Michael Ungar *Editor*

The Social Ecology of Resilience

A Handbook of Theory and Practice

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Editor
Michael Ungar
Killam Professor of Social Work
Dalhousie University
Halifax, NS, Canada
michael.ungar@dal.ca

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Biographies of the Contributors

Derrick Armstrong is the Deputy Vice Chancellor (Education) and Professor of Education at the University of Sydney, Sydney, Australia.

Kate M. Bennett is a Senior Lecturer at the Institute of Psychology, Health and Society, at the University of Liverpool, England, United Kingdom.

Peter Berliner is professor in Community Psychology, DPU, Department of Education, University of Aarhus, Copenhagen, NV, Denmark.

Theresa S. Betancourt is Assistant Professor in the Department of Global Health and Population at the Harvard School of Public Health (HSPH), and directs the Research Program on Children and Global Adversity (RPGCA) at François-Xavier Bagnoud Center for Health and Human Rights.

Dorothy Bottrell is a Lecturer of teaching and learning in the Faculty of Education and Social Work, University of Sydney, Sydney, Australia.

Arn Chorn-Pond is a former child soldier in Cambodia, and an internationally recognized human rights leader. He is the founder and, at present, the spokesperson for Cambodian Living Arts.

Ronald Chung is a Senior Research Assistant in the Department of Pediatrics at McMaster University in Hamilton, Canada.

Heather D'Antoine is Associate Director of Aboriginal Programmes, Menzies School of Health Research, in Casuarina, Northern Territory, Australia.

Gonwo Dahnweih has been a field worker for the project "A Services Approach to Preventive Mental Health for Adolescent Refugees" at the UIC College of Medicine, Department of Psychiatry.

Stéphane Dandeneau is Franco-Métis from St-Boniface, Manitoba and is currently the Professor of social psychology at the Université du Québec à Montréal where his research focuses on uncovering the underlying processes of social-cognitive resilience.

Jack Demick is an Adjunct Professor Department of Education, Center for the Study of Human Development, Brown University, Providence, Rhode Island, USA.

Pat Dolan is joint founder and Director of the Child and Family Research Centre and Director of the Higher Diploma/Masters Degree in Family Support Studies at the University of Galway, Ireland.

Kimberly DuMont is a Research Scientist for New York State's Office of Children and Family Services (OCFS) Bureau of Evaluation and Research, Rensselaer, NY, USA.

Vicki Durrant is the Director of The Youth of Today Society that operates a community run shelter and drop-in center for homeless and street-involved youth in Whitehorse in northern Canada.

Mark Eggerman is Research Fellow of the Macmillan Center for International and Area Studies at Yale University, New Haven, USA; and Assistant Editor (Medical Anthropology section) of the interdisciplinary journal *Social Science & Medicine.*

Susan Ehrhard-Dietzel is a Research Support Specialist with the Center for Human Services Research at State University of New York, Albany, New York.

Petra Engelbrecht is Professor of Education in the Education Research Directorate, Faculty of Education, Canterbury Christ Church University, Canterbury, United Kingdom.

Leonce Hakizimana has been a program officer in Burundi and a field worker for the project "A Services Approach to Preventive Mental Health for Adolescent Refugees" at the UIC College of Medicine, Department of Psychiatry.

Rebecca Harvey is an Assistant Professor and Marriage and Family Therapy Program Director at Seton Hill University. She maintains a private practice specializing in couples and sexuality issues.

Jean Hine is Reader in Criminology at De Montfort University in the United Kingdom. She directs the UK research network "Pathways into and out of Crime: Risk Resilience and Diversity."

Nan Henderson is the President of Resiliency In Action, a training, consulting, and publishing company in Southern California.

Katrina D. Hopkins is a Ph.D. candidate and recipient of an Australian Postgraduate Award, Curtin University of Technology Postgraduate Scholarship, and a Stan & Jean Perron Award for her doctoral research in resilience in Aboriginal youth.

Morgan Kahentonni Phillips (Kanien'kehá: ka/Mohawk) is a researcher for the Network for Aboriginal Mental Health Research (www.namhr.ca) and McGill University's Faculty of Medicine specializing in Indigenous health and wellness.

Martha Kent serves as Clinical Neuropsychologist at the Carl T. Hayden Veterans Affairs Medical Center in Phoenix.

Kristen Kirkland is a Research Scientist at the New York State Office of Children and Family Services Bureau of Evaluation and Research, Rensselaer, New York.

Laurence J. Kirmayer is the James McGill Professor and Director, Division of Social and Transcultural Psychiatry, McGill University; Director, Culture and Mental Health Research Unit, Lady Davis Institute, Jewish General Hospital; and Codirector, National Network for Aboriginal Mental Health Research.

Silvia H. Koller is a Professor at the Department of Developmental and Personnality Psychology, Institute of Psychology, Federal Universidade do Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil.

Line Natascha Larsen is a Ph.D. fellow, Department of Psychology, University of Copenhagen, Denmark.

Renata M. C. Libório is a Professor, Department of Education, Faculty of Science and Technology, Julio de Mesquita Filho São Paulo State University, Presidente Prudente, São Paulo, Brazil,

Elise Levin is a sociocultural anthropologist with a background in public health who works as a research manager at UIC College of Medicine, Department of Psychiatry with an interest in behavioral and social underpinnings of health practices and outcomes, sub-Saharan Africa, and social justice.

Linda Liebenberg is the Codirector of the Resilience Research Centre and adjunct Professor of Social Work at Dalhousie University, Halifax, Canada.

Lewis P. Lipsitt is Professor Emeritus of Psychology, Medical Science, and Human Development, and Research Professor of Psychology at Brown University, Providence, Rhode Island, USA.

Macalane Malindi resides in Bethlehem in the Free State Province of South Africa and is a Senior Lecturer in the Department of Education at North-West University.

Elizabeth Marshall is the Director of the Treaty Beneficiary Association and Community researcher, Eskasoni, Nova Scotia, Roots of Resilience Project.

Robyn Munford is Professor of Social Work and Social Policy, School of Health and Social Services at Massey University in Palmerston North, New Zealand.

Kate Murray is a postdoctoral fellow in the Comprehensive San Diego State University-University of California, San Diego Cancer Center Comprehensive Partnership, USA.

Orit Nuttman-Shwartz is Associate Professor, Chairperson, The Israeli National Council for Social Work and the Dean, School of Social Work, Sapir College, Israel.

Catherine Panter-Brick is Professor of Anthropology, Health, and Global Affairs at the Jackson Institute and at the Department of Anthropology, Yale University, New Haven, USA; and Senior Editor (Medical Anthropology section) of the interdisciplinary journal *Social Science & Medicine.*

Jennifer Puig is a Ph.D. candidate at the Institute of Child Development at University of Minnesota.

Michael Rutter is Professor of Developmental Psychopathology at the Social, Genetic, and Developmental Psychiatry Centre, Institute of Psychiatry, King's College London, London, United Kingdom.

Jackie Sanders is Senior Researcher, School of Health and Social Services at Massey University in Palmerston North, New Zealand.

Ingrid Schoon is a Professor of Human Development and Social Policy at the Institute of Education, University of London, London, UK.

Neerja Sharma is Associate Professor, Department of Human Development and Childhood Studies, Lady Irwin College, University of Delhi, Delhi, India.

Rekha Sharma Sen is Associate Professor, Faculty of Child Development, School of Continuing Education, Indira Gandhi National Open University, Delhi, India.

Jude Simpson is a Family Violence Prevention Advocate with Presbyterian Support Northern in New Zealand.

Elena de Casas Soberón is Senior Lecturer, Department of Psychoeducation, University of Cuauhtémoc, Aguascalientes, Mexico.

L. Alan Sroufe is the William Harris Professor Institute of Child Development and Department of Psychiatry, University of Minnesota, Minneapolis, MN, USA.

Bill Strickland is the Chief Executive Officer of Bidwell Training Center in Pittsburg, USA.

Laura M. Supkoff is a Ph.D. candidate at the Institute of Child Development at University of Minnesota.

Catherine L. Taylor is an Associate Professor at the Curtin Health Innovation Research Institute; and the Director of the Centre for Developmental Health Telethon Institute for Child Health Research, Population Sciences Division in Perth, Australia.

Linda C. Theron is a Professor of Educational Psychology in the School of Educational Sciences, North-West University, Vaal Triangle Campus, Vanderbijlpark, South Africa.

Piotr Trzesniak is a Professor at the Department of Physics and Chemistry, Institute of Sciences, Federal University of Itajubá, Itajubá, Minas Gerais, Brazil.

Michael Ungar is a Killam Professor of Social Work at Dalhousie University, Halifax, Canada.

Randall Waechter is a researcher in cognition and coinvestigator of a longitudinal study of child welfare-involved adolescents, along with Dr. Christine Wekerle, at McMaster University in Hamilton, Canada.

Froma Walsh is Professor Emerita, School of Social Service Administration and Department of Psychiatry, and Codirector, Chicago Center for Family Health, at the University of Chicago, Chicago, IL, USA.

Stevan M. Weine is a Professor of Psychiatry and Director of the International Center on Responses to Catastrophes at the University of Illinois at Chicago.

Christine Wekerle is an Associate Professor in the Department of Pediatrics at McMaster University in Hamilton, Canada; and a Research Associate at the Centre for Research on Violence Against Women and Children.

Joanna Welford is Research Fellow at De Montfort University in the United Kingdom.

Karla Jessen Williamson is Assistant Professor, Educational Foundations, University of Saskatchewan.

Gill Windle is a Research Fellow at the Dementia Services Development Centre, Institute of Medical and Social Care Research at Bangor University, in Wales, United Kingdom.

Alex Zautra is Arizona State University Foundation Professor of Clinical Psychology, and codirects ASU's Resilience Solutions Group.

Stephen R. Zubrick is a Professor at the Curtin Health Innovation Research Institute, Centre for Developmental Health Telethon Institute for Child Health Research, Population Sciences Division, in Perth, Australia.

1 Introduction to the Volume

Michael Ungar

Since 2002, the Resilience Research Centre at Dalhousie University (RRC – http://www.resilienceresearch.org) has explored culturally and contextually sensitive ways of studying resilience among children, youth and families on six continents. That work has shown that the resilience of individuals growing up in challenging contexts or facing significant personal adversity is dependent on the quality of the social and physical ecologies that surround them as much, and likely far more, than personality traits, cognitions or talents. As the authors in this volume show, *nurture trumps nature* when it comes to explaining why many children do well despite the odds stacked against them.

More than two decades after Rutter (1987) published his summary of protective processes associated with resilience, researchers continue to report definitional ambiguity in how to define and operationalize positive development under adversity. The problem has been partially the result of a dominant view of resilience as something individuals *have*, rather than as a *process* that families, schools, communities and governments facilitate. Because resilience is related to the presence of social risk factors (we can only speak of resilience in the presence of at least one stressor), there is a need for an ecological interpretation of the construct that acknowledges the importance of people's interactions with their environments.

This perspective is still young. Talking about cultural differences in how resilience is expressed, or the complexity of interactions between elements of our environment, makes the science of resilience messy. Suddenly there are many more variables to consider. Simple associations between traits like emotional regulation or an internal locus of control and positive development become less determined as we ask questions like, 'In what context does this trait contribute to resilience?' and 'What role does culture play with regard to whether a particular attribution style is valued as something that protects children or adults from problems?'

This understanding of resilience extends the discourse concerning positive human development under adversity, suggesting that social ecological factors such as family, school, neighbourhood, community services, and cultural practices are as influential as psychological aspects of positive development when individuals are under stress. An abundance of research in the field of genetics, cognition, human development, family processes, community responses to disaster and trauma studies (reviewed in the chapters that follow) provide a solid basis for a definition of resilience that explicitly accounts for the disequilibrium between vulnerable individuals who lack opportunities for growth and the influence of environments that facilitate or inhibit resilience-promoting processes.

M. Ungar (✉)
Killam Professor of Social Work,
Dalhousie University, Halifax, NS, Canada
e-mail: michael.ungar@dal.ca

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Each chapter in this volume provides evidence for this ecological understanding of resilience in ways that help to resolve both definition and measurement problems. As well, by positioning authors from both western and non-western contexts in this volume, my hope is to challenge the discursive bias of western scientists and mental health practitioners. That bias has tended to favour individual-level variables and culturally homogenized notions of the interaction between risk factors and aspects of positive development in threatening social and physical ecologies. The voices in this text are, therefore, not uniform. Most texts on resilience have tended to invite authors well known in the west doing research that conforms to standards set by western-trained psychologists. Although many of the chapters and their authors meet these standards, many others do not. In particular, I have included five interviews with individuals from the United States, Canada, South Africa, Cambodia and New Zealand, who grew up facing great adversity and not only survived, but thrived. Their stories, in Part Two, are offered as a means to ground the discussion in the other chapters by reminding us what we are really talking about: lives as they are lived and the way social and physical ecologies make resilience possible.

To these interviews are added more than two dozen chapters that help explain why lives are lived successfully despite the threats people experience to their healthy psychosocial development. As the editor, I purposefully sought out authors who were both world leaders in the study of resilience as well as those writing on the margins of the resilience field, or from the perspectives of cultures and contexts very different from my own. In many cases, I was their student, learning about South African school children orphaned because of the death of their parents from AIDS, Brazilian children who work as domestic labourers, Aboriginal youth in western Australia, gay, lesbian, bisexual, transgendered and queer youth in the United States, and communities in Greenland facing drastic cultural changes. To these voices are added more recognizable studies of children in child welfare systems in western countries, studies of the neurology of resilience, resilience in schools, the science of post-traumatic growth, the resilience of children who face violence and ways in which young people's contributions (engagement) protects them.

The authors may not all be well known in the field of resilience, but all are well established researchers from Western and non-Western countries, recognized for their work on child development, family processes and community engagement in their respective fields of Psychiatry, Social Work, Sociology, Child and Youth Studies, Education, Anthropology and Psychology. In many cases, they bring a fresh perspective to this field of research and its application to practice.

The chapters that follow build on the groundbreaking contributions of other volumes that have contributed to our understanding of resilience. Though less ecologically focused, all have hinted at the importance of social ecologies when considering the developmental trajectories of children, youth and adults. In particular, readers of this volume may want to also consider reading Reich, Zautra, and Hall's *Handbook of Adult Resilience* (2010). Likewise, two excellent volumes that helped set the stage for this present work are Luthar's *Resilience and Vulnerability* (2003) and Lester, Masten and McEwen's *Resilience in Children* (2006).

My work in this field, including the *Handbook for Working with Children and Youth: Pathways to Resilience Across Cultures and Contexts* (Ungar, 2005), like that of my colleagues, has been influenced by recent reports on important research related to the study of resilience. A short list of these works includes Sroufe, Egeland, Carlson and Collins (2005) wonderful volume on the Minnesota Study of Risk and Adaptation from Birth to Adulthood titled *The Development of the Person*; Schoon's (2006) *Risk and Resilience: Adaptations in Changing Times* that provides support for a temporal, historical perspective of resilience; and work by Elliott et al. (2006) who reported on studies of neighbourhoods in Denver and Chicago in their book titled *Good Kids from Bad Neighbourhoods: Successful Development in Social Context*.

Related works that would be of interest to readers include Brown's (2008) edited volume

Key Indicators of Child and Youth Well-being; Wong and Wong's (2006) *Handbook of Multicultural Perspectives on Stress and Coping*; Kagitçibasi's (2007) *Family, Self, and Human Development Across Cultures*; Peters, Leadbeater and McMahon's (2005) *Resilience in Children, Families, and Communities;* and Jenson and Fraser's (2006) *Social Policy for Children & Families: A Risk and Resilience Perspective*.

With this foundation in mind, *The Social Ecology of Resilience* provides access to innovative research throughout the following chapters.

Part 1: Introduction to the Theory

In this chapter, I present an ecological approach to the study of resilience and its application to practice and policy. The chapter begins with a detailed expression of resilience that defines it as a set of behaviours over time that depends on the opportunities that are available and accessible to individuals, their families and communities. Building on the research of other scholars and the RRC, I show the importance of understanding resilience as a contextually and culturally embedded construct and the need to capture what people mean when they say 'doing well when facing adversity'.

Next, Sir Michael Rutter, in his chapter titled *Resilience: Causal pathways and social ecology,* distinguishes resilience from concepts of positive psychology and competence by showing that there is heterogeneity in how humans respond to environmental hazards, whether those are physical or psychological (Rutter, 2006). His goal is to explore these different responses in order to discover the causal processes that relate to resilience. His chapter shows the wisdom that comes with more than four decades of research in this area.

The third chapter in Part 1 seeks coherence between more individually focused understandings of resilience and an ecological perspective. In their chapter, titled *Theory and measurement of resilience: Views from development,* Lewis Lipsitt and Jack Demick in the US explore the relationship between the construct of resilience and other concepts such as invulnerability, stress resistance, hardiness and protective factors. To advance an explanation of the construct, they present two developmental approaches to the study of resilience. The first, based on developmental learning theory, argues that the behavioural seeds of resilience inhere in the predisposing capabilities of the newborn infant. The second, grounded in a holistic/systems developmental perspective, proposes that the *telos* of development entails a differentiated and hierarchically integrated person-in-environment system with the capacity for flexibility, self-mastery and freedom. Although the two approaches differ in some ways, Lipsitt and Demick show that they share theoretical and methodological assumptions.

Finally, the fourth contribution to Part 1 is a challenging discussion of resilience by Piotr Trzesniak, Renata Libório and Silvia Koller titled *Resilience and Children's Work in Brazil: Lessons from physics for psychology.* The chapter begins with a discussion of resilience itself, borrowing concepts from physics to better understand what resilience means. They conclude that resilience is not 'reality' but a 'convenient way' to describe a phenomenon in which children cope with adversity. They show the application of this understanding of resilience and the cognitions that accompany it to a discussion of working children in Brazil.

Part 2: Five Interviews

Part 2 changes the focus from theory to the phenomenon of resilience as illustrated through the narratives of individuals who have experienced challenging contexts. To show the interaction between individuals and their social ecologies, I conducted five interviews with very special people from very different backgrounds.

The first is with Macalane Malindi, a lecturer in education at North-West University in South Africa. We spoke together about his upbringing and the impact that education and social policy had on him during the apartheid and post-apartheid eras.

The second interview is with Bill Strickland, a community activist and social entrepreneur in

Pittsburgh who has started a network of adult educational facilities to lift people out of poverty in urban America. Having grown up facing the same disadvantage as many of his students, Strickland shows how when we build prisons, we create prisoners and criminals. But when we build schools we nurture citizens.

The third interview is with a remarkable woman from New Zealand named Jude Simpson who, despite a history of abuse and gang involvement, has become a leading advocate for safe families and communities.

The fourth interview changes continents again. This time, I went to Canada's north and spoke with Vicki Durrant, a single parent who started a program for high-risk Aboriginal youth who spend most of their time on the street. The innovative program she runs engages hard to reach youth by providing food, shelter, and training to young people with few other resources.

The final interview is with Arn Chorn-Pond, an internationally recognized peace activist and former child soldier from Cambodia. His work now focuses on the revival of traditional music and art after the Khmer Rouge. His story of his own survival shows how important the arts can be to young people's ability to cope with extreme adversity and recover later from the trauma of war.

Part 3: The Individual (In Context)

Martha Kent's chapter begins Part 3 that focuses on individual factors and their interaction with social ecologies. Her chapter is titled *From neurons to social context: Restoring resilience as a capacity for good survival.* It examines the neurobiological mechanisms that facilitate adaptation. The chapter provides a brief overview of the basic brain, endocrine and behavioural mechanisms that are related to resilience at a biobehavioural level. A number of concepts are reviewed such as homeostasis, affiliation as an anti-stress system, brain circuits and their responsivity to context, mirror neurons, social neural networks and the nature of personal agency.

The next chapter by Laura M. Supkoff, Jennifer Puig and Alan Sroufe is titled *Situating resilience in developmental context.* The authors link the theory of resilience to principles of general development and show that resilience is similar to other outcomes. They show that the 'hierarchical' or 'cumulative' feature of human development is particularly relevant to the study of resilience, with adaptation over time the product of a child's current circumstances and the supports and challenges that are present. They show that when children overcome adversity or recover following exposure to trauma, their success is the result of earlier positive supports and experiences of positive adaptation.

In the third chapter, *Temporal and contextual dimensions to individual positive development: A developmental-contextual systems model of resilience,* Schoon introduces a developmental-contextual model of resilience that takes into account developmental and contextual influences on individuals' manifest adaptation under adversity. Building on her research reviewing historical cohort data sets in Britain, Schoon describes multiple contextual factors and their influence on individual functioning over the life course. Her work shows that early experiences in childhood do not necessarily predict negative development later and that assumptions of developmental constancy are overstated.

The fourth chapter of Part 3, *Girls' violence: Criminality or resilience?* by Jean Hine and Joanna Welford, examines girls' violence and considers whether it is a risk factor or part of a strategy by some youth to sustain resilience. Hine and Welford show that violent behaviour by girls is 'doubly condemned' as violence and an unfeminine expression of identity. Using narratives from girls themselves, Hine and Welford show that within gendered spaces that marginalize young women, violence can sometimes be a rational response that helps girls cope when there are limited choices.

Part 4: The Family

Leading off Part 4 on the family, Froma Walsh presents *Facilitating family resilience: Relational resources for positive youth development in conditions of adversity.* As one of the innovators of the concept of family resilience, Walsh's work

shows us that a social ecological understanding of resilience recognizes the important contributions of family and social networks, community services and cultural influences on young people. The chapter offers relational and systemic perspectives on resilience, first considering how key family bonds in the multigenerational network of relationships can nurture children's resilience. It then addresses resilience in the family as a functional unit, from ecological and developmental perspectives. It describes Walsh's (2006) research-informed family resilience framework developed for clinical and community-based practice to strengthen children and families facing adversity and the key processes in family resilience, culled from findings from research on resilience and effective family functioning.

The next chapter by Christine Wekerle, Randall Waechter and Ronald Chung explores *Contexts of vulnerability and resilience: Childhood maltreatment, cognitive functioning and close relationships*. Wekerle and her colleagues examine the problem of childhood maltreatment and its relationship to resilience. Specifically, they discuss two elements of resilience, those external to the child like close/romantic relationships and the care received from child welfare caseworkers, and internal ones such as neurocognitive processes. They argue that following disclosure of abuse, there is much that can be done to improve individual development. They propose several strategies that may be helpful creating a coherent sense of self that buffers the impact of maltreatment. These include strategies such as cognitive re-appraisal, contextualizing the maltreatment event, dealing with shame and guilt, and authoring an accurate and self-compassionate narrative.

These same themes are discussed in very different ways by Kimberly DuMont, Susan Ehrhard-Dietzel and Kristen Kirkland in their chapter *Averting child maltreatment: Individual, economic, social and community resources that promote resilient parenting.* Understanding resilience as an ecological construct, they show that a mother's parenting behaviours help nurture the healthy development of her child and protect the child from maltreatment. But they also argue that to this parent–child understanding of resilience must be added a more contextualized appreciation for the child-rearing environment that influences the ability of caregivers to nurture their children. Reporting on a study with a sample of mothers who face a great deal of adversity and were at risk of neglecting or abusing their children, the chapter identifies which factors are likely to predict poor outcomes and who defines the nature of risk.

Gill Windle and Kate M. Bennett then broaden the focus to a discussion of caregiving in their chapter *Caring relationships: How to promote resilience in challenging times.* They argue that the burden of care provision within a family (whether to a child, spouse or parent) poses considerable risk to psychosocial outcomes. However, as not all caregivers are affected negatively, Windle and Bennett examine the factors that are likely to predict the resilience of adult caregivers.

In the fifth chapter in Part 4, Jackie Sanders, Robyn Munford and Linda Liebenberg write about *Young people, their families and social supports: Understanding resilience with complexity theory.* They take the innovative approach of exploring the way complexity theory can help us understand resilience among young people. The chapter uses a case example to apply three aspects of complexity theory to practice, demonstrating how complexity theory is congruent with an ecological understanding of the supports (family and otherwise) that make resilience more likely.

Part 5: The School

Part 5 explores the considerable influence school environments have on human development. The first contribution is by Dorothy Bottrell and Derrick Armstrong whose chapter, *Local resources and distal decisions: The political ecology of resilience*, examines the resilience of young people as they cope with processes of school exclusion, placement as students with emotional and behavioural difficulties, and interactions with the criminal justice system. They report findings from a qualitative study in the UK called 'Pathways Into and Out of Crime: Risk, Resilience and Diversity' that showed the links between criminality, school experiences and coping.

The next chapter switches the discussion to South Africa where Linda Theron and Petra Engelbrecht discuss the role of educators. Their chapter, titled *Caring teachers: Teacher–youth transactions to promote resilience* shows that when communities are challenged by AIDS-related losses, divorce and violence, teachers become particularly important as 'agents of resilience'. They use stories collected from non-white South African youth who face significant challenges to show how caring teachers that are accessible to children provide an ecological source of hope, optimism and mentorship.

The following chapter by Neerja Sharma and Rekha Sharma Sen shifts the focus to India and *Children with disabilities and supportive school ecologies.* They focus specifically on children with disabilities and the disadvantages they face inside and outside educational institutions. Even for those fortunate enough to receive formal education, Sharma and Sen show that children's experiences vary greatly. Reporting on their own research, they discuss how schools can play a role mitigating the risks children with disabilities face. Their work is as applicable to western contexts as it is to India, identifying the physical, socio-cultural and systemic features of schools that serve protective functions and promote positive development.

Nan Henderson next discusses *Resilience in schools and curriculum design,* building on her successful work as a lecturer on school resilience. She shows through case examples how important schools are to fostering resilience among children and youth. The nature of that school environment will influence everything from a child's academic success, to the safety they experience, and their capacity for social and emotional well-being.

Part 6: The Community

In Part 6, the focus widens even further to community factors that influence resilience. Steven Weine, Elise Levine, Leonce Hakizimana and Gonwo Dahnweigh in their chapter *How prior social ecologies shape family resilience amongst refugees in U.S. resettlement*, discusses the experiences of refugee families during resettlement and how they overcome the multiple adversities that result from exposure to war, forced displacement and long periods of internment in refugee camps and the stressful resettlement process that follows. While the stressors are complex, Weine et al. shows that refugee families bring with them family and community resources that buffer the impact of resettlement. Their work builds on results from an ethnographic study of 73 Liberian and Burundian refugee adolescents in the US. Much of what predicts a family's ability to cope depends on the capacity of its community to help the family find or build new churches, secure adequate living space and share parenting responsibilities with other adults. The implications for policy and resettlement programs is discussed.

In the next chapter, Rebecca Harvey discusses her own personal and professional experience as a queer family therapist/supervisor. She provides case examples of a variety of youth who identify as queer, an umbrella term for lesbian, gay, bisexual, transgendered and queer. Her work, titled *Young people, sexual orientation and resilience*, is a kaleidoscope of images of young people and the multiple ways they cope when marginalized in their communities, including the role that mentors, therapists, schools and families play in nurturing these young people's resilience.

The following chapter by Kate Murray and Alex Zautra is titled *Community resilience: Fostering recovery, sustainability and growth.* In their chapter, they define community resilience and identify the components that predict it will occur. Three dimensions are highlighted: recovery, sustainability and growth. Their discussion focuses on communities like those of Sudanese refugees who have experienced forced migration, emphasizing the importance that community plays to future adaptation. They show through their report on their research that community collaboration, shared identity and empowerment increase bonding and bridging capital that promote the well-being of people under stress. They argue that an emphasis on community resilience places value on the social connections, policies, programs and community context necessary for resilience in different cultures and contexts.

The next chapter of Part 6 is by Theresa S. Betancourt and focuses on war-affected youth in the context of Sierra Leone. Her work, titled *The social ecology of resilience in war-affected youth: A longitudinal study from Sierra Leone*, reports on findings from a mixed methods longitudinal study. Betancourt shows that a developmental and ecological perspective on the lives of children affected by armed conflict helps us to see the role environment plays in how well children cope during and after exposure to violence. Individual factors interact with family and community factors to bolster wellbeing, securing for children the cultural and community resources necessary for mental health while addressing the problems of stigma and alienation.

The final chapter related to community is by Pat Dolan from Ireland and is titled *Travelling through social support and youth civic action on a journey towards resilience.* In it, Dolan explores the connection between resilience and social support and how each is affected by individual, family and wider ecological factors that can be addressed at the level of social policy. The focus is on concepts of social support networks and how resilience can be built at multiple levels through youth civic action. Several short vignettes are presented that show how good policy can affect young people and the programming required to make this happen.

Part 7: Culture

Part 7, which discusses the links between culture on resilience, begins with a chapter by Catherine Panter-Brick and Mark Eggerman entitled *Understanding culture, resilience, and mental health: The production of hope.* Reporting on their multidisciplinary and longitudinal studies of Afghan families that included paired interviews with adolescents and adult caregivers, the authors argue that cultural values are the 'bedrock' of resilience: they underpin the meaning attributed to great suffering, hope for the future and a sense of emotional, social and moral order to ordinary and extraordinary aspects of life. Remarkably, they show that war-related trauma is not the principal driver of poor mental health: traumatic experiences are linked to fractured family relationships and a failure to achieve personal, social and cultural milestones. Resilience, meanwhile, rests upon a demonstration of family unity. In the context of structural disadvantage that includes poverty, crowded living conditions and exposure to violence, Panter-Brick and Eggerman also show that cultural dictates come to entrap Afghans in the pursuit of honour and respectability, a core facet of psychosocial resilience. Their chapter highlights linkages between psychosocial and structural resilience, cautioning against a simplistic view of culture as a set of protective resources. Instead, they discuss the ramifications of social policies that raise not just hope, but undue expectations without sufficient resource provision.

The next chapter by Peter Berliner, Line Natascha Larsen and Elena de Casas Soberón provides a case study of Greenland's Paamiut Asasara, a program to promote community resilience using local values. This chapter shows how one community facing high rates of crime, violence, suicide, drug abuse and child neglect were able to address these social problems by strengthening community-wide resilience. Interventions included the revitalization of the local culture, shared activities, the building of social networks, and opening up opportunities for creative self-expression. The chapter reports at length on the participants' descriptions of the changes they experienced and describes differences in the community at large.

The following chapter by Laurence J. Kirmayer, Stéphane Dandeneau, Elizabeth Marshall, Morgan Kahentonni Phillips and Karla Jessen Williamson shifts the focus once again. It is titled *Toward an ecology of stories: Indigenous perspectives on resilience.* Kirmayer and his colleagues, well-known researchers in the area of resilience among Aboriginal people in Canada and Australia, argue for more attention on how people cope outside the US and UK. They show that indigenous peoples have their own unique cultures and contexts, and that their historical rootedness can help them cope with the profound disadvantages caused by colonization and the

political oppression and bureaucratic control that followed. In this chapter, the authors incorporate material from collaborative work in Cree, Inuit, Mohawk, Mi'kmaq and Métis communities to explore how cultural ideologies, institutions and practices sustain processes associated with resilience.

The next chapter in Part 7 is by Orit Nuttman-Shwartz from Israel and is titled *Macro, meso and micro perspectives of resilience during and after exposure to war*. In it, she explores the role that sense of belonging to one's family, community and nation plays in buffering the impact of the stress and trauma related to war. Reporting on a sample of Israeli young people living on the border with Gaza, she suggests that feelings of national identity and sense of belonging help people to cope and are associated with the meaning people make from their experiences of violence. This work, like the rest of the chapters in Part 7, help us to think more broadly about the socio-political ecologies that shape resilience, no matter which side of a war we are on.

In the last chapter by Katrina D. Hopkins, Catherine L. Taylor, Heather D'Antoine and Stephen R. Zubrick, *Predictors of resilient psychosocial functioning in Western Australian Aboriginal young people exposed to high family-level risk*, the authors review results from a study in Western Australia of stress exposure and resilience among Aboriginal children and young people who come from families where there is violence. The findings are provocative given the social and economic marginalization the youth face. Results show that the youth who are the most resilient are those who report *less* adherence to their culture and come from *lower* rather than higher socioeconomic households.

Next Steps

Combined, these chapters offer a unique compilation of perspectives on resilience that emphasizes the social ecologies that make resilience more likely to occur. Each part provides a sampling of some of what we already know. More importantly, each part hints at what more is possible. There continues to be large gaps in our knowledge of how social ecologies influence resilience, even though it is obvious that individual oriented understandings of the resilience construct overlook many of the factors that shape successful development under stress. What we need now is more research, both qualitative and quantitative, to capture indigenous knowledge, practice-based evidence and narratives of success, as well as empirical cross-sectional and longitudinal studies that explore homogeneity and heterogeneity among children, youth, families and communities at-risk. This is the goal of the RRC and its partners worldwide.

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Part I

Introduction to the Theory

Social Ecologies and Their Contribution to Resilience

2

Michael Ungar

In the physical sciences, resilience refers to a quality of a material or an ecosystem (Walker & Salt, 2006). A trestle of steel is more or less resilient depending on its capacity to recover from load bearing and return to its previous state unchanged. A natural environment that sustains an industrial disaster and recovers also demonstrates resilience. The term began to appear with frequency in the psychological sciences in the 1980s and was a metaphor for the ability of individuals to recover from exposure to chronic and acute stress. In the language of human cybernetics (Bateson, 1972; von Bertalanffy, 1968), individuals return to a state of homeostasis (recovery to a previous level of functioning) or, in rare cases, experience change and growth (morphogenesis) following exposure to a toxic environment. These processes, like the environments in which they take place, were theorized as predictable and measurable phenomena that could be manipulated through interventions within neatly nested ecological levels.

A simple example of this positivist epistemology in the study of resilience was Anthony's (1987) notion of psychoimmunization in which early or current experiences of stressful events, when combined with high social support, were shown to be less likely to be pathogenic. The individual was thought to develop an "invulnerability" to later risk exposure. Recovery from trauma could be stimulated by engaging the individual in a process that promoted his or her expression of latent coping capacity. Resilience was reified in psychological discourse as something intrapersonal even if it was dependent on the resources, or structures, of the wider environment for its realization. Anthony suggested that "what are needed are objective measures regarding such structures and the degree of the individual's participation in them" (p. 7). Almost always, early studies of resilience focused on the individual as the locus of change. The environment (a family, school, institution, or community) was assessed for its influence on individual developmental processes but it was still the qualities of the individual, not the environment, which intrigued researchers. Self-efficacy (Bandura, 1977), sense of coherence (Antonovsky, 1987), self-esteem (Brown & Lohr, 1987), prosociality (Dovidio, Piliavin, Schroeder, & Penner, 2006), and other individual qualities associated with resilience have been hypothesized as more or less amenable to protection from the negative influence of environmental stressors and the health-promoting function of supports (Murphy & Moriarty, 1976; Werner & Smith, 1982).

By implication, within this individually focused view of resilience (what I'll term "the first interpretation of the resilience research"), those who are disadvantaged are expected to exercise personal agency in regard to accessing opportunities in their environments in order to increase their psychological functioning. This approach, mirroring materials science, suggests latent capacity of the

M. Ungar (✉)
Killam Professor of Social Work, Dalhousie University, Halifax, NS, Canada
e-mail: michael.ungar@dal.ca

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individual. It focuses attention less on processes of social production that create conditions of risk and growth than it does on the individual's temperament that makes him or her amenable to change. This discourse of individualism embodied by western psychological sciences (and reflecting a cultural narrative of the rugged individual who "beats the odds") is changing as evidence gathers for a more contextualized understanding of human development (Lerner, 2006). Studies of individual qualities limit our understanding of psychological phenomena to a fraction of the potential factors that can explain within and between population differences. It was for this reason that groundbreaking work by Rutter (1987) helped shift our understanding of resilience as the result of individual traits that predicted coping under stress to processes that included reducing risk exposure, developing adequate self-esteem, preventing the negative impact of risk factors on developmental trajectories, and opening new opportunities for development by shaping the child's environment.

In this chapter, I summarize our emerging understanding of the relationship between individuals and the social and physical ecologies that make resilience more likely. Resilience is defined as a set of behaviors over time that reflect the interactions between individuals and their environments, in particular the opportunities for personal growth that are available and accessible (Ungar 2010a, 2010b, 2011b). The likelihood that these interactions will promote well-being under adversity depends on the meaningfulness of these opportunities and the quality of the resources provided. This understanding of resilience distinguishes between strengths within a population and the role strengths play when individuals, families, or communities are under stress. In this chapter I show that resilience results from a cluster of ecological factors that predict positive human development (more than individual traits), and that the effect of an individual's capacity to cope and the resources he or she has is influenced by the nature of the challenges the individual faces. This interactional, ecological understanding of resilience is supported by brief discussion of two studies being done by the Resilience Research Centre (RRC) at Dalhousie University in Canada (of which I am the Principal Investigator and Co-Director), one mixed methods and one qualitative. Both are international in scope.

An Ecological Perspective of Resilience

Arguing against a paradigm of individualism, Lerner (2006) and other human developmentalists emphasize a more contextualized understanding of children as reflected in the work of Vygotsky (1978) that explores the scaffolding of experience that supports human development. This shift to a position that I will term "ecological" is an important part of the arguments made by all the authors of the chapters in this volume. An interactional, environmental, and culturally pluralistic perspective provides a second way to understand resilience. It builds on the process oriented arguments of Rutter (1987) and Lerner (2006). Its proponents are showing that environments count a great deal more than we thought, perhaps even more than individual capacity, when we investigate the antecedents of positive coping after individuals are exposed to adversity. Whether mapping the effect of schools on individuals (Chapter 21), or the shaping of neuron networks that result from healthy attachments (Chapter 11), a more ecological understanding of resilience suggests complexity in reciprocal person–environment interactions. The goodness of fit between elements of the mesosystem (interactions between family, school, and community systems; Bronfenbrenner, 1979) predicts positive growth in suboptimal conditions. As individuals or environments change, the factors most likely to correlate with positive developmental outcomes also change. Luthar, Cicchetti, and Becker (2000) suggest that successful adaptation is properly operationalized when it reflects high fidelity to the way good development is theorized for a particular sample of at-risk individuals in a particular context. Of course, which interaction is most likely to be a catalyst for resilience depends in part on which outcomes are chosen as the measures of good functioning under stress. In few instances are *a priori* assumptions of positive outcomes negotiated with research participants to

ensure contextual relevance. More often, those studying resilience impose a standard set of outcome measures that are reasoned to be relevant to a population but may overlook indigenous coping strategies that are adaptive in contexts where there are few choices for other forms of adaptation (Castro & Murray, 2010; Gilgun & Abrams, 2005; Ungar 2010a, 2010b). The child who works, for example, may according to a number of researchers (International Union of Anthropological and Ethnological Sciences, 2002; Liborio & Ungar, 2010; Liebel, 2004) argue that his or her burdensome employment brings several advantages with regard to sense of self-worth, hope for the future, and respect from others for the contribution he or she makes to his or her family. While not an argument for complete relativism (not all outcomes desired by a specific population are necessarily advantageous long-term), an ecological understanding of resilience positions these negotiations for control of meaning and the resources that support growth as an integral part of all studies of resilience and their application to practice.

I've termed this contextualized approach to the study of resilience a social ecological one (Ungar, 2008, 2011a). Whereas proponents of an individual interpretation of capacity under stress still emphasize personal qualities as the *sine quo non* of developmental outcomes, interactionists posit individual gains as the consequence of congruence between individual needs and environments that facilitate growth. A social ecological perspective on resilience that evolves from this interactional perspective results in more focus on the social and physical environment as the locus of resources for personal growth. As the authors in this volume show, the individual and ecological positions are neither mutually exclusive nor antagonistic. They simply emphasize different aspects of the processes associated with resilience, whether those processes are compensatory, protective, or promotive (Luthar et al., 2000). For example, the capacity to avoid delinquency despite early experiences of deprivation may be attributable to individual traits like attachment to a caregiver, a lack of genetic predisposition towards antisocial behavior, self-regulation, or gender (Henry, Caspi, Moffitt, Harrington, & Silva, 1999; Moffitt, 1997; Rutter, 2008), or be a consequence of structural factors like neighborhood stability, access to employment, and avoidance of discrimination (Elliott et al., 2006; Law & Barker, 2006; Sampson, 2003). Ecological interpretations of resilience make clear the complexity inherent in the processes that contribute to growth. Even in optimal neighborhoods a child's capacity to avoid delinquency may still depend on early attachments with caregivers (Sroufe, Egeland, Carlson, & Collins, 2005) and epigenetic processes that moderate the effects of genes that predispose a child from a criminogenic home from repeating patterns of antisocial behavior (Hudziak & Bartels, 2008; Moffitt, Caspi, Rutter, & Silva, 2001).

The problem is not the complementarity of individual and ecological approaches to the study of resilience, but the oversight that results when ecological aspects of resilience are de-emphasized (individual resilience is seldom overlooked in psychological research). Understood in this complex, multidimensional way, resilience is as, or more, dependent on the capacity of the individual's physical and social ecology to *potentiate* positive development under stress than the capacity of individuals to exercise personal agency during their recovery from risk exposure. A broader ecological understanding of resilience is more likely to produce interpretive models that explain how people navigate through adverse environments over time (Schoon, 2006).

Ecological Opportunity Structures and Resilience

An intervention by Bierman et al. (2004), members of the Conduct Problems Prevention Research Group, provides support for this ecological interpretation of resilience. Based on a survey of 10,000 kindergarten students in four high-risk neighborhoods (Durham, NC; Nashville, TN; Seattle, WA; rural central Pennsylvania), 891 children were identified as being at risk for future conduct problems. Using random assignment to intervention and control groups, a 10-year intervention was performed that included