.5 degrees C or above. While the technologies already exist to reach zero or near-zero net greenhouse gas emissions, change commensurate with the threat is currently not happening fast enough (Allen, French, Hopkinson, & James, 2015).

As Allen et al. (2015) note, changing how millions of people live is a unique problem and tackling it will require "a new kind of approach which joins up research and practice across disciplines, borders, sectors and scales." There is a clear and critical role for developmental science as part of this mix.

Psychological Factors Related to Responses to Climate Change

As noted above, the prevention of the worst effects of climate change will necessitate major changes in policies, practices and lifestyles. From a psychological point of view, activating adequate and timely responses to climate change presents unique challenges. Despite the fact that global warming from greenhouse gas emissions is one of the most certain concepts in natural science, a significant proportion of the public express serious doubts about its veracity.

There are a number of aspects of the psychology of how people perceive climate change which work against an understanding or acceptance of it (Newell & Pitman, 2010). Amongst these are:

- Distance in time: Climate change will most seriously affect coming generations; its main impact is not visible now, and immediate changes in behavior do not reward people with discernible improvement, whereas the costs of preventative action are immediate and highly visible.
- Selective use of information to draw inferences or conclusions: People often base their understanding of global warming on their everyday experience of the local weather, which is variable from day to day and year to year, rather than the long-term global climate changes.
- Framing: The way in which information is presented can affect beliefs and behavior. Carbon dioxide is a colorless, odorless gas which cannot be perceived

directly, it is not in itself a powerful toxin, it occurs naturally, and is essential to plant life. Therefore, it is hard for people to perceive human-induced increases in carbon dioxide as a serious threat.
- Effects of media representations on judgments: Despite 97% of climate scientists agreeing that climate change is real and caused by human behavior, if people hear opinions from climate change sceptics about half of the time, they may believe that there is another, equally plausible and accepted scientific viewpoint.

Understanding the psychological processes that mitigate against acceptance of climate science can lead to more effective strategies for intervention.

Despite these obstacles, the vast majority of people claim to be concerned about climate change. A large-scale survey of Australians' perceptions and understandings of climate change found that the majority do accept the scientific consensus on climate change (87%) and believe that if nothing is done, it will be a very or somewhat serious problem for Australia (78%) (Reser, Bradley, Glendon, Ellul, & Callaghan, 2012). A total of 20% of respondents expressed considerable distress about climate change. However, many people avoid, minimize, switch off, or distance themselves from effectively engaging with the problem.

A number of psychological obstacles to taking action to prevent or mitigate climate change have been identified (APA, 2011; Gifford, 2011; Marshall 2014). These include:

- Cognitive factors, including ignorance, uncertainty, optimism bias, and discounting; as an example, cognitive dissonance occurs if what we *know* (e.g. that burning fossil fuels contributes to climate change) conflicts with what we *do* (e.g. driving, flying), often leading to changes in thinking rather than behavior.
- Social comparisons and norms—e.g., we may experience social dissonance if our belief in climate change and our actions to help limit it conflict with what those in our social group believe in or do—again it is often easier to change our thinking than our behavior.
- Perceived risks of action, in terms of time, money, social, and psychological costs, which can reduce the motivation to act.
- Low self-efficacy and response efficacy—a sense of helplessness or lack of belief that the individual can do anything about the problem; and
- The disabling effects of fear and anxiety.

Social and behavioral scientists, including developmental scientists, have the skills to both study and counter these processes which act to stymy effective action to prevent or mitigate climate change.

The Role of Developmental Science

If the concern of developmental scientists is the wellbeing of future generations, it can be argued that our efforts should be directed first and foremost to helping prevent or mitigate catastrophic climate change. In addition to the general need to understand and respond to the broad-based tendency to discount or ignore the need for urgent action, there are other reasons why developmental science has a critically important contribution to make. First, the ecological or systems perspectives (e.g. Bronfenbrenner & Morris, 2006) commonly adopted by developmental scientists provide them with tools for understanding the complex interplays between a changing environment, varying cultural contexts, and individual development and adaptation.

Second, while developmental science covers the lifespan, many developmental scientists have a particular interest in children and youth; it is these groups who will be most vulnerable to the impacts of climate change, and will inherit its consequences. Developmental science has an important role to play in developing ways to buffer children against the negative consequences of changes in climate, some of which are already inevitable. It can also contribute to supporting the next generation to develop the attributes that will help them to respond and adapt to climate change.

Finally, many developmental scientists have expertise in the translation of research findings into evidence-based policies and interventions, skills that can be highly valuable in addressing the urgent and complex global challenge of climate change.

Children and Youth

Climate change dramatically disrupts some of life's basic requirements for health, i.e. water, air and food. It is clear that children and youth are likely to suffer disproportionately from its direct and indirect impacts on physical and mental health (Committee on Environmental Health, 2007; Currie & Deschenes, 2016; Sheffield & Landrigan, 2011). Indeed, climate change has been called the "greatest crisis for child health" (Waterston, 2006).

Compared with other groups, children have increased vulnerability to all the expected physical health impacts from climate change–infectious diseases, nutritional deficits, water-borne diseases, food-borne diseases, respiratory and other problems from air pollution, and heat-related health impacts. Malnutrition is expected to increase in many regions as food production falls, especially in low latitude and low altitude regions. Between 40 and 300 million people worldwide are predicted to become hungry as a result of climate change, and most of these will be children. Children in low-resource settings are predicted to be particularly vulnerable to all these effects (Currie & Deschenes, 2016).

Ecological and systems perspectives on development stress that children are nested within families, and hence much of the impact of climate change on children (especially young children) will be mediated by its impact on parents and families. For example, research on children exposed to societal violence has shown that its impact depends in large part on their family's reactions to the violence (Garbarino, 1993). Similarly, it can be predicted that impacts on children's wellbeing following exposure to extreme weather events or natural disasters will be mediated by the effect of such events on parental emotional and social wellbeing, as well as by the family's functioning, economic status and structure. Extreme events often place stress on family relationships and parental mental health, and often cause separation from parents. The potential

impact on children can be illustrated by the consequences of Hurricane Floyd in North Carolina, where families were found to be vulnerable to higher child-abuse risk, increased parental stress and decreased social support. Rates of inflicted head injury in children under two increased five-fold after one hurricane in the US (Fritze, Blashki, Burke & Wiseman, 2008).

Supporting the Next Generation

Besides working to prevent or mitigate climate change, how can we help buffer its impacts on children and youth? For younger children, this will likely be best achieved through support in their immediate contexts of family, school and community (see below). For older children and adolescents, their own attributes become more critical. As individuals living in a zero-carbon world, young people will need to adapt to faster and more wide-ranging change than we have seen before. This suggests that the collective values and attributes they will need to survive will include highly developed capacities for adaptability, flexibility and resilience, and excellent problem-solving and conflict resolution skills. Further, the Pope's Encyclical noted the need to "reorient our attitudes toward nature and, thereby, toward ourselves," referring to non-negotiable human values—"intrinsic" or "bigger-than-self" values. Hence, of equal if not greater importance will be attributes such as empathy and compassion; tolerance and acceptance; skills for cooperation and shared action; beliefs in equality, justice and environmental protection; and strong community orientation and engagement.

These attributes resonate strongly with the model of positive development in young adulthood that has been developed in the Australian Temperament Project (ATP), a 33-year longitudinal study following a representative cohort of almost 2,500 Australians from the State of Victoria from infancy to adulthood, with 16 waves of data collection (for a summary, see Vassallo & Sanson, 2013). In addition to examining developmental pathways to numerous problem outcomes (e.g. depression, anxiety, antisocial behavior, eating problems, substance use and risky driving), the project has articulated a broad positive development framework that draws from theoretical models including developmental systems theory, developmental assets, social capital theory, and developmental psychopathology. Importantly, the model includes both *hedonia*, the Platonic notion that 'the good life' is a happy or pleasurable life, as well as *eudaimonia,* the Aristotelian view that 'the good life' is a moral life—structured by virtues such as kindness, trust, loyalty, and honesty. The ATP model includes five broad factors:

- **Social competence** includes domains such as empathy, assertiveness, responsibility, and self-control which help individuals to meet everyday functional demands, be responsible for themselves and others, and interact effectively in social relationships.
- **Life satisfaction** reflects a sense of contentment and feelings of congruency between wants or needs and accomplishments or resources.
- **Civic action and engagement** refers to the willingness of an individual to take up the role of being a citizen and their concern for the wellbeing of others, and is essential for a successful democratic society.
- **Trust and tolerance of others** (including those with different cultural backgrounds) is also central to political socialization and includes concerns about social justice, fairness and equity.
- **Trust of authorities and organizations** such as the police and courts is an important aspect of social capital.

Structural equation modeling has shown that this model is a valid way of capturing positive development in this cohort, holding up well for each age from late adolescence through the 20s (Hawkins, Letcher, Sanson, Smart, & Toumbourou, 2009; Hawkins et al., 2011). The model has some commonalities with Lerner's '6 Cs' (Lerner, Almerigi, Theokas, & Lerner, 2005)—the original 5 Cs (competence, confidence, connection, character, and caring) and the sixth C (contribution)—but is broader and more applicable to early adulthood. Eudaimonic qualities in adolescence (reflected in behaviors aimed at benefiting other individuals, the community or society) predicted better emotional health in young adulthood (Hallam et al., 2014).

Positive development in early adulthood was predicted by four broad factors from childhood through early adolescence (O'Connor et al., 2011): *self-regulation*, with roots in temperament but nurtured through responsive parenting and teaching; positive and supportive *relationships with parents, peers and teachers*; both primary and secondary *school being perceived as places of belonging and feeling valued*; and *being a contributing member of their community*, through such activities as volunteering, membership of youth groups, political awareness, and close connections with neighbors. Interestingly, many ATP participants, when adolescents, said they would be more involved in community and volunteer work if there were more opportunities to do so.

Developmental science interventions designed to help the next generation in Western countries cope better with the massive challenges of climate change could seek to promote these positive attributes. There are many possible foci for such interventions—amongst these might be: helping young people develop a sense of individual and group efficacy to nurture a sense of empowerment; encouraging volunteering and community engagement; encouraging a deep connection with nature; modeling responsible political action; and promoting a eudaimonic perspective in schools that values and promotes 'intrinsic' attributes as much as intellectual and occupational success.

However, non-Western low- and middle-income countries will bear the brunt of climate change, and this model of positive development and others like it (e.g. Lerner et al., 2005) which have emerged from research in Western high-income countries may have limited relevance and applicability in these contexts. For example, Harkness, Super, Mavridis, Barry, and Zeitlin (2013) emphasize the need for policies and programs to reflect and fit in with cultural perspectives and understandings of child development. Further, although predictors of the ATP model of positive development lie in early childhood through adolescence, its focus is on young adults. While some of its components (e.g. social competence, trust, self-regulation, and relationships) are relevant to children and adolescents, others (e.g. civic action and contributing to the community) are less so. There is a clear need for research in non-Western

countries and across a wide age range on the best ways to buffer the impacts of climate change for the next generation.

Research and Intervention Opportunities for Developmental Science

Besides the suggestions for research mentioned above, there are a number of other areas where developmental scientists could make a valuable contribution:

Responding to disasters and migration. As noted above, the likely consequences of climate change include significant increases in the number and severity of natural disasters, an increase in conflict within and across borders, and unprecedented numbers of people being forced to leave their homes. Hence the insights and recommendations in the ISSBD submissions for ICDSS on migration (Lawrence, Daiute, & De Souza, 2017, present Bulletin issue) and disasters (Verma & Cooper, 2017, present Bulletin issue) are also relevant to climate change. In particular, their emphasis on considering the person and the environment not as separate phenomena but rather as mutually acting forces is highly relevant. Similarly, their calls for resiliency-enhancing interventions and interdisciplinary studies are also relevant to climate change. The insights of other branches of psychology, such as social psychology, peace psychology and community psychology, should also be draw on.

Prevention and mitigation of climate change. In order to encourage the speedy and far-ranging changes in policies and practices that are needed to prevent the worst of climate change, developmental scientists need to work closely with other disciplines and with policy makers and practitioners. A close dialogue is needed between people who understand the science of climate change and those who understand human development in an ecological context. To support policy change and action, developmental science needs to clearly articulate the implications of climate change for human wellbeing across the globe, and work in partnership with other stakeholders to communicate this knowledge persuasively to policy-makers.

Substantive change at the scale needed will require strong leverage from individuals and communities, to support government-level policy change and its implementation. To help mobilize grassroots action, we need a deeper understanding of the psychological barriers to action on climate change and what motivates and sustains effective climate action, for different people and groups in different contexts, and this then needs to be translated into strategies and interventions to address them. For example, using a systems perspective emphasizing the complex interplays between a changing environment, cultural contexts, and individual development and adaptation, developmental scientists could help support communities to transition to zero-carbon while protecting the developmental needs of children.

Current Impact of Climate Change on Children and Youth

There is very little research on the way children and young people are currently understanding, acting on and making sense of climate change and its impacts. We know little about how it is affecting their self-efficacy and sense of the future, their fears and anxieties, nor about strategies to help them cope with these. Participatory research could examine ways that children can build their self-efficacy and hope for the future, thereby helping to protect against deleterious mental health impacts, and promoting optimism that is more likely to result in useful action. Optimism is supported by articulating the potential for a low-carbon world to be more healthful, equitable, tolerant and interconnected than the current world.

Developmental scientists are well placed to highlight to parents not only children's current fears and anxieties about climate change, but also the consequences of climate change for the wellbeing and future of their children. Parents who might otherwise think about climate change as something abstract and irrelevant for them may then be more willing to get involved with this issue. Parents and families need support and guidance in handling the negative emotions evoked by the threat of climate change. One of the most powerful ways to reduce anxiety is to take action on its sources, thus providing ideas and opportunities for family actions to ameliorate climate change may be beneficial.

Future Impact of Climate Change on Children and Youth

Despite evidence that children and young people will be particularly vulnerable to climate change, research and policy targeting the future impacts of climate change on children and young people is relatively scarce. Most modeling of the impacts of climate change does not include children, and few large and detailed data sets on child wellbeing are available, especially in developing countries. Although some projects have started to explore children's participation in planning and adaptation to climate change and natural disasters (Institute of Development Studies, 2009), policy responses to climate change have typically not been built with a child focus or a child voice. Developmental science can help to make the voices and concerns of children and young people heard.

Research on the future impacts of climate change on children's and young people's wellbeing would shed light on their specific and contextual vulnerability. Ecological and systems perspectives are highly appropriate for research on adaptation to climate change. Climate change is itself a macro-level factor, and successful adaptation to it at an individual level will be mediated through policies, processes and systems at national, institutional, community and family levels. Thus government policies and programs in areas including energy production, education, health, welfare, employment, community resources, school programs, and family functioning are amongst the many factors that may affect adaptation and can be targets for intervention.

Finally, climate change features prominently in the Sustainable Development Goals (SDGs) agreed on by the United Nations in 2015, and these may provide an effective avenue for mobilizing action on climate change (Raikes, Yoshikawa, Britto, & Iruka, in press). Developmental science has been influential in shaping the SDGs which provide a better-articulated vision for child and

youth development than previous agendas, and acknowledge that achieving a sustainable planet requires the next generation to achieve its human potential in growth, learning and development. The SDGs ask wealthy countries to fairly acknowledge their contribution to climate change, and call on them to help combat climate change and promote equity through funding for low-income countries as well as directly through their own policies and programs. Raikes, et al. (in press) note the important role of developmental scientists in working to ensure accountability for the SDGs on behalf of children and youth through: population-based measurement to inform global and national monitoring; basic research, program evaluations and longitudinal studies to inform policy development; and helping to build capacity for developmental research in low- and middle-income countries.

As Individuals

The urgency of the climate crisis calls on all of us to act. For developmental scientists there are many ways, from the personal through the professional to the political, in which we can act to help prevent catastrophic climate change, a few of which are: adopting a sustainable lifestyle ourselves; making opportunities in both our personal and professional lives to discuss the psychological consequences of climate change; and actively engaging in political advocacy. Professional associations play a role in this process; see for example the range of resources produced by the Australian Psychological Society, http://www.psychology.org.au/public-interest/environment/.

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The Scope of Macedonian Research on Cognitive Vulnerability to Depression in the Developmental Period of Adolescence

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In recent years, Macedonian psychologists and psychiatrists at Goce Delcev University, in the city of Stip, have initiated several innovative research projects. With the support of colleagues from the University of Belgrade and University Clinic of Psychiatry and Psychotherapy, Paracelsus Medical University in Nuremberg, we opened the Department of Psychiatry and Clinical Psychology in Stip (including the Psychological Laboratory), focused on research in mental health.

Diathesis Stress Models of Cognitive Vulnerability

Developmental psychopathology, especially in clinical settings, provides a leading paradigm for research and treatment of depression in adolescence. The theoretical and empirical research discussed in this paper was led by the author under the supervision of Prof. Dr. Tatjana Vukosavljevic-Gvozden, University of Belgrade, and has been successfully implemented during recent years. It is important to emphasize that cognitive models are basically diathesis-stress models. The basic thesis is that depression arises from the interaction between the cognitive vulnerability of the person (diathesis) and specific conditions of the environment (stress) that serve as a trigger for activating this diathesis.

The rate of occurrence of depression in children and adolescents worldwide is not fully known. What is known is that in recent years, the prevalence of depression, one of the many common mental disorders in adolescence, has begun to grow rapidly. Early and middle adolescence, especially from 13 to 17 years of age, is a critical period for exploring the risk of depression, because this is a developmental period in which symptoms of depression often appear for the first time (Cicchetti & Rogosch, 2002). In adolescence, prerequisites for cognitive vulnerability are often present and may become manifest (Alloy, Abramson, Walshaw, Keyser, & Gerstein, 2006).

Recent research on developmental psychopathology forms part of a larger research perspective focused on clinical and subclinical depression during adolescence. The research was conducted in accordance with the World Medical Association Declaration of Helsinki, 2001. These guidelines are followed in clinics and schools in the three main population centers of the Republic of Macedonia (Stip, Eastern Region; Skopje, Central Region; Bitola, Western Region). We aimed to explain the risk factors for the development of symptoms of depression in a sample of adolescents aged 13-17. Screening for depression is an important step in the implementation of a modern mental health system aimed at preventing the occurrence of clinical depression during adolescence.

Research Conducted in Recent Years

The sampling procedure in this project was carried out in two phases. Over a three-year period, the main research was conducted in psychiatric wards and Centers for Mental Health for children and adolescents, in three clinics and in primary and secondary schools in the three main towns of Macedonia (Skopje, Stip, Bitola). In the first phase (pilot study) for the purpose of checking the instruments' reliability (Cronbach alpha coefficient) on the non-clinical sample of adolescents between the ages of 13-17 years, a sample of 300 youth of both sexes in primary school and high school in Skopje was undertaken. The instruments showed good psychometric properties, with Cronbach alpha coefficients ranging between 0.79 and 0.89.

In the second phase, three groups were formed: a clinical group, a subclinical group and a control group. The criterion for inclusion in the clinical sample was the fulfillment of the diagnostic criteria of DSM-IV-TR/DSM-V (APA, 2000,2013) for unipolar depression without psychotic features (Major Depression, MDD). The data for 139 adolescents were taken into account in the final *clinical sample.* The data for *subclinical* and *control sample* were collected in primary and secondary schools from three socio-demographic regions, Stip, Skopje and Bitola. There was a total of 720 adolescents, of which 240 were divided by their socio-demographic region. The respondents from the subclinical sample have the cut-off score for subclinical depression on the CES-D, over 16, and do not fulfill the criteria of the M.I.N.I. kid interview for Major Depression. The remaining adolescents who have low scores on the CES-D (below the cut-off score for subclinical depression), were screened through interviews, and formed a control sample of adolescents. The sample consisted of: the clinical group, 139 (33.7%) respondents; the subclinical group, 133 (32.3%)

respondents, and 140 (34.0%) respondents in the control group, or a total of 412 respondents.

Cognitive vulnerability factors for depression (dysfunctional attitudes, negative inferential style, ruminative response style), and psychosocial risk factors (negative life events and perceived social support) were measured by a set of instruments. We employed a data sheet for each respondent; M.I.N.I. Interview (MINI kid Screen/DSM-IV -TR/Sheehan & Lecrubier, 2001/2006); Dysfunctional Attitude Scale (DAS, Weissman & Beck,1978); Adolescent's Cognitive Style Questionnaire (ASCQ, Hankin & Abramson,2002); Ruminative Response Style Questionnaire (RSQ, Nolen-Hoeksema & Morrow,1993); Adolescent Life Events Questionnaire (ALEQ, Hankin & Abramson, 2002); Multidimensional Scale of Perceived Social Support (MPSS, Zimet, Dahlem, Zimet & Farley,1988) and Centre for Epidemiological Depression Scale (CES-D, NIMH, Radloff, 1977).

Cognitive Vulnerability-Transactional Stress Model (CV-TSM, Hankin and Abramson, 2001)

Within the Transactional stress model of cognitive vulnerability to depression in adolescence, (CV-TSM, Hankin and Abramson, 2001) we have confirmed the hypothesis that there is a significant correlation between the risk factors of cognitive vulnerability (dysfunctional attitudes, negative inferential style and ruminating response style), psychosocial factors (negative life events, perceived social support), socio-demographic factors (average grade at school, gender and age), on the one hand, and the level of symptoms of depression on the other. All risk factors included in the model are highly interconnected and have a high intercorrelation. The highest correlation (negative connection) with the level of symptoms of depression is shown by the perceived social support, and the lowest correlation (positive connection) with the level of symptoms of depression is shown by negative life events in the area of romantic relationships. Only gender and age are not statistically significantly associated with the level of symptoms of depression.

Developmental Psychopathological Perspective

The survey results provide initial support for the thesis that cognitive vulnerability is stabilized into relatively firm individual dispositions, during the transition from middle and late childhood into early adolescence, and they increasingly consolidate and stabilize in the period of early adolescence. Different factors of cognitive vulnerability can be relatively independent of each other during pre-adolescent years, but during the transition from childhood into early adolescence, they can become very interconnected. When multiple risk factors are consolidated, the degree of vulnerability to depression among adolescents increases (Abela & Hankin, 2008).

Cognitive-psychosocial Predictive Models

We have also confirmed that risk factors that were the subject of our interest are significant *predictors* of the level of symptoms of depression (see Hankin & Abramson, 2001; Calloway, 2010; Brissette, Scheier, & Carver, 2002; Uchino, 2009; Nolen-Hoeksema & Hilt, 2013; Bliese & Britt, 2001; Cankaya, 2002; Hankin & Abramson, 2002; Hankin, Fraley, & Abela, 2005; Sawyer, Pfeiffer, & Spence, 2009; Spasojevic & Alloy, 2001; Feldner, Leen-Feldner, Zvolensky, & Lejuez, 2006; Kaslow, Adamson, & Collins, 2000; Sheeber, Hops, & Davis, 2001;Takakura & Sakihara, 2001; Kaltiala-Heino, Rimpela, Rantanen, & Laippala, 2001).

Hierarchical multiple regression analysis shows that socio-demographic factors (gender, age and school grade average) predict a 6.9% level of symptoms of depression in the clinical group, 58.9% in the subclinical group, and 43.1% in the control group. Analysis of the three predictive models for each group respectively showed that the model of the clinical group has the greatest predictive power, i.e. that the predictors of ruminating response style, dysfunctional attitudes, negative inferential style, negative life events and perceived social support can predict 90.4% of the level of symptoms of clinical depression, which is a very high effect. For the subclinical group these predictors together can predict 89.5% of the overall level of symptoms of subclinical depression, and 86.8% of the low level of symptoms of depression in the control group.

Interestingly, in cognitive-psychosocial predictive models, in the clinical and the subclinical group, the strongest predictor appears to be perceived social support. The results obtained are consistent with our expectations that the perceived social support moderates the relationship between negative life events and the level of symptoms of depression, and that it is consistent with the determination of social support as a "stress buffer," but only for the subclinical group. The change of prediction between two steps, which is significant only in the subclinical group, is 1.9%, which supports the view that interaction between negative life events and perceived social support helps in predicting the level of symptoms of depression, but only in the subclinical group. This means that the high interaction between negative life events and perceived social support leads to lower levels of symptoms of depression. Furthermore, our results suggest that the inclusion of perceived social support as a psychosocial risk factor in cognitive-behavioral etiological models of depression is justified.

The group of adolescents with clinical depression, the group with subclinical depression and the control group, are significantly different in terms of risk factors of cognitive vulnerability (dysfunctional attitudes, negative inferential style and ruminating response style) and psychosocial factors (negative life events and perceived social support). We expected that the group of adolescents with clinical and subclinical depression would differ from the control group in terms of the variables gender and age. The results obtained have not confirmed our expectations.

Instead of a Conclusion: Guidelines for Future Research

Here are a few suggestions for future research: First, it is of particular importance to promote research on the developmental aspects of cognitive theories concerning vulnerability to depression, emphasizing studies that focus on the emergence and consolidation of risk factors for cognitive

vulnerability. Besides transactional studies, longitudinal studies are also necessary to understand and explain the developmental processes leading to risk factors. Studies which focus on how to alter the factors of cognitive vulnerability during development are also needed. Second, it is important to integrate the factors of cognitive vulnerability with other theoretically and empirically supported risk factors, especially social /interpersonal, neural, genetic and emotional influences. We have demonstrated statistically the value of a transactional stress model of cognitive vulnerability to integration, through the inclusion of psychosocial variables as risk factors (e.g., perceived social support). Third, theories of cognitive vulnerability should address the "great arguments of depression" such as a dramatic increase in symptoms and states of depression, variations in the pattern of depression in early adolescence, and continuity versus recurrence of depression.

Fourth, we believe that the methodological criticisms relating to the research so far can generally be overcome by the inclusion of modern neuroimaging methods. Fifth, the phenomenon of comorbidity of depression with other emotional and behavioral disorders in adolescence is well known. Consequently, future research should explore which cognitive factors are specific to depression or are general factors of mental disorders. The following focus of future enquiries is proposed: a) integration towards more models, b) necessary inclusion of developmental psychopathological aspects and c) methodological and statistical enhancement, including the most advanced neuroimaging techniques.

We believe that the current study, among the first from the Republic of Macedonia, adds to the knowledge base regarding the cognitive vulnerability of adolescents. It enhances the developmental psychopathological perspective by elucidating the phenomenon of subclinical depression in adolescence. Prevention of depression in adolescence increasingly requires a shift of the paradigm from traditional models of disease in which symptoms are treated when they occur, to a proactive focus on mental health and to maximizing protective factors and reducing risk factors for mental diseases (National Research Council and Institute of Medicine, 2009).

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Impact Evaluation of ISSBD African Regional Workshops 1992–2015[1]

Robert Serpell, Bame Nsamenang, Suman Verma and Anne Petersen

Abstract

This report on the series of African Regional Workshops documents the remarkable progress achieved by the ten workshops funded primarily by ISSBD. ISSBD was established to promote scientific research globally, and in the early 1990's ISSBD leadership determined that the African continent, with an increasing percentage of the globe's children but underdeveloped human development research capacity, was an excellent focus for capacity development. The workshops have unquestionably developed research capacity in human development, increasingly added loyal ISSBD members from Africa and exponentially increased human development knowledge with contributions from Africa. The report recommends that the series be continued, and identifies some of its strategic achievements as well as some areas requiring further attention in the future.

1. Introduction

The mission of ISSBD is "to promote scientific research on human development throughout the lifespan." As an international organization, it is committed to ensuring that the science emerging from research reflects the diversity of human development across nations and their distinctive cultural, historical, social and economic characteristics, and that the science includes a wide enough evidence base to sustain the generality of theories that claim to transcend that diversity.

The African region is home to about one-fifth of the world's children[2], but they are very sparsely represented in the published literature on child and adolescent development. When the African Regional Workshops series was launched, systematic research on behavioral development in Africa was extremely limited relative to the science as a whole, accounting for a tiny proportion of the scientific literature. Moreover, most of that small corpus of African developmental research was conducted by expatriates on short visits to the continent. Awareness of the science of behavioral development was very limited in African countries other than South Africa, both among the general public and among policymakers, resulting in weakly formulated educational, health and social service policies and professional practices that were often poorly adapted to local needs. Moreover, very little cross-national communication was taking place among the few African scholars of behavioral development scattered across the continent, even though, when some of them did meet at international conferences outside the continent, they often found much in common among the challenges they faced in conducting and publishing research and in communicating the implications of their findings to policymakers and professionals[3].

Reflecting on the inaugural workshop that he convened in Yaounde, Cameroon in April 1992, Bame Nsamenang wrote, in the newly founded *Journal of Psychology in Africa South of the Sahara, the Caribbean, and Afro-Latin America*, that it represented "an effort to 'open up' African developmentalists to each other and to the international psychological community." The two-fold aims of the Yaounde workshop on "child development and national development in Africa" were to provide a glimpse of the state of the field and to initiate a network for information exchange and stimulation of an African presence in the arena of international developmental science. (Nsamenang, 1993, xviii).

The series of ten African Regional Workshops that followed was organized by African scholars in eight different countries of the region: Cote d'Ivoire 1994 (hosted by Jean Tano), Zambia 1996 (Serpell &Mwape), Namibia 1998 (Zimba), Uganda 2000 (Baguma), Cameroon 2004 (Nsamenang& Tchombe), South Africa 2006 (Kasese-Hara), Kenya 2009 (Oburu), Nigeria 2011 (Akinsola), South Africa 2013 (Phasha), and most recently Kenya 2015 (Mweru & Marfo).

Typically, each workshop ran for 2-4 days and was held on the grounds of a university campus. The number of participants ranged from 38 to 150, of whom 5 to 10 were senior scholars recruited to facilitate the workshop. Table A shows the academic format, participant structure, and output of successive workshops. ISSBD provided a grant for each workshop, principally designed to cover international travel and accommodation for African Early Career Scholars (ECS) and senior scholar facilitators from their normal place of work to the workshop venue. Grants ranged in amount from USD 38,000 to USD 62,000 for the last three workshops in the series, and in several cases were supplemented by the offices of local and international organizations in the hosting country, notably the national UNICEF offices and the host universities.

Three features of the workshops emerged over the course of the series: (1) an emphasis on learning opportunities for ECS (especially in the phase leading from the first degree up to a PhD degree) about research methods and publication; (2) a structured opportunity for ECS to present research findings in the form of a poster, with formative evaluation by senior scholars in attendance, and competitive awards for excellence; and (3) an attempt to balance the venues over time across different sub-regions of the continent, while ensuring that the host institution has sufficient capacity to manage the tasks of international communication, coordination and financial management essential for the success of the workshop. Each workshop was followed

Table A. Academic format and output of successive workshops

Country	*Year (later)*	*oral Presentations*	*posters presented*	*papers published*	*countries represented*	*African, other*
Cameroon	1992	22	0	4	9,	5
Cote d'Ivoire	1994	?	0	?	5,	4
Zambia	1996	32	0	10	12,	3
Namibia	1998	34	0	1+	10,	5
Uganda	2000	37	0	4+	8,	4
Cameroon (2)	2004	27	0	6	7,	2
South Africa	2007	c.9	c.20	0	10,	2
Kenya	2009	c.9	22	1	5,	3
Nigeria	2011	17	28	in prep[5]	7,	2
South Africa (2)	2013	18	65	...	10,	3
Kenya (2)	2015	8	c.50[6]	...	11,	4

with a report by its convenor to the international Executive Committee of the ISSBD.

The present report provides an overview of the participant structures, academic content and publication outputs of the ten workshops held between 1992 and 2013, and summarizes the responses to a short evaluation questionnaire by samples of several different categories of stakeholder: former Early Career African scholar participants in the workshops, Early Career Scholar representatives on ISSBD's International Executive Committee, workshop convenors, and Presidents of the ISSBD.

We also marshall some evidence to support a few integrative interpretations or hypotheses:

1. **International mentoring to support academic and professional development of graduate students based in the region** became a valuable distinctive feature of the workshops, setting them apart from other, more conventionally organized scientific meetings.
2. **Juried awards for excellence of posters by Early Career Scholars** served to accelerate the rate of submissions from Africa of posters for biennial ISSBD meetings.
3. **Country coordination of ISSBD membership fees** served to increase retention of membership over succeeding years.
4. **Interactive learning sessions on research methodology and writing for publication** increased the value of participation in the workshops for Early Career Scholars, especially those currently registered in a study program at an African university directed towards a PhD degree.
5. **Cumulative refinement of workshop design over time in light of experience** was facilitated by the emergence, over successive workshops in the series, of a more enduring network of mid-career and senior scholars within the region.
6. **Increased representation of African research in the international literature on human development** was effectively promoted by the African Regional Workshop series directly, through publication of research reports initially presented at the workshops, and indirectly, by nurturing the growth of an African community of scholarship through mentoring, dissemination of technical skills, and collegial interactions[4].

2. Data collection methods

a. Questionnaire. This was designed by the co-authors of this report and sent in mid-2015 to several different groups of informants: Workshop convenors, Early Career Scholar representatives on ISSBD Executive Committee, and Presidents of the ISSBD. Parts A-D of the questionnaire were composed of open-ended requests for specific information, about (a) attendance by Regional Workshop participants at ISSBD International Congresses, (b) completion of PhD degrees by predoctoral participants in the Regional Workshops, (c) publications emanating from research presented at the Regional Workshops, and (d) enduring collegial links initially forged at the Regional Workshops.

Respondents were given 9 multiple-choice items, in which they were asked to indicate on a Likert scale the degree to which they agreed or disagreed with specific summary statements relating to the value of the Workshops, the desirability of continuing the series, and principles that should govern the location of the workshops, recruitment/admission criteria for selecting participants, and targeted outcomes of workshop participation (including international mentoring and award of travel grants to attend ISSBD's international biennial congresses).

b. Consultative discussions held in Nairobi at 11th Workshop in November 2015. Dr. Suman Verma, one of the authors of this report, participated as a resource person in the latest workshop of the series, which was convened by Dr. Maureen Mweru at Kenyatta University in Nairobi, Kenya in November 2015, and undertook to sound out opinions by participants in the workshop relating to the topics addressed by the Questionnaire that was circulated to the first round of informants a month or two ahead of the Nairobi Workshop.

3. Findings

International mentoring to support academic and professional development of graduate students based in the region. The introduction of poster sessions for presentations by Early Career Scholars afforded an opportunity for senior international scholars attending as facilitators to initiate a content-focused, medium-term mentoring relationship with one or more early career scholars (ECS) based in the region and became a valuable distinctive feature of

Figure 1. Kampala, Uganda 2000. Fifth ISSBD African Regional Workshop. Makerere University.
Convenor: Dr. Peter Baguma.
Convenor, Dr. Peter Baguma is fourth from the left in the front row.

Bame Nsamenang (Cameroon), Roderick Zimba (Namibia), Robert Serpell (Zambia).

ISSBD Representative, Deputy Vice-Chancellor, Makerere University Director, Institute of Psychology.

the workshops, setting them apart from other, more conventionally organized scientific meetings. As Dr. Oburu noted, the ECS who participated in the Maseno Workshop in 2009 included a remarkable number of African scholars registered for a PhD degree at an African University, who went on to successfully complete their degree within the following 6 years. The impact of such advanced training on the capacity of African institutions to conduct research and teaching in the field of human behavioral development is substantial. At the University of Zambia, for instance, research and teaching on various aspects of behavioral

Figure 2. Sixth ISSBD African Regional Workshop in Yaounde, Cameroon 2014.
Convenor: Dr. Therese Tchombe.
Convenor, Dr. Therese Tchombe and ISSBD President, Rainer Silbereisen are fourth and fifth from the right in the front row.

Figure 3. Seventh ISSBD African Regional Workshop in Johannesburg, South Africa 2006. Witwatersrand University.
Convenor: Dr. Mambwe Kasese-Hara.
Bame Nsamenang, Rainer Silbereisen and an Early Career Scholar.

development are conducted in two Departments: The Psychology Department of the School of Humanities and Social Sciences (HSS), and the School of Education's Department of Educational Psychology, Sociology and Special Education (EPSSE). Between 2007 and 2015, the number of Zambian scholars on the faculty of those two Departments holding a PhD degree increased by 10 from 3 to 13. Nine of these Early Career scholars received their PhD degrees within the past ten years, and 5 of those attended one or more of the ISSBD African regional workshops along the way.

Juried awards for excellence of posters by Early Career Scholars

The introduction (2009 Maseno) of formal adjudication of poster sessions served to accelerate the rate of submission of posters for biennial ISSBD meetings. Exactly how this worked is not entirely clear. The Maseno-Lusaka bridging scheme described below attempted to formalize the process, by assigning mentors to assist the authors of promising posters at the 8th African Regional Workshop (2009) to further refine their report for submission to the next International Biennial congress (Lusaka 2010). In the three workshops that followed (Lagos 2011, Tshwane 2013 and Nairobi 2015) adjudication followed the Maseno 2009 model, but little or no attention was paid to the adjudication in selecting candidates for travel grant sponsorship to the next International Biennial congress. Nevertheless the numbers of African scholars registered at the international

Figure 4. Eighth ISSBD African Regional Workshop in Kisumu, Kenya 2009. Maseno University.
Convenor: Dr. Paul Oburu.

Figure 5. Ninth ISSBD African Regional Workshop in Lagos, Nigeria 2011. University of Lagos.
Convenor: Dr. Esther Akinsola.
Dr. Esther Akinsola in front row, seated between Bame Nsamenang and Robert Serpell.

congresses in Edmonton (2012) and Shanghai (2014) did rise relative to the most recent previous congresses outside the African continent (Melbourne 2006, Wuerzburg 2008). Moreover, most of those at the 2012 and 2014 congresses had also attended the preceding African Regional Workshop. At the time of writing, information is still incomplete regarding how many participants in the latest African Regional Workshop (Nairobi 2015) took advantage of the intensive orientation provided at the Workshop to revise their submissions to the next International congress (Vilnius 2016), and to what extent such revised submissions were any more successful in qualifying the author for travel sponsorship to the congress than submissions made without any revision based on Workshop experience.

Country coordination of fees to expand ISSBD membership

The introduction of country (as distinct from regional) ISSBD membership coordinators (2009) served to increase retention of membership over succeeding years.

Inspection of the ISSBD membership records in May 2016 revealed that there are currently members in six of the eight countries where regional workshops have been held: 14 in Cameroon, 12 Kenya, 22 Nigeria, 9 South Africa, 2 Uganda, 12 Zambia. The only other countries in sub-Saharan Africa with more than one member are Ghana (6), where the next Regional Workshop is envisaged, and Zimbabwe (6). Basically, ISSBD has members in Anglophone countries where there has been an active Country Coordinator. One of the major advantages conferred by the appointment of a Country Coordinator has been the option of collecting annual renewal fees in local currency, a practice that was established early in the history of the Society in order to facilitate membership by scholars residing in Soviet states. This well-established way of managing currency for ISSBD has apparently been neglected in the past few years.

When the concept was first introduced, local coordinators were authorized by the EC to keep the funds for regional scientific meetings, provided that they reported to the EC on this use. In at least one region, a number of regional activities were organized with prior permission of the EC at the country/regional level. However, we are not aware of any record of that kind of application in the African region.

Interactive learning sessions on research methodology and writing for publication

The focus on interactive, methodologically oriented sessions that was introduced at the 8th workshop in Maseno (2009) increased the value of participation in the workshops for Early Career Scholars, especially those currently registered in a study program at an African university directed towards a PhD degree. Indeed, this focus was advocated by Early Career Scholars at the 2006 Johannesburg workshop in South Africa, and (as explained in the next section of the present report) explicitly implemented at the next workshop in the series, held in Kenya.

Cumulative refinement of workshop design over time in light of experience

Three examples of this feature of the series are as follows.

Example 1: The unpublished report prepared by the Convenor and two undergraduate student rapporteurs on the 5th workshop held in Kampala, Uganda 2000 noted that the theme adopted for the workshop was "Life course in context: the application of cross-cultural methodology," because during the previous workshop held in Windhoek, Namibia in 1998 "various aspects of developmental, social and personality or cross-cultural research methodology were not adequately addressed; yet they are a very important component of developmental/psychological research investigations" (p.2).

Example 2: The Convenor of the 7th workshop in Johannesburg, South Africa 2006 recalled that: "early career scholars

Figure 6. Tenth ISSBD African Regional Workshop in Tshwane, South Africa 2013. University of South Africa. Convenor: Dr. Nareadi Phasha.
Convenor, Dr. Nareadi Phasha, ISSBD Past-President Prof Anne Petersen and others look on as an Early Career Scholar joins the local dance troupe during the welcome opening ceremony.

presented their current or completed research studies in poster form and received feedback from colleagues and senior scholars. Local participants were all early career scholars who had completed a Masters degree (minimum), and were either working in an academic or research environment. Some were working on a PhD or at least a proposal. The informal feedback from local participants showed that the workshop was an affirming and enriching environment where participants could share their work freely without fear."

However, a report on the Workshop prepared by an Early Career Scholar participant included the following comment: "What would perhaps have been even more productive and useful (particularly for the budding scholars in attendance) would have been a more concentrated space and time provision for engagement with the poster presentations. One recognizes that such an endeavor may be rather difficult given that this was a two-day workshop, however considering that the key thrust of the workshop was to foster critical research skills amongst up and coming academic scholars and researchers, we hope that future projects bear the necessity and importance of research 'mentorship' in mind."

The Convenor of the next (8th) workshop in the series (Kisumu, Kenya 2009) took these recommendations seriously in the design of the Workshop program, noting in his report that "one of its main objectives was to provide a forum for training junior scholars on a wide range of methodological approaches in human development research and allied areas. The other aim was to equip early career researchers with skills that they might need to complete their already identified research topics and also increase their research and publication capacity. The three-day meeting comprised of training sessions addressing career planning and advances in research methodology, scientific writing skills, and publication and dissemination procedures."

The next (9th) workshop, held in Lagos, Nigeria 2011, set out deliberately to build on and extend the experience gained at the 8th workshop in Kenya. The Workshop Theme was "Consolidating and Extending African Early Career Scholars' Capacity to do research across the Life Span." One of the highlights of the Workshop was a series of very insightful and much appreciated presentations by Julie Robinson of Flinders University, Australia on how to make an effective poster.

Example 3. **Bridging scheme to link poster presentations at the Regional Workshops to presentations at the following International Biennial Meeting**. In 2007, the EC of ISSBD approached several African universities with a view to one of them hosting the 2010 Biennial international meeting. The proposal that was eventually adopted by the EC was formulated by the host institution, the University of Zambia (UNZA). It included not only a multidisciplinary Local Organizing Committee (LOC) (bringing together developmental scholars from the university's Schools of Social Science, Education and Medicine) but also a regional African Research Advisory Panel

Figure 7. Eleventh ISSBD African Regional Workshop in Nairobi, Kenya 2015. Kenyatta University.
Convenor: Dr. Maureen Mweru.
Convenor, Dr. Maureen Mweru and ISSBD representative, Dr. Suman Verma are seated in middle row, 4th and 6th from the left.

(ARAP) comprising senior African developmental scholars based in nine other African countries (Botswana, Cameroon, Ethiopia, Kenya, Namibia, Nigeria, Senegal, South Africa and Uganda), five of whom had acted as Convenor of one of ISSBD's series of biennial African regional Workshops.

In 2009, this African Regional Advisory Panel (ARAP) formulated a scheme to make the most of the opportunity afforded by the next ISSBD African Regional Workshop, scheduled to be hosted by Maseno University in Kenya. The rationale for the scheme was submitted to the Johann Jacobs Foundation to support a request for funding. The Foundation awarded a total amount of USD 10,000 for the implementation of the scheme, of which USD 9,764 were spent on travel and 2010 congress participation grants to nine African Early Career Scholars.

The Maseno-Lusaka bridging scheme. ISSBD's 8th African regional workshop was hosted by Maseno University in Kisumu, Kenya from 30th November to 2nd December, 2009. Graduate student participants were invited to bring a poster for presentation of their ongoing dissertation project. These were displayed during the Workshop and a panel of seven judges was assembled to rate them for quality on a ten-point scale. The ratings were averaged and the outcome was announced at the close of the workshop. The top-rated posters in Kisumu were by nine African early career scholars (6 women, 3 men) studying for a PhD degree at six different universities in four different African countries (Cameroon, Kenya, Nigeria and Zambia). Each of them was assigned a short-term mentor based elsewhere to support the further development of their dissertation project and the refinement of their poster for consideration by the Proposal Review Panel for the ISSBD 2010 congress scheduled for July the next year. In addition, the seven award-winners not based in Zambia were each offered a capacity-building travel award.

One index of the success of the Bridging Scheme is that all nine recipients prepared a poster that was accepted by the independently constituted Review Panel for evaluating proposals submitted for inclusion in the scientific program of the international congress. Moreover, all of them attended the congress and later testified that the experience had been an enriching one. Last, but not least, all nine have since successfully completed a PhD degree.

An attempt to compile individual appraisals of the international mentoring process was frustrated by the hacking of the evaluator's email archive in 2010. But the following excerpts may serve as positive testimony. One award recipient wrote:

> *"The Maseno-Lusaka award provided me an opportunity to interact with other young scholars from all over the world. Also, after my presentation in the symposium . . . , I received positive feed-back from the audience which I would not have*

had if I didn't have the opportunity to come to Lusaka. In addition, the pre-congress workshop was truly invaluable."

Another wrote:

"1. It was my first time to attend an international meeting
2. I made links with several senior scholars
3. I was networked to several young scholars in the world
4. I made friendship with several people in the world"

9th African regional Workshop in Lagos, Nigeria 2011. As in Maseno in 2009, early career scholar participants in the Lagos 2011 Workshop were invited to bring a poster about their work, and these were assessed by a panel of 7 judges, composed of a multinational cross-section of available senior scholars and resource persons attending the Workshop. Certificates of excellence were awarded to the authors of the top-rated 8 posters, and they were each allocated a short-term international mentor. However, no travel grants were awarded on this basis for African early career scholars to travel to the next international ISSBD congress, hosted by the University of Edmonton, Canada in July 2012. The closing date for submitting proposals for the Edmonton congress was already past when the Lagos workshop was held in late November 2011.

Due to this difficulty, a proposal was presented to the 2013 meeting of ISSBD's International Executive Committee (EC), to formalize the link between adjudication of posters at each African Regional Workshop and consideration of applications for travel grants to the next International Biennial Meeting. The EC declined to assign funding to such a formalized link, preferring to retain a separate evaluation process for allocating travel grants to the Biennial Meetings. However, small separate funding grants were secured for the top rated posters at the next (10th) workshop, held in Tshwane, South Africa 2013. Two poster presenters were awarded travel grants based on adjudication at the Workshop, that enabled the recipients to travel to the International Biennial Meeting in Shanghai, China 2014.

Example 4. An explicitly constructive link was articulated between the theme of the 8th workshop held in Kisumu, Kenya in 2009 "Building junior scholars' capacity in human development research," and the theme adopted for the next (9th) workshop held in Lagos, Nigeria in 2011: "Consolidating and extending Africa Early Career Scholars' capacity to do research across the life span." The next (10th) workshop, held in Tshwane, South Africa in 2013, echoed the same focus in the theme "Sustaining research excellence amongst early career scholars in Africa."

Increased representation of African research in the international literature on human development

Two different approaches to publication were considered at different workshops in the series. The convenors of the 4th (Namibia), 5th (Uganda) 6th (Cameroon) and 9th (Nigeria) workshops explicitly considered the option of compiling a book of proceedings, and two such projects have been implemented (Yaounde 2004, Lagos 2011). On the other hand, a decision was taken at two of the earlier workshops (1st Cameroon, 3rd Zambia) to aim at publishing some selected papers in journals, with varying degrees of editorial advocacy by selected workshop participants. Each model has its strengths and limitations. In addition it should be noted that the 7th (South Africa) and 8th (Kenya) workshops explicitly focused more attention on nurturing the scholarly and professional development of ECS than on publication, and the chapters envisaged for the volume emerging from the 9th (Nigeria) workshop do not include revisions of poster presentations by ECS. The poster presentations by ECS at the last four workshops, however, typically reported on work that was in due course submitted as part of the requirements for a PhD degree at an African university, and deposited in the libraries of those universities, some of which are accessible on the internet under the heading of institutional repositories via dspace (an open source repository software package typically used for creating open access repositories for scholarly and/or published digital content).

4. Recommendations for the future

The multiple choice section of the questionnaire invited respondents to take a definite position both on the value and viability of the series as a whole and on certain specific features of their design. The responses indicated that there is widespread agreement that the series has made a major contribution to building African regional research capacity in the field of behavioral development and should be regarded by ISSBD as a priority field of continuing endeavor in the coming decade. Very few respondents agreed with the proposition that the series has added little value relative to other opportunities for the promotion of research on behavioral development in the region, and should be discontinued, or that the series has served its purpose, is no longer needed, and should be discontinued.

Regarding the design of the workshops, respondents were quite evenly divided as to whether greater emphasis should be placed on participation by Early Career Scholars without a completed Masters degree or by Early Career Scholars with a completed PhD degree. Opinions were also divided on the following three question of strategic design:

- whether travel grant awards to support attendance of ISSBD's biennial international congresses should be linked to evaluation of posters presented at the regional workshops
- whether more time and effort should be given to the role of international mentors in supporting research by Early Career Scholars, during and following the regional workshops
- whether dispersion of meetings across different subregions of Africa should be more heavily emphasized in the choice of venues for future meetings in the series. Only 24 of the 50 sub-Saharan African countries have sent a participant to any of the workshops, and only 12 of those have been represented at more than 2 of the 11 Workshops to date).

Our own view on these matters of design, as authors of the present report, is that, as the number of African graduates with Masters degrees in relevant fields has increased over the past 20 years, it has become more relevant to offer opportunities to participate in the ISSBD's African Regional Workshops to scholars who are already registered

for or have already completed a PhD degree. We believe that international mentoring is both more feasible and more valuable for students who have already attained a certain degree of confidence in articulating their research interests, and have already acquired competence in basic methods of data collection and analysis. Methodological lectures and exercises can be more effectively addressed to students at that relatively advanced level, and the students can correspond more productively with international mentors via internet, than is the case with students who are still struggling to define their focus of interest and to understand basic principles of research methodology and data analysis.

Regarding international dispersion of meetings across different sub-regions, we believe that in the longer term, participation in the discourse of research on African behavioral development by francophone and arabophone scholars is of great importance. However, unless and until ISSBD has recruited a larger number of members with fluency in French or Arabic, it may be premature to invite scholars based in francophone or arabophone African countries to host workshops under the auspices of ISSBD.

Among the Anglophone countries of sub-Saharan Africa, we would encourage the convenors of future workshops in the series to give affirmative priority to inviting participants based in countries that have not yet hosted one of the workshops, and to encourage those participants to explore vigorously the possibility of an institution in their home country hosting the next workshop. Conspicuously absent from the list of convenors to date are scholars in the following countries: Botswana, Ghana, Liberia, Sierra Leone, Tanzania and Zimbabwe. Each of those countries has been the locus of internationally published research on human behavioral development in the past, a fact that would lead one to believe that there is potential interest among local scholars sufficient to motivate them to propose to host a workshop, especially if they are enabled to draw on the experience of other anglophone African countries in drawing up and implementing such a proposal.

In conclusion, we wish to thank the President of ISSBD, Prof XinYin Chen for affording us this opportunity to consult with many colleagues over the past year in reflecting on the significance of the African Regional Workshop series, and to thank all those colleagues who gave generously of their time and effort to share ideas with us. It is clear to us, and we hope it will be clear to the Executive Committee of ISSBD, that the resources invested in the series have borne valuable fruit, that the ISSBD African baby, whose birth Bame Nsamenang heralded in his report to the ISSBD Newsletter (1992) on the inaugural workshop, has come of age, and that the pumpkin to which the first workshop was likened by the late Andy Gilbert, who traveled from South Africa to attend the workshop in Cameroon, has indeed spread its tendrils in many different directions. We hope that the series will continue to flourish in years to come, and generate a growing African presence in the arena of international developmental science.

Notes

1. This report has been prepared by the authors in response to a request by Professor Xinyin Chen, President of ISSBD, for an assessment of the success of the workshop series, in which ISSBD has invested about $400,000 over the past 20 years, with particular attention to how they have contributed to capacity building in African universities regarding the situation in developmental psychology units and promotion of ISSBD in the region.
2. "Projections indicate that by 2050, around 40 per cent of all births, and about 40 per cent of all children, will be in Africa, up from about 10 per cent in 1950." (http://www.unicef.org/media/media_74754.html)
3. E.g. at meetings of the following international organizations attended by the first author of this report in Europe: IACCP 1978 in Germany, UNESCO 1982 in France, IUPsyS 1982 in UK, ISSBD 1983 in Germany, ARIC 1987 in Switzerland, ISSBD 1989 in Finland, and UNICEF 1990 in Italy)
4. Prospects of extending those interactions beyond the time-frame of short workshops were discussed at the latest of the workshops (Nairobi 2015), and some preliminary steps taken by Prof Julie Robinson to establish an internet-mediated network, in the form of a closed Facebook Group, named *ISSBD African Workshops Network*, with a site that will allow the development of a community of scholars, who are linked by ISSBD African Regional Workshop attendance, who support each other by sharing information and resources. The URL is https://www.facebook.com/groups/740791522732077/
5. Proposed volume containing 14 chapters.
6. Out of 171 applications with proposal abstracts received from 12 African countries.

ISSBD 2007 Regional Workshop in Brazil: A look back

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In July of 2007, ISSBD organized a workshop in Gramado, Brazil designed to foster collaborations between early career scholars from North, Central and South America. That special event, organized by Brett Laursen, Silvia Koller, Bill Bukowski and Carolina Lisboa, engaged 24 students across national, cultural and language barriers, encouraging them to get to know each other over the course of a couple of weeks, share their research and plant the seeds of future collaborations together. Almost 10 years have passed since then and we'd like to take stock of how formative the workshop was to the professional development of those budding teachers, researchers and clinicians. As two members of the workshop who met for the first time in Gramado and started collaborating from then on, we have found our careers to be inextricably influenced for the better thanks to that time together.

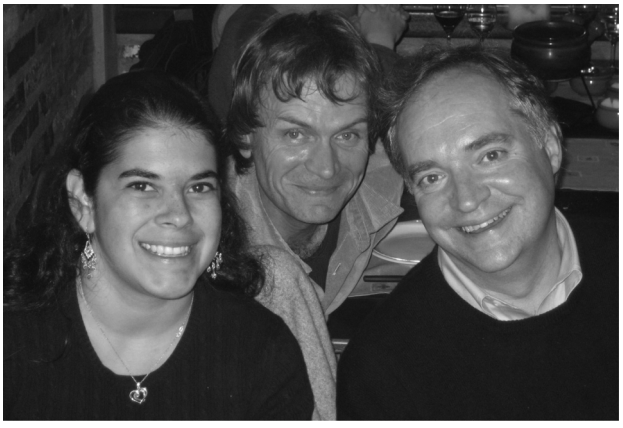
It's worth mentioning that the task of trying to encourage collaborations among graduate students is easier said than done. The workshop organizers needed to create a permissive environment for students to capitalize on the opportunities afforded by these potential collaborations over more pressing day-to-day demands. Graduate students are often trying to juggle the requirements of their coursework, learning the tools of their trade, engaging in their lab's research program and (hopefully) tending to their own research agenda. As such, adding one more task, as nebulous and daunting as "developing an international collaboration" is no short order. To overcome these difficulties, the workshop organizers used a combination of presentations (by Susan Pick, Marc Bornstein and Betsy Lozoff), career capacity building workshops, directed group discussions paired with convivial dinners, social outings, and cultural exchanges to help these students, coming from a number of countries and interested in a range of different topics and approaches, to connect on a meaningful level.

For us, the workshop was an unqualified success in its intended goal of fostering collaborations across cultural, national and theoretical/methodological divides. In the last ten years, we've seen shared publications, collaborative data collections and an overall cross-pollination of ideas and perspectives. Some journals with shared authorships from Gramado attendees include the *International Journal of Behavioral Development*, the *European Journal of Developmental Psychology* and the *Journal of Latino/Latin American Studies*.

The fruits of the ISSBD workshops have also been witnessed in various shared ISSBD paper and poster presentations, perhaps the most memorable being a poster symposium in Wurzburg, Germany (in 2009) on "Research of Young Scholars from the 2007 ISSBD Gramado Workshop." The fruits of these connections continue to be seen in ISSBD conferences presentations in Lusaka (Zambia),

Edmonton (Canada), Shanghai (China) and the recent conference in Vilnius (Lithuania). Moreover, the participants from the Gramado workshop have also presented together at a number of SRCD and SRA meetings (among numerous other associations).

To get a sense of what additional impact the ISSBD Gramado workshop had on the lives of these early career scholars, we contacted them again and asked them about their current positions and how their time together shaped their development, professionally and personally.



What follows are a few of the participants' key takeaway messages.

Melania Brenes Monge (Research and Evaluation Coordinator/Research Professor; Omar Dengo Foundation/Distance National University, Costa Rica) remarked upon how the ISSBD workshop changed her point of view about the possibilities of academic work in Psychology and Human Development. She feels that she had the chance to discover new trajectories she could pursue compared to the opportunities presented to her in Central America.

Gail Ferguson (Assistant Professor of Human Development and Family Studies, University of Illinois at Urbana-Champaign, USA) reinforced this notion and credits the workshop with expanding the network connections that helped her learn about the academic position she eventually secured. Those connections also played a role in the evolution of her research program (on modern forms of acculturation among Caribbean populations on the islands and in the US).

Carolina Greco (Assistant Researcher, Developmental and Educational Psychology Group—Human, Social and Environmental Science Institute, Mendoza, Argentina), says her time in the Gramado program allowed her to reflect on and build a vision of applied science for social purposes, in order to serve those who need it most. She learned thereby that science should be applied to strengthen cognitive, social-emotional resources in areas of education and children's health.

Jeremy Bakken spoke of what a huge influence the workshop had on his approach to teaching, research and life in general. He has integrated cultural perspectives into all his courses, and has continued to do cultural research as well. One of his favorite classes to teach was cultural psychology: "It was incredible to introduce some students to ideas and perspectives they have never considered, and help to provide a voice to other students who often felt underrepresented in mainstream psychology classes."

Elder Cerqueira-Santos (Associate Professor of Developmental Psychology; Federal University of Sergipe, Brazil) touches on how important his time in Gramado was for the internationalization of his career, especially in his approach to ISSBD and participation in the biennial meetings. The workshop helped him realize the importance of international publication, and of collaboration with colleagues from other countries.

Meanwhile, **Christian Berger** (Associate Professor of Psychology; Pontificia Universidad Católica de Chile) also credits the ISSBD workshop with offering a creative substrate to develop the collaborations he now enjoys. He elaborates that "what we do in terms of human development is a broad enterprise, and we need to work together. It also allowed me to know and validate great researchers in Latin America, whereas before that I usually looked up to the US and Europe, overlooking the great and amazing people in our vicinity."

Susana Mendive (Associate Professor in School of Education; Pontificia Universidad Católica de Chile) felt empowered as a researcher by the workshop which provided specific tools for designing her career and creating opportunities to develop social and academic links. She was also thankful for the efforts of established faculty who organized the workshop.

Laissa Eschiletti Prati (Associated Researcher and Clinical Psychologist, Colorado State University and Stress Management Family Counseling Center, both in Fort Collins, CO, USA) also wrote about meeting mentors at the workshop who helped to develop her curiosity and served as a driving force in her practice (as professor, researcher or clinician). Being able to see the differences/diversity in research at that time was transformative.

These reports provide a taste of the range of positive professional and personal developments that have been made possible by the ISSBD Gramado workshop, in a warm and convivial atmosphere that offered the ideal environment for developing long-lasting connections among young researchers. Not least, each participant benefited from the society's international focus and initiative in shepherding early career scholars to think globally about human development and the future of research in this area. It bears mentioning how important a workshop such as this can be in scaffolding academic careers, early on. We are especially grateful to ISSBD for supporting this workshop and others since, around the world, which advance the goal of fostering an understanding of human development in a truly international context. As we move forward to the next ten years of our careers, it is exciting to see how many of us are still connected and collaborating, while also participating as active members of ISSBD. It is inspiring to know that we can still count on the support and encouragement from ISSBD as many of us face the challenges of becoming mentors ourselves. Thanks again for the great memories.

MAJOR CONFERENCES OF INTEREST

June 02 - 04, 2017
III International Conference - Integration of Psychotherapy in the Disintegrating World
Location: Warsaw, Poland
Web: http://conference.psip.org.pl/en/start-2/

June 08 - 09, 2017
Integrating Research and Practice to Combat Violence and Interpersonal Aggression
Location: Coventry, United Kingdom
Web: http://www.coventry.ac.uk/violenceconference2017

June 26 - 28, 2017
International Conference on Neurology and Brain Disorders
Location: Valencia, Spain
Web: http://neurologycongress.com/

June 29 - 30, 2017
2017 Singapore Conference on Applied Psychology
Location: Singapore, Singapore
Web: http://scap.ear.com.sg/

July 17 - 21, 2017
XXIInd Congress of the International Society of Rorschach and Projective Methods
Location: Paris, France
Web: http://www.rorschachparis2017.org/en

Sep 08 - 09, 2017
25th Annual World Congress on Learning Disabilities
Location: Orlando, United States
Web: http://www.ldworldwide.org/

Sep 18 - Sep 19, 2017
22nd World Congress on Cognitive Behavioral Science and Therapy
Location: San Antonio, USA
Web: http://cognitivebehavioraltherapy.cmesociety.com/

Oct 11 - 12, 2017
23rd International Conference on Psychology & Language Research (ICPLR)
Location: Dubai, United Arab Emirates
Web: http://gplra.org/23rd-international-conference-on-psychology-and-language-research-icplr-11-12-october-2017-dubai-uae-about-47