



Four Dimensions of Childhood Brain, Mind, Culture, and Time

February 11-13, 2005

CONFERENCE PROGRAM

Korn Convocation Hall

Anderson School of Management

UCLA

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Four Dimensions of Childhood

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1. ***Organizing Committees***

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Claudia Mitchell-Kernan, PhD, Vice Chancellor of Graduate Studies, Dean of Graduate Division, UCLA
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Thomas S. Weisner, PhD, Professor, Department of Psychiatry & Biobehavioral Sciences, Center for Culture and Health (NPI), Department of Anthropology, UCLA
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This is an activity offered by UCLA Neuropsychiatric Institute, a CMA-accredited provider.



3. Opening Remarks

As president of The Foundation for Psychocultural Research, I am delighted to welcome you to our second international interdisciplinary conference. The conference focuses on current neurobiological and psychological research and anthropological fieldwork and scholarship of early life experiences and their relationship to later psychological and psychosocial outcomes.

The Foundation is committed to fostering a new community of researchers and clinicians interested in forging connections between neurobiological, cultural, and clinical levels of understanding, knowledge, and practice. With this goal in mind, I am particularly excited about the prospects for this conference. We have worked hard with the Conference Academic Committee at UCLA to bring together the brightest thinkers and clinicians from the United States, Canada, and Japan, to explore the multidimensional meanings and clinical realities surrounding early life experiences and their implications for neurodevelopment, social development, and vulnerability to or protection from psychopathology.

I would like to take this opportunity to thank Vice Chancellor Claudia Mitchell-Kernan. This conference would not be possible without the generous and energetic participation of, the conference moderators, presenters, and panelists, and the academic and organizing committees. I thank you all most sincerely for your tremendous efforts on behalf of this conference.

I also thank the National Institute of Child Health and Human Development (NICHD) and the National Institute of Mental Health (NIMH) for supporting this conference.

Finally, I would like to extend a special thank you to my staff for all their hard work.



*Robert Lemelson, President
The Foundation for Psychocultural Research*

4. *Introduction*

The profound influence of early life environments and experiences on physiological and behavioral reactivity in later life underscores the importance of a broader and deeper understanding of multiple contexts—biological, psychological, social, and cultural—and the ways these contexts shape neurodevelopmental pathways. The purpose of this three-day conference is to provide a multidimensional view of childhood by exploring the interaction of contexts and their mutual influence on development. This conference challenges the notion that any single approach is sufficient to understanding the complex effects of cultural and social experiences on children.

On the first day, we present biological, psychological, and anthropological perspectives on infancy. Topics include animal models of vulnerability to variation in maternal care, critical period mechanisms, and human infant attachment. On the second day, we present interdisciplinary sessions focusing on enculturation and socialization processes in childhood. Topics include the evolution of social play, the internalization of culture, the acquisition and expression of conditioned defeat, and social engagement and social conflict within the normal range of cross-cultural experiences, including bullying and initiation rituals. The third day of the conference focuses on the biological and cultural implications of early adverse experiences in later life, including the neurobiological effects of childhood abuse, the cultural and neighborhood contexts of child maltreatment, and ethnopsychology as a protective mediator of cultural change.

Alternating with sessions of formal presentations by neuroscientists, psychologists, clinicians, and anthropologists, each day will include ethnographic and clinical case studies on normative and adverse experiences in infancy and early childhood. Each case study presentation will be followed by an interdisciplinary roundtable discussion. We believe that offering specific foci for discussion will engage members of the various disciplines and foster integration of perspectives. In addition to these discussions, on the evening of the first day of the conference (Friday, Feb. 11, 2005), we are convening an interdisciplinary keynote panel that will specifically address the long-term psychosocial and cultural implications of the tsunami disaster in the Aceh region on Indonesian children and families.

In closing, we believe that the conference will give all of us a unique opportunity to cross academic boundaries as we explore the complexity and diversity of childhood experiences and their significance with respect to individual vulnerability or resistance later in life.



Conference Program at a Glance

Friday, February 11, 2005

8:00-8:30	Introduction
8:30-9:00	Opening keynote (Melvin Konner, Emory University)
9:00-10:15	<i>Ethnographic Case Study & Interdisciplinary Roundtable</i>
10:45-12:30	Life-long biological effects of infant experience
2:00-3:15	<i>Clinical Case Study & Interdisciplinary Roundtable</i>
3:45-5:30	Psychological and anthropological perspectives on early attachment relationships
7:30-9:00	<i>Keynote Panel: Implications of the tsunami disaster in the Aceh region on Indonesian children and families</i>

Saturday, February 12, 2005

8:00-8:30	Summary of previous day
8:30-9:45	<i>Ethnographic Case Study & Interdisciplinary Roundtable</i>
10:15-12:00	Social experience and social context
1:30-2:45	<i>Clinical Case Study & Interdisciplinary Roundtable</i>
3:15-5:25	Dominance, aggression, and fear

Sunday, February 13, 2005

8:00-8:30	Summary of previous day
8:30-10:00	<i>Ethnographic Film & Interdisciplinary Roundtable</i>
10:30-12:15	Clinical and cultural outcomes of early adverse experiences
12:15-12:45	Summary and future directions
12:45-1:00	Concluding remarks



Day 1: Friday, February 11, 2005
The Interface of Brain and Culture in Early Life

7:30-8:00 Breakfast
Registration and Distribution of Conference Kit

8:00-8:30 Introduction

Robert Lemelson, PhD, President, The Foundation for Psychocultural Research (FPR); Lecturer, Departments of Anthropology and Psychology, University of California, Los Angeles (UCLA)

Claudia Mitchell-Kernan, PhD, Vice Chancellor of Graduate Studies, Dean of Graduate Division, UCLA

8:30-9:00 Opening Keynote

Early relationships: An anthropological perspective

Melvin Konner, MD, PhD, Samuel Candler Dobbs Professor of Anthropology and the Program in Neuroscience and Behavioral Biology, Emory University

9:00-10:15 Session 1

Ethnographic Case Study & Interdisciplinary Roundtable-1

Culture, biology, and attachment in Central Africa and the United States: An integrated evolutionary approach

Presented by: Barry S. Hewlett, PhD, Professor, Department of Anthropology, Washington State University, Vancouver

Moderator: Thomas S. Weisner, PhD, Professor, Department of Psychiatry and Biobehavioral Sciences, Center for Culture and Health (NPI); Department of Anthropology, UCLA

Panelists:

Takao K. Hensch, PhD, RIKEN Brain Science Institute, Japan

Harvey Karp, MD, Tenth Street Pediatrics

Melvin Konner, MD, PhD, Emory University

Robert A. LeVine, PhD, Harvard University

Paul M. Plotsky, PhD, Emory University

10:15-10:45 Coffee Break

10:45-12:30 Session 2

Life Long Biological Effects of Infant Experience

Session Chair: Paul M. Plotsky, PhD, Director, Stress
Neurobiology Laboratory, Emory University School of Medicine

- 10:45-11:10 *Critical period mechanisms of experience-dependent plasticity*
Takao K. Hensch, PhD, RIKEN Brain Science Institute, Japan
- 11:10-11:35 *Epigenetic regulation of behavior in rodents: The importance of mom*
Darlene D. Francis, PhD, University of California, Berkeley
- 11:35-12:00 *Rodent and primate models of vulnerability to mood disorders: Through the looking glass*
Paul M. Plotsky, PhD, Emory University School of Medicine

12:00-12:30 Comments (10 minutes) and Discussion (20 minutes)

12:30-1:15 Lunch

1:15-2:00 Dessert and Poster Session (Posters 1-6 will be presented)

2:00-3:15 Session 3

Clinical Case Study & Interdisciplinary Roundtable-2

A mother-infant case study involving intergenerational violent trauma and pseudoseizures across three generations: Observations through age 4 years

Presented by: Daniel S. Schechter, MD, Assistant Professor of Clinical Psychiatry (in Pediatrics), Columbia University College of Physicians & Surgeons

Moderator: Mark Barad, MD, PhD, Assistant Professor, Department of Psychiatry and Biobehavioral Sciences, Brain Research Institute and Neuropsychiatric Institute, UCLA

Panelists:

Nathan A. Fox, PhD, University of Maryland, College Park

Darlene D. Francis, PhD, University of California, Berkeley

Emeran Mayer, MD, UCLA

Thomas S. Weisner, PhD, UCLA

3:15-3:45 Coffee Break

3:45-5:30 Session 4**Psychological and Anthropological Perspectives on Early Attachment Relationships**

Session Chair: Robert A. LeVine, PhD, Roy E. Larsen Professor of Education and Human Development, Emeritus, Harvard University

- 3:45-4:10 *Temperament and social engagement: The origins of human infant attachment*
Nathan A. Fox, PhD, University of Maryland, College Park

- 4:10-4:35 *Outcome correlates of parent-child bedsharing: An eighteen-year longitudinal study*
Thomas S. Weisner, PhD, UCLA

- 4:35-5:00 *Plasticity and variation: Cultural influences on parenting and early child development within and across populations*
Robert A. LeVine, PhD, Harvard University

- 5:00-5:30 Comments (10 minutes) and Discussion (20 minutes)

5:30-6:45 Dinner**7:30-9:00 Special Keynote Panel: Implications of the tsunami disaster in the Aceh region on Indonesian children and families****MODERATOR**

Allan Tobin, PhD, Managing Director, MRSSI; Professor Emeritus, UCLA; former Director, Brain Research Institute, UCLA

PANELISTS

Cameron Hay-Rollins, PhD, Adjunct Assistant Professor, UCLA Center for Culture and Health

Helianti Hilman, SH, LLM, Executive Director, Yayasan Bina Usaha Lingkungan (YBUL) a Jakarta based NGO

Douglas Hollan, PhD, Professor and Chair, UCLA Dept. of Anthropology
Livia Iskandar-Dharmawan, Dra., MSc, Coordinator, PULIH Foundation, Centre for Trauma Recovery and Psychosocial Intervention, Jakarta, Indonesia

Melvin Konner, MD, PhD, Samuel Candler Dobbs Professor of Anthropology and the Program in Neuroscience and Behavioral Biology, Emory University

Robert S. Pynoos, MD, MPH, Professor of Psychiatry, UCLA Department of Psychiatry and Biobehavioral Sciences; Co-Director, National Center for Child Traumatic Stress

Geoffrey Robinson, PhD, Director, UCLA Center for Southeast Asian Studies
Stephen J. Suomi, PhD, Chief of the Laboratory of Comparative Ethology, National Institute of Child Health and Human Development (NICHD)



Day 2: Saturday, February 12, 2005
Enculturation and Socialization Processes in Childhood

7:30-8:00 Breakfast

8:00-8:30 Summary of Previous Day

Emeran Mayer, MD, Professor, Departments of Medicine, Physiology and Psychiatry & Biobehavioral Sciences, UCLA

8:30-9:45 Session 5

Ethnographic Case Study & Interdisciplinary Roundtable-3

Inuit morality play and the Danish medical officer

Presented by: Jean Briggs, PhD, Professor Emeritus, Department of Anthropology, Memorial University of Newfoundland

Moderator: Douglas Hollan, PhD, Professor and Chair, Department of Anthropology, UCLA

Panelists:

Sergio M. Pellis, PhD, University of Lethbridge

Naomi Quinn, PhD, Duke University

Daniel J. Siegel, MD, Center for Human Development

Carol M. Worthman, PhD, Emory University

9:45-10:15 Coffee Break

10:15-12:00 Session 6

Social Experience and Social Context

Session Chair: Carol M. Worthman, PhD, Samuel Candler

Dobbs Professor of Anthropology; Director, Laboratory of Comparative Human Biology, Department of Anthropology, Emory University

10:15-10:40 *The internalization of culture*
 Naomi Quinn, PhD, Professor Emeritus, Duke University

10:40-11:05 *The evolution of social play*
 Sergio M. Pellis, PhD, University of Lethbridge

11:05-11:30 *How culture gets under the skin: Biocultural dynamics of child development*
 Carol M. Worthman, PhD, Emory University

11:30-12:00 Comments (10 minutes) and Discussion (20 minutes)

12:00-12:45 Lunch Break

12:45-1:30 Dessert and Poster Session (Posters 7-11 will be presented)

1:30-2:45 Session 7

Clinical Case Study & Interdisciplinary Roundtable-4

Clinical perspectives on early trauma

Presented by: Alicia F. Lieberman, PhD, Professor of Psychology, Vice Chair for Academic Affairs, University of California, San Francisco (UCSF) Department of Psychiatry; Director of the Child Trauma Research Project, San Francisco General Hospital

Moderator: Robert S. Pynoos, MD, MPH, Professor of Psychiatry, Department of Psychiatry and Biobehavioral Sciences; Co-Director, National Center for Child Traumatic Stress, UCLA

Panelists:

Gilbert Herdt, PhD, San Francisco State University

Jaana Juvonen, PhD, UCLA

Stephen J. Suomi, PhD, NICHD

Carol M. Worthman, PhD, Emory University

2:45-3:15 Coffee Break

3:15-5:25 Session 8

Dominance, Aggression, and Fear

Session Chair: Jaana Juvonen, PhD, Professor and Area Chair of Developmental Psychology, Department of Psychology, UCLA

3:15-3:40 *Social conflict and the acquisition and expression of conditioned defeat*
Kim L. Huhman, PhD, Georgia State University

3:40-4:05 *Gene-environment interactions and the socialization of aggression in primates*
Stephen J. Suomi, PhD, NICHD

4:05-4:30 *Context and correlates of bullying in middle school*
Jaana Juvonen, PhD, UCLA

4:30-4:55 *Sambia male resocialization through ritual initiation: Some lessons from 30 years' research*
Gilbert Herdt, PhD, San Francisco State University

4:55-5:25 Commentary (10 minutes) and Discussion (20 minutes)

5:25 Adjourn



Day 3: Sunday, February 13, 2005
Clinical and Cultural Outcomes of Early Adverse Experiences

7:30-8:15 Breakfast

8:15-8:30 Summary of Previous Day

Douglas Hollan PhD, Professor and Chair, UCLA Department of Anthropology

8:30-12:00 Session 9

Clinical and Cultural Implications of Early Adverse Experiences

Session Chair: Robert Lemelson, PhD, President, FPR; UCLA

8:30-9:00 *Neurobiological effects of childhood abuse: Implications for the pathophysiology of depression and anxiety*

Charles B. Nemeroff, MD, PhD, Reunette W. Harris Professor and Chair, Department of Psychiatry and Behavioral Sciences, Emory University School of Medicine

9:00-10:30 Ethnographic Case Presentation (Film) and Interdisciplinary Roundtable-5

Longterm outcomes of social violence for 3 Indonesian families

Presented by: Robert Lemelson, PhD, FPR, UCLA

Panelists:

Eileen Anderson-Fye, EdD, UCLA

Livia Iskandar-Dharmawan, Dra., MSc, PULIH Foundation

Jill E. Korbin, PhD, Case Western Reserve University

10:30-11:00 Coffee Break

11:00-11:25 *Child maltreatment: The cultural and neighborhood context*

Jill E. Korbin, PhD, Case Western Reserve University

11:25-11:50 *Never leave yourself: Ethnopsychology as protective mediator of rapid cultural change among schoolgirls in Belize*
Eileen Anderson-Fye, EdD, UCLA

11:50-12:15 Commentary (10 minutes) and Discussion (20 minutes)

12:15-12:45 Summary and Future Directions

Allan J. Tobin, PhD, Managing Director, MRSSI; Professor Emeritus, Departments of Physiological Science and Neurology, UCLA; former Director, Brain Research Institute, UCLA; former Scientific Director, Hereditary Disease Foundation

12:45-1:00 Concluding Remarks

Robert Lemelson, PhD, FPR, UCLA

1:00 Adjourn

7. Abstracts of Presentations

DAY 1 (Friday, February 11, 2005)

Opening Keynote (8:30 - 9:00 a.m.)

Early relationships: An anthropological perspective

Melvin Konner, MD, PhD, Emory University

Early relationships are a primate legacy extended in hunter-gatherers. They are a crossroads of attachment, fear, and stress, a maturational process reflecting limbic system development, an expression and a source of stable individual differences, a vehicle for creating cultural differences, a possible sensitive and formative period, and a possible source of psychopathology. Biological preparedness for early relationships includes such cross-cultural universals of psychosocial growth as an increase followed by a decrease in infant crying over the first 3 mos., growth of social smiling from 2 to 4 mos., growth of attachment from 5 to 9 mos., growth of language from 12 to 36 mos., sex differentiation of physical aggression in early childhood, a transition to cultural learning from 5 to 7 years, and the maturation of sexual behavior in adolescence. This biological program evolved in the context of hunter-gatherer infancy and childhood, which were characterized by prolonged physical contact with the mother and others, high indulgence of dependent demands, nursing 4x/hr throughout waking hours, co-sleeping and night nursing, weaning after age two, birth spacing of 3 to 4 years, strong separation and stranger protest until late age, a dense social context that reduces pressure on the mother, paternal much less than maternal care but more than in most cultures, a gradual transition to a multi-age, mixed-sex child group, and permissive sexual mores in childhood and adolescence. In every respect this pattern exemplifies and extends the pattern among non-human higher primates. Marked departures from this pattern in a very short span of history could have developmental consequences, but they have not been systematically studied.

Session 1 / Case Study (9:00 - 10:15 a.m.)

Culture, biology and attachment in Central Africa and the United States: An integrated evolutionary approach

Barry S. Hewlett, PhD, Washington State University, Vancouver

This presentation examines unity and diversity in infant and early childhood care in foragers, farmers and urban-industrial cultures. Observational data on the daily lives of infants in Aka foragers and Ngandu farmers of Central Africa, and upper-middle class urban industrialists from Washington D.C. area are utilized to illustrate unity and diversity in the lives of young children. Issues explored include: does indulgent care in infancy contribute to the development of a secure sense of self later in life, how do individuals learn how to care for young children and how do the different transmission patterns impact the quality of child care, why do most hunter-gatherers hold/touch their infants and young child most of the day? The importance of an integrated evolutionary approach is emphasized.

Session 2 / Presentations (10:45 a.m. - 12:30 p.m.)

Critical period mechanisms of experience-dependent plasticity

Takao K. Hensch, PhD, RIKEN Brain Science Institute

Neuronal circuits are shaped by experience during ‘critical periods’ of early postnatal life. Direct experimental control over the timing, duration and closure of these heightened levels of brain plasticity has recently been achieved, primarily in the developing visual system. We have identified a mechanism that establishes the critical period for ocular dominance. The sensitivity to monocular deprivation first appears when particular local GABAergic connections within neocortex mature, which may ultimately regulate columnar architecture through a molecular cascade for structural refinement. Gene-targeted deletion of the synaptic glutamic acid decarboxylase (GAD65) or NMDA receptor 2A subunit (NR2A) shifts the delicate cortical excitatory-inhibitory balance and impairs the loss of deprived eye response. A benzodiazepine agonist diazepam rescues visual cortical plasticity in both animal models. Thus, a paradigm shift counter-intuitive to an LTP perspective, reveals that enhanced inhibition is required for plasticity *in vivo*.

Interestingly, not all GABA circuits are involved. Systematic knock-in of a point mutation reveals just one subset of GABA_A connection (a1) to underlie critical period onset. These are enriched at parvalbumin-positive large basket cell synapses impinging upon the cell body. Direct manipulation of their firing behavior slows the rate of plasticity. Conversely, with age these cells are surrounded by peri-neuronal nets of extracellular matrix molecules, whose pharmacological disruption reactivates plasticity in adulthood. Proteolytic activity and subsequent anatomical rearrangement in response to monocular deprivation is endogenously regulated by excitatory-inhibitory balance limited to the critical period. The key to successfully controlling the critical period then lies in specific local inhibitory circuits of the neocortex, paving the way for novel training paradigms or therapeutic targets for rehabilitation, recovery from injury, or improved learning in adulthood.

Epigenetic regulation of behavior in rodents: The importance of mom

Darlene D. Francis, PhD, University of California, Berkeley

The debate over nature versus nurture in the understanding of biology and behavior is long over. Researchers are now focusing on *how* information from our DNA gets expressed. Our genetic information does not exist in a vacuum. The ‘environment’ in which our genes are expressed and/or regulated is critical. To fully understand the ultimate role a gene may play in processes as complex as behavior requires a detailed understanding of the multiple environmental factors that gene will experience from conception through development and into adulthood. BUT....what constitutes environment? Is culture considered a level of environmental regulation? What about family? How does information from ‘the world’ get transduced into a biological signal? This talk will focus on how early-life environments are critical to the regulation and expression of both genes and behaviors in rats and mice. By using animal models we can explore *how* nature and nurture interact to determine behavior.

Rodent and primate models of vulnerability in mood disorders: Through the looking glass

Paul M. Plotsky, PhD, Emory University School of Medicine

Accumulating evidence points to perinatal and childhood adversity, acting in conjunction with genetic liabilities, as a significant factor associated with individual vulnerability (or resistance) to the development of mood disorders and medical diseases. In an ongoing

series of studies, we have compared the neurodevelopmental trajectories in rodent and nonhuman primate models including prenatal social instability, neonatal maternal separation, and naturally occurring maltreatment in order to determine “sensitive periods” in development, characterize neurocircuits vulnerable to (mal)adaptation, and to identify genes potentially associated with individual vulnerability or resilience to changes in the quality of experience-expectant input associated with care-giving. A major premise of this work is based on the concept that as the offspring of a species require increasing parental investment, considerable learning occurs in the infant related to attachment, food preference, vigilance, and predictability/controllability of the environment. The neurocircuits underlying each of these processes may be viewed as interrelated targets whose set-points can be programmed by external stimuli, giving rise to systems that may respond differently to the same stimulus with respect to developmental stage.

Many, but not all of the long-term effects of adverse early experience are intriguingly similar in rodents and nonhuman primates. These include increased anxiety-like behavior, neuroendocrine function, sympathetic responsivity, anhedonia, as well as changes in social behavior, sexual behavior, and cognitive performance. Species-specific differences in neurocircuitry suggest that translation across species will not be direct. Specific adaptations occur in neurocircuits at the level of structure, gene and protein expression. Stress and maternal behavior have profound short- and long-term effects on the development of brain areas mediating stress including the prefrontal cortex, cerebellum, hippocampus, bed nucleus of the stria terminalis, amygdaloid complex, nucleus accumbens, locus coeruleus, raphe nuclei, and integrative areas of the medial hypothalamus are particularly plastic during perinatal development and early childhood with varying degrees of plasticity extending through puberty. These regions exhibit changes in neuromorphology, neurotransmitter expression and content, receptor mRNA and binding, and in intracellular signaling cascades. For instance, in the rat model of neonatal maternal separation, regionally specific micro-structural alterations encompassing dendritic branching complexity, dendritic spine number, and synaptic density are observed. The rearing protocol is associated with an approximately 50% decrease in hippocampal dentate gyrus neurogenesis when evaluated at postnatal day 21. Dendritic complexity, as determined by analysis of branching, is also significantly decreased in hippocampal subregions. The long-term trace of this reduced complexity during development appears to be a reduction in synaptic density as determined by electron microscopy and expression of synaptogranin mRNA in adults.

Gene expression profiling has revealed expression changes in elements of DNA-RNA synthesis (DNA methyltransferase), neuronal growth and adhesion (cahedrin, N-CAM, BDNF, NGFI-A), intracellular signaling cascades (PKC alpha, MAP kinase kinase), glial markers (GFAP), and numerous neuronal signaling systems. The neurotransmitter/neuromodulator systems most affected, in a region specific manner, by early adversity are the corticotropin releasing factor (CRF), gamma aminobutyric acid (GABA), and noradrenergic systems. Intracellular signaling cascades such as G-protein coupled pathways are also affected. The net effect appears to be sensitization of stress-responsive neurocircuits such that these individuals display and reduction in proactive coping behaviors (i.e., escape and aggressive behaviors) during adult social encounters. Overall, we interpret our findings to suggest that early adverse experience cause adaptations leading to changes in perception and processing of the salience of external stimuli and, thus, responsiveness to them. These developmental adaptations occur during

overlapping windows in the developmental trajectory; windows that also provide an opportunity for targeted non-pharmacological and pharmacological interventions.

Supported by The Silvio O. Conte Center for the Neuroscience of Mental Disease (MH58922), NIH grants MH50113 and MH62577, and The Center for Behavioral Neuroscience (NSF agreement IBN-9876754).

Session 3 / Case Study (2:00 - 3:15 p.m.)

A mother-infant case study involving intergenerational violent trauma and pseudoseizures across three generations: Observations through age 4 years

Daniel S. Schechter, MD, Columbia University College of Physicians and Surgeons

This case-study presents in detail the clinical assessment of a mother and daughter who first presented to infant mental health specialists when mother was age 29 and her daughter was age 16-months. Hospital records suggested that a dyadic disturbance had been present at least since age 8-months. Data from psychiatric and neurological assessments, as well as observational measures of child and mother are reviewed with attention to issues of disturbed attachment, intergenerational trauma, and cultural factors for this inner-city Latino dyad. Severe maternal affect dysregulation in the wake of chronic, early-onset violent-trauma exposure manifested as psychogenic seizures. These events were referred to in the mother's native Spanish as "ataques de nervios," the latter, an idiom of distress, commonly associated with childhood trauma and dissociation. We explore the mechanisms by which the mothers, reexperiencing of violent traumatic experience, together with physiologic hyperarousal and associated negative affects, are communicated to the very young child and the clinician-observer via action and language from moment to moment during the assessment process. Even though mother and daughter received individual and dyadic psychotherapy for more than six months after this assessment -- with clear gains, follow-up data on this family when the child was 4-years-old confirmed that this child met criteria for chronic posttraumatic stress disorder and dissociative symptoms. Her play-narratives on the MacArthur Story Stem Battery showed a high amount of distress, aggression, anxiety, concerns about personal injury, and dissociation. Implications of these and other findings in relation to intergenerational communication of violent trauma will be discussed.

Session 4 / Presentations (3:45 - 5:30 p.m.)

Temperament and social engagement: The origins of human infant attachment

Nathan A. Fox, PhD, University of Maryland, College Park

Temperament may be defined as individual differences in the pattern of behavioral and physiological reactivity of the infant or young child to stimulation. It further involves individual differences in the manner in which emotions are expressed including their intensity, duration, and frequency. Thus, individual infants may be disposed to express with negative affect of high intensity and long duration when confronted with novel or unfamiliar adults or situation. Or, alternatively, infants may be disposed to express positive affect with high intensity and long duration to unfamiliar adults or situations. In either case, it is clear that such dispositions will affect the manner in which caregivers respond to the infant and potentially the nature of the infant-caregiver attachment. In my talk I will address two areas: first, what we know about infant temperament and its influence on the development of early social relationships. Second, I will present a model

of a social engagement system, which includes perception of faces and social cues in the environment and interaction with caregivers and describe how individual differences in temperament may affect the development of this system.

Outcome correlates of parent-child bedsharing: An eighteen-year longitudinal study

Thomas S. Weisner, PhD, University of California, Los Angeles

We report results of the first longitudinal study of outcome correlates of parent-child bedsharing. 205 families in nonconventional and conventional family lifestyles have been followed since 1975; some of these families practiced bedsharing. A target child in each family was followed from the third trimester of mother's pregnancy through age 18. As we expected, bedsharing in infancy and early childhood was not associated with sleep problems, sexual pathology, or any other problematic consequences when children were ages 6 and 18. There were nonsignificant trends toward beneficial consequences in adolescence, particularly for boys. We discuss these results in light of widespread fears in the United States of physical or psychological harm caused by parent-child bedsharing. We suggest that such fears are without warrant, if bedsharing is practiced safely as part of a complex of valued and related family practices. Bedsharing is practiced widely around the world without evidence of deleterious consequences. How bedsharing fits into the parental and family context and daily routine, and the reasons for and meanings of the practice, matter for its consequences and correlates. We discuss the importance of considering bedsharing and other child-rearing practices in context rather than as isolated practices.

Plasticity and variation: Cultural influences on parenting and early child development within and across populations

Robert A. LeVine, PhD, Harvard University

The concept of plasticity in human development has been fundamental in anthropology since the research of Franz Boas on physical growth at the beginning of the 20th century. Psychological and linguistic anthropology elaborated the concept and applied it to the understanding of childhood, psychological development and mental health in diverse cultural contexts. This presentation will begin with a description of a largely forgotten research project of the 1960s, that of William Caudill on normal and abnormal development in Japan and the United States. Caudill's attempt to incorporate clinical, observational and epidemiological approaches to problems of childhood experience and psychopathology in a longitudinal study grounded in ethnography remains virtually unique and contains valuable lessons for contemporary research. The question of how to approach these problems more than forty years later, given the present state of our knowledge, will be considered, with particular attention to the influence of cultural meanings on parental behavior and childhood psychological development. The presentation will end with a discussion of childhood vulnerability and resilience in diverse cultural contexts as a problem for cross-cultural research.

DAY 2 (Saturday, February 12, 2005)

Session 5 / Case Study (8:30 - 9:45 a.m.)

Inuit morality play and the Danish medical officer

Jean Briggs, PhD, Memorial University of Newfoundland

I start from two assumptions: (1) The process of socialization is complex, multifaceted, and tangled in any society. (2) The emotionally charged motivations of socializers, together with a child's accumulated experiences and understandings (or misunderstandings) of social interactions always provide an emotionally active context in which any particular lesson acquires its meaning. Hence, behavior tends to be overdetermined; and the psychological dynamics underlying interaction cannot be deduced solely from the behavior observed.

Inuit children learn socially appropriate behavior, attitudes, and, most importantly, the emotions that motivate and energize behavior and attitude, partly by participating in emotionally powerful, sometimes painful, impromptu dramas and interrogations, engineered by their elders. Observers of Euro-North-American origin tend to perceive these dramatic events as 'teasing'. Some even see them as 'abusive'. Using an illustrative drama enacted with a three-year-old Inuit girl, this paper argues that such judgments fail to take account of the cultural patterning of relationships; the motives and emotions of the socializers; and the child's capacity for understanding. The result is that observers misread the developmental consequences of such dramas.

Session 6 / Presentations (10:15 - 12:00 p.m.)

The internalization of culture

Naomi Quinn, PhD, Duke University

This review pulls together several heretofore unconnected strands of research and theory to catalog and examine the major ways in which culture is internalized in children. Considered are the roles of neurobiology, cognitive development, attachment, child rearing, and memorable experience, including trauma. The hope is that this review will point the way to a new framework, and new directions, for the study of children's acquisition of culture.

The evolution of social play

Sergio M. Pellis, PhD, University of Lethbridge

Play, especially involving conspecifics (i.e., social play), is quite common among mammals. However, social play can range from rudimentary approach and withdrawal to complex wrestling involving self-handicapping and other forms of content modulation depending on the context and the identity of the partner. Comparing diverse species of rodents has been a useful model for identifying what the different components of play fighting are, and how they have evolved. Importantly, this approach has enabled the characterization of at least seven different control mechanisms that are needed to transform a non-playing species into one with the most complex form of play fighting. Five control mechanisms reside in the brainstem and at least two involve the cortex. Importantly, at least one of the cortical mechanisms involve a system that has similar effects in a range of social contexts. That is, while some control mechanisms are specific to regulating play fighting, others are general purpose mechanisms that affect play along with other social behaviour. This distinction between play-specific and non-specific

control mechanisms is important because it appears that primates have all the mechanisms present in rodents, but differ from rodents in the degree to which general cognitive or emotive abilities can influence the content of play fighting. Furthermore, it appears that it is these more general cognitive and emotive abilities through which play experience can have a feedback effect on the development of social skills. The evolutionary perspective used here has direct relevance to making predictions about the kinds of play experiences from which human children are most likely to benefit.

How culture gets under the skin: Biocultural dynamics of child development

Carol M. Worthman, PhD, Emory University

Views of child development are changing rapidly with the growing recognition that culture is more than skin deep. Mounting empirical evidence demonstrates the importance of the social and material ecologies in which humans develop and live for informing much of their biological form and function. How culture gets under the skin furthermore has attained great interest for illuminating the sources of risk and resilience in a challenging world. This presentation considers the state of theory and knowledge about biocultural processes in child development, drawing on a comparative and cross-cultural approach. To complement the rich social scientific literatures on psychobehavioral socialization, the discussion foregrounds the biological dimensions of social competence (affective regulation, differential attention, memory and recall). Finally, the implications for understanding sequelae of social change and inequity are considered.

Related publications:

- C.M. Worthman, S. Mustillo, and E.J. Costello (2003) Time demands and child mental health: the role of family characteristics and stressful life events. MARIAL Center for Working Families, Working Paper 025-03.
[\[http://www.emory.edu/COLLEGE/MARIAL/research/index.html\]](http://www.emory.edu/COLLEGE/MARIAL/research/index.html)
- C.M. Worthman, J.A. DeCaro, and R. Brown (2002) Cultural consensus approaches to the study of American family life. MARIAL Sloan Center for Working Families, Working Paper 013-03.
[\[http://www.emory.edu/COLLEGE/MARIAL/research/index.html\]](http://www.emory.edu/COLLEGE/MARIAL/research/index.html)
- T.M. McDade, J.F. Stallings, and C.M. Worthman (2000) Culture change and stress in Western Samoan youth: methodological issues in the cross-cultural study of stress and immune function. *American Journal of Human Biology* 12:792-802.
- C.M. Worthman (1999) Emotion: you can feel the difference. In: *Beyond 'Nature or Nurture': Biocultural Approaches to the Emotions*, A.L. Hinton, ed. Cambridge: Cambridge University Press, pp. 41-74.
- C.M. Worthman (1999) The epidemiology of human development. In: C. Panter Brick and C.M. Worthman, eds. *Hormones, Health, and Behavior*. Cambridge: Cambridge University Press, pp. 47-104.

Session 7 / Case Study (1:30 - 2:45)

Clinical perspectives on early trauma

Alicia F. Lieberman, PhD, University of California, San Francisco

This presentation will describe child-parent psychotherapy as a theoretically informed, evidence-based approach for the treatment of traumatic stress in infancy and early childhood. Findings from a randomized clinical trial comparing child-parent psychotherapy with an intensive case management/community referral treatment group will be presented. A case presentation will be used to illustrate how child-parent

psychotherapy addresses early child traumatic stress within the context of the child's relationship with the parents.

Session 8 / Presentations (3:15 - 5:25 p.m.)

Social conflict and the acquisition and expression of conditioned defeat

Kim L. Huhman, PhD, Georgia State University

Exposure to a stressor can have profound effects on the behavior of organisms. Arguably, the most frequent stressors experienced by humans are social in nature, and exposure to these stressors is known to contribute to the onset of depression and a variety of anxiety disorders. Animal models are useful for examining the neurobiological changes that occur following exposure to social stress, and Syrian hamsters are a particularly valuable species to use in these studies because they readily exhibit territorial aggression. Thus, a male or female hamster will quickly attack an intruder placed in its home cage, particularly if the intruder is smaller than the resident. We have demonstrated that defeated, but not dominant, hamsters exhibit a marked hormonal stress response following an agonistic encounter. We have also shown that hamsters exposed to a brief social defeat exhibit striking changes in their subsequent social behavior, and we have called this change conditioned defeat. Hamsters showing conditioned defeat fail to produce normal territorial aggression, but instead display only submissive and defensive behaviors even though they are subsequently tested in their own home cages with a smaller, non-aggressive intruder. Conditioned defeat can persist in males for at least 33 days following an initial defeat, while, surprisingly, conditioned defeat in female hamsters is less profound and varies over the estrous cycle. In addition, it appears that social defeat may have very different effects on subsequent agonistic behavior depending on when, developmentally, the initial defeat occurs. We have demonstrated through intracranial drug injections, lesion studies and viral vector-mediated gene transfer that glutamate, gamma-aminobutyric acid, and corticotropin releasing factor neurotransmission in the amygdala and bed nucleus of the stria terminalis are critical components of the neural circuit mediating defeat-induced alterations in agonistic behavior in hamsters. We believe that conditioned defeat is an extremely useful model with which to determine how exposure to social stress can lead to profound and long-lasting changes in behavior.

Gene-environment interactions and the socialization of aggression in primates

Stephen J. Suomi, PhD, National Institute of Child Health and Human Development

Recent research has disclosed marked individual differences in patterns of biobehavioral development exhibited by rhesus monkeys across the life span. For example, approximately 5-10% of rhesus monkeys growing up in the wild consistently exhibit impulsive and/or inappropriately aggressive responses to mildly stressful situations throughout development; those same individuals also show chronic deficits in their central serotonin metabolism. These characteristic patterns of biobehavioral response emerge early in life and remain remarkably stable from infancy to adulthood. Laboratory studies have demonstrated that although these characteristics are highly heritable, they are also subject to major modification by specific early experiences, particularly those involving early social attachment relationships. For example, a specific polymorphism in the serotonin transporter gene is associated with deficits in serotonin metabolism, extreme aggression, and excessive alcohol consumption among monkeys who have experienced

insecure early attachment relationships but not in monkeys who have developed secure attachment relationships with their mothers during infancy (“maternal buffering”). Moreover, because the attachment style of a monkey mother is typically “copied” by her daughters when they grow up and become mothers themselves, similar buffering is likely to occur for the next generation of infants carrying that specific polymorphism.

Context and correlates of bullying in middle school

Jaana Juvonen, PhD, UCLA

This talk reviews some of the most recent findings obtained from a longitudinal study of close to 2000 middle school students in the Los Angeles area. The findings show victims of bullying displaying signs of emotional distress that are not observed by teachers. Although bullies are academically as disengaged as are the victims, bullies report no emotional problems. The differences in emotional well-being are related to students' social standing among their peers: whereas victims are unpopular, bullies are “cool.” Longitudinal analyses suggest that while both emotional and physical problems result from victimization, they also place youth at risk for becoming victims of bullying over time. Analysis of bullying, in turn, indicate that youth who emerge as bullies during the first year in middle school demonstrate only gains in popularity and self-views. Implications of the distinct and diverging trajectories of bullies and victims are discussed.

Sambia male resocialization through ritual initiation: Some lessons learned from 30 years' research

Gilbert Herdt, PhD, San Francisco State University

The Sambia of Papua New Guinea practice secret male initiation for boys 7-10 years old involving ritual ordeals and violence and extreme emotional expression bordering on trauma. These rituals prepare the boys for warriorhood life and resocialize gender and sexuality away from mother toward father and the men's society (Herdt, 1981, 2003). The ritual transition represents a major discontinuity not only in gender and emotion, but also in sexuality (Herdt and McClintock, 2000). The Sambia imperative to resocialize boys by age 10 represents also a folk awareness of the universal of sexual attraction development by this period, and the dilemma of boys' desires during late childhood. This paper argues that the initiations serve to disrupt the sexual subjectivities of boys so that they fulfill their reproductive roles sexually and socially. However, this traumatic process leaves significant mental traces and emotional scars throughout life, including phobias and misogynous relations to women that frequently result in sexual violence. These are the lessons learned from 30 years' fieldwork among the Sambia.

- 1981 Herdt, G. *Guardians of the Flutes: Idioms of Masculinity*. New York: McGraw-Hill.
- 2003 Herdt, G. *Secrecy and Cultural Reality*. Ann Arbor: University of Michigan Press.
- 2000 Herdt, G., and McClintock, M. The magical age of 10. *Archives of Sexual Behavior*, 29 (6): 587-606.

DAY 3 (Sunday, February 13, 2005)

Session 9 / Presentations & Film (8:30 - 12:15 p.m.)

Neurobiological effects of childhood abuse: Implications for the pathophysiology of depression and anxiety

Charles B. Nemeroff, MD, PhD, Emory University School of Medicine

There is considerable evidence that early untoward life stress, including child abuse and/or neglect, is associated with an increase in the prevalence rate of depression and related disorders in adulthood. This presentation will summarize a series of clinical and preclinical studies, which all provide congruent results suggesting that CRF-containing neurons are rendered persistently supersensitive to stress after exposure to neonatal stress. Previous studies have clearly documented CRF neuronal hyperactivity in drug-free depressed patients as evidenced by hypothalamic-pituitary-adrenal (HPA) axis hyperactivity and increased cerebrospinal fluid (CSF) CRF concentrations. These CRF alterations are reduced by successful treatment of depression with ECT or fluoxetine. In an animal model of early untoward life stress in rats, maternal separation, we have repeatedly demonstrated long lasting hyperactivity of the HPA axis, as well as increases in CRF mRNA expression in the PVN, central nucleus of the amygdala and bed nucleus of the stria terminalis, CSF CRF concentrations and behavioral alterations reminiscent of depression. Similar findings were found in a bonnet macaque model of early stress. Treatment of adult rats exposed to neonatal maternal deprivation with paroxetine, the SSRI antidepressant, reverses these measures of HPA axis hyperactivity and CRF neuronal hyperactivity. Clinical studies in depressed women with a history of sexual abuse in childhood reveals an increased HPA axis response to stress. These data, taken together, support the CRF hypothesis of depression and suggest that alterations in CRF neurons mediate the effects of early trauma in increasing an individual's vulnerability to depression. The therapeutic implications of these findings will be discussed. Finally, in patients with chronic depression, the presence of early adverse life events is associated with a more robust therapeutic response to psychotherapy than to antidepressant (nefazodone) treatment. Supported by NIMH MH-58922 and MH-42088

Longterm outcomes of social violence for 3 Indonesian families

Robert Lemelson, PhD, The Foundation for Psychocultural Research and University of California, Los Angeles

This presentation explores how the historical and social context that traumatic experience is embedded in affects long-term psychosocial and psychiatric outcome. I examine three families who suffered similar exposures to severe traumas involving political violence, extrajudicial killings and torture in 1965, in the anti-communist bloodbath that presaged the beginning of Suharto's "New Order" regime in Indonesia. The complexities of reconstruction of family memories, repression of the trauma and loss associated with family members being imprisoned and executed are explored in the context of a national forgetting and a centralized control of what memories and experiences were politically allowable. I argue that while there are clearly phenomenological similarities in the subject's experience that support a more universal, psychiatric model of PTSD, how these experiences are remembered, discussed, and processed, and how this affects each family member's individual response to trauma, must be considered in the light of their political, historical and social context.

Child maltreatment: The cultural and neighborhood context

Jill E. Korbin, PhD, Case Western Reserve University

Various approaches have been taken to elucidate the relationship between culture and child maltreatment. The influence of contextual factors is core to understanding the complexity of this relationship. While not strictly a proxy for culture, neighborhood and community are the immediate day-to-day context in which children and families reside and are an important, but as yet only partially understood, influence on the causes and consequences of child maltreatment.

Child maltreatment report rates vary across neighborhoods in ways that cannot be explained solely by socioeconomic factors or cultural variability. Neighborhood maltreatment rates have been associated with structural conditions including demographic composition, economic disadvantage and residential mobility, as well as with residents' perceptions of the quality of their neighborhoods and social fabric. It is also possible that neighborhood processes affect the recognition and reporting of child maltreatment rather than its actual distribution.

Despite a re-emergence of interest in neighborhood factors, understanding the processes and mechanisms by which neighborhoods influence child maltreatment remains somewhat elusive and demands a multimethod and interdisciplinary approach. This presentation will take an ecological-developmental perspective on the influence of neighborhood conditions on the etiology and outcomes of child maltreatment.

Never leave yourself: Ethnopsychology as protective mediator of rapid cultural change among schoolgirls in Belize

Eileen Anderson-Fye, EdD, University of California, Los Angeles

How do transnational ideas and images become psychologically salient to youth in local communities? Based on five years of fieldwork among high school girls in a rapidly-changing Belizean community, this paper investigates how some transcultural symbolic material (e.g. gender-based maltreatment) becomes psychologically salient in a given society and yet other constructs (e.g. thin body ideals) can pass by with relatively few consequences in an increasingly transnational world. The ethnopsychological practice of self-protection among young Belizean women, which girls describe as "Never Leave Yourself," mediates how girls make sense of and incorporate transnational concepts into their lived experience. These young women are remarkable relative to their counterparts in the cross-cultural literature in terms of their resilience in the face of difficult situations and resistance to transnational messages thought to be associated with developmental challenges during adolescence. Implications for understanding mental health-related ethnopsychological and cultural strengths among adolescents in the face of rapid social change (i.e. globalization and immigration) are discussed.

8. Poster Abstracts

1. Annihilation campaigns and resiliency over the “longue durée”: Child Holocaust survivor’s orphaned or wounded Israeli grandchildren 2000-2004

Rony Blum, Ph.D.

Social Studies of Medicine, McGill University

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Does an intraspecies annihilation campaign headed by a large and powerful group against another much tinier group, the most catastrophic trauma of all, ineradicably transform child development through long-term traumatic molding of critical “cusps” of affective development (Fonagy 2003)? Can these long-term traumatic effects be modified over time (Moskowitz 1985; Clark 2003)? Can these long-term traumatic after-effects transform later generations? Have later generations developed some kind of defense, as Michael Meaney has pointed out for other species? If so, what form does it take? How will these children react to further trauma during their own development? And finally, how will their own children, who are grandchildren of the original survivors, react? She’erit HaPlitah (Survivor self-help organization), AMCHA (National Israeli Centre for Psychosocial Support of Survivors of the Holocaust and the Second Generation), and various “survivor cafés” have helped survivors for over fifty years become and stay resilient. How should we understand, contextualize, and treat multigenerational annihilation trauma? While large-scale epidemiological studies negate long-term problems (Bar-On et al 1998), variable clinical studies indicate room for further in-depth examination (Niederland 1968; Krystal 1968; Wiesel 1972; Baracos & Baracos 1973; Dor-Shav 1978; Friedlander 1979; Davidson 1980; Kestenberg 1980; Bergmann & Jocovy 1982; Eisenberg 1982; Danieli 1988; Wardi 1990; Kestenberg 1992; Krell 1993; Hass 1995; Bar-On 1995; Kestenberg 1996; Berger-Reiss 1997; Rosenthal 1998; Auerhahn and Laub 1998; Solomon 1998; Chaitin 2000; Bugner 2000; Bar-On & Chaitin 2002; Sagi-Schwartz 2003.)

The nature of resiliency itself will be re-examined and reinterpreted, in a study of the resiliency resources of recently orphaned or wounded Israeli grandchildren of Holocaust survivors. The repertoire of therapeutics used to help the children is analyzed, as well as further study of “treating the context.” Can resiliency be characterized as an evolutionarily-inborn or civilizational tendency toward a “self-righting” capacity, and to what extent does intraspecies annihilation persecution profoundly count?

2. Subsistence ecology and children's play among the Okavango Delta peoples of Botswana

John Bock and Sara E. Johnson

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Children's play is widely believed by educators and social scientists to have a training function that contributes to psychosocial development as well as the acquisition of skills related to adult competency in task performance. In this paper we examine these assumptions from the perspective of life history theory using behavioural observation and household economic data collected among children in a community in the Okavango Delta of Botswana where people engage in mixed subsistence regimes of dry farming, foraging, and herding.

We hypothesize that if play contributes to adult competency then time allocation to play will decrease as children approach adult levels of competence. This hypothesis generates the following predictions: 1) time allocated to play activities that develop specific productive skills should decline in relation to the proportion of adult competency achieved; 2) children will spend more time in forms of play that are related to skill development in tasks specific to the subsistence ecology in which that child participates or expects to participate; and 3) children will spend more time in forms of play that are related to skill development in tasks clearly related to the gender specific productive role in the subsistence ecology in which that child participates or expects to participate.

We contrast these expectations with the alternative hypothesis that if play is a characteristic of the juvenile period that is not preparatory for adult competence then time allocated to each play activity should diminish at the same rate. This latter hypothesis generates the following two predictions: 1) time allocation to play should be unaffected by subsistence regime and 2) patterns of time allocation to play should track patterns of growth and energy balance.

Results from multiple regression analysis support earlier research in this community showing that trade-offs between immediate productivity and future returns, mediated through skill acquisition, determined by the labor needs of the household were a primary determinant of children's activity patterns. Children whose labor was in greater demand spent significantly less time playing. In addition, controlling for age and gender, children spent significantly more time in play activities related to tasks specific to their household subsistence economy. These results support the assertion that play is an important factor in the development of adult competency and highlight the important contributions of an evolutionary ecological perspective in understanding children's developmental trajectories.

3. Life history approaches to risk-taking and the life course: Filling the cognitive gap

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Although risk-taking represents a prevalent challenge for youth, the key cognitive factors mediating and moderating this phenomenon remain poorly understood. We report a study that uses a novel technique combining ethnographic and epidemiologic approaches to examine the relationship of individual models of the life course to success or difficulty in the youth to adult transition. Participants were 160 Anglo and Cherokee youth ages 18-24 years, from the ongoing Great Smoky Mountains Study (GSMS), a longitudinal population-based developmental epidemiologic investigation of mental health consisting of 1420 participants first recruited at ages 9, 11, and 13.

The study protocol included an interview designed using a modified cultural consensus analysis technique to identify the content and distribution of cultural models of the life course. The one-year method development phase involved primary ethnographic interviews, focus groups, and pilot cognitive tasks. The resultant quantitative card sort measure covers four life course factors: life events, life course barriers, social affordances, and material goods. Participants performed a series of card sorts for each of these domains, with regard to cultural model, difficulty, and desirability.

From a life history perspective, resource constraint should influence timing of life events (including reproduction). Indeed, marriage and childbirth were some of the first life events to be discarded when participants were asked to apply a “trade-off” scenario. A life history framework might interpret such findings as an effect of constraints imposed by the high relative poverty of the area. Initial results further suggest that early exposure to poverty influenced life course expectations of individuals. Individuals with reduced access to resources would be expected to adjust perceived prospects to a more realistically achievable level. Indeed, young people who had experienced two or more years of poverty removed more cards from the line-up of events considered necessary for a “basic life.” However, individuals with persistent “problem behavior” did not make such downscaling adjustments. Such persons furthermore significantly downplayed and underreported the number of barriers to life course achievement. These preliminary findings support the importance of resource restriction in adjusting life course models, but also suggest the importance of experience-dependent cognitive mediation of the ends and means of life course construction.

4. Breast milk bio-equivalency from re-lactation efforts of grandmother-aged Kenyan women to prevent mother-to-child HIV transmission

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Objective: The vast majority of pediatric AIDS cases worldwide are attributed to mother-to-child transmission (MTCT) of the human immunodeficiency virus (HIV) via breastfeeding (15-30% transmission rate). The primary study aim was to determine if multiparous, non-pregnant, seronegative [-] women at the grandmother stage-of-life (≥ 35 years of age) could re-establish a nutritious/adequate milk supply equivalent in essential nutrient bioavailability to mother's milk. **Design:** This was an intervention trial, titled "maisha mabibi," the Swahili words for "life grandmother," by using low-technological, re-lactation methods to re-constitute breast milk production in weaned, older women of grandmother age. **Population, Sample, Setting, Years:** Participants were volunteer grandmother-age (GM) women (N=20; ages 35-70 years) who had breast fed at least one child for at least 6 months and were now weaned for at least 6 months. These grandmother aged women used re-lactation methods for up to 6-weeks, with analyses of expressed milk samples for quantity and bioavailability of essential nutrients as compared to daughter-age (DA) women (N=20; ages 18+) from the GM participant's village. **Intervention and Outcome Variable(s):** Following a 6-week trial of using a simple, manual breast pump for 4-6 times per day for 10 minutes, breast milk samples were collected for protein (specifically IgA), carbohydrates, vitamin A, E, iron, and fatty acids along with plasma samples for prolactin, hemoglobin, and vitamin A and E, and lipids and compared on these same variables to the breast milk from breastfeeding mothers from the same village. **Methods:** Following consent, women aged 35 and over and were not pregnant or breastfeeding were recruited through community focus group discussion in villages outside of Malindi Kenya. The elder women used a simple, manual foot pedal style breast pump daily for 4-6 times of 10 minute duration. Nurses visited the village home weekly to ascertain problems and appropriate use of the re-lactation protocol. The woman's daughter or neighbor of daughter age, at least 18 years old and breastfeeding was recruited to donate a breast milk sample for comparison. All women were tested for HIV status and anemia prior to enrollment. If seronegative and not anemic, they were recruited into the study. Data analyses included nutritional assays of human milk primary components. **Findings:** Final results (N=20 GM; 20 DA women) review the similarities and differences between human milk components produced by GM women, that by DA women, and human milk literature. **Conclusions:** Breast milk from surrogate grandmother aged women in Kenya following a 6 week trial of breast pumping appears to establish an initial milk supply equivalent nutritionally to that expressed by breastfeeding mothers from the same village. Further exploration of the physiological and cultural feasibility of novel infant feeding approaches that nourish and protect infants born to HIV-positive mothers in sub-Saharan Africa and developing countries with MTCT concerns is warranted given the dramatic contribution of breastfeeding to the AIDS crisis. **Implications:** Mother-to-child transmission of HIV via breast milk is a global problem of disastrous proportion. Developing nations depend upon lactation to nourish the newly born. The grandmother hypothesis that elder women outlive their procreation function to care for the next generations progeny is supported at its very basic level of nutrition, as a Maisha Mabibi, or "life grandmother."

5. Does the model matter? The influence of previous experience with experimental stimuli on African and American infants' categorization

Kim Theresa Ferguson and Marianella Casasola
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The development of the ability to group similar things into categories is fundamental to cognitive development. Past research on infants' categorization of objects has been particularly fruitful in identifying the types of categories that infants form at specific ages (e.g., Oakes & Madole, 2000). Although this research is tremendously important as a first step in investigating early categorization development, the majority of infants participating in these studies tend to be from Caucasian American middle-class families. Nevertheless, the results of these studies tend to be discussed in terms of infant development in general. Given the current move in the field towards considering the role of contextual variation, such as the nature of the stimuli (e.g., Quinn, Eimas, & Rosenkranz, 1993) and the particular procedure used (e.g., Oakes, Plumert, Lansink, & Merryman, 1996; Younger & Furer, 2003), it is important to consider the role that infants themselves play in what they bring to the table in these categorization tasks. It is conceivable that infants' previous experience with particular stimuli used within these categorization tasks, such as model animals, as well as their experience with their real-world counterparts, will influence their in-task categorization. Thus, the primary goal of the present study was to investigate the influence of infants' previous experience with the experimental stimuli used on their categorization of animals. In particular, the differential experience with the model animals typically used in interactive categorization tasks between infants in industrialized and non-industrialized cultures was investigated, with a view towards understanding whether (1) infants' experience with the task stimuli affected their categorization and (2) infants in a non-industrialized culture demonstrate similar categorization development to infants typically tested in categorization tasks.

Twenty-two African (Malawian) and twenty-four American 15-month-olds were tested in an object-examining task. Infants were familiarized with four exemplars of either plastic or wooden model animals. The wooden models were copied from the plastic models by professional woodcarvers. Different types of models were used as it was expected that wooden models may be more familiar to the Malawian infants, and plastic models more familiar to the American infants. Following familiarization, infants were presented with six test trials: A familiar animal (introduced during familiarization) trial, a familiar animal-novel material trial, a novel animal-familiar material trial, a novel animal-novel material trial, a vehicle-familiar material trial and a vehicle-novel material trial. Overall, infants examined vehicles in both test trials, but not the novel animal or familiar material, significantly longer than the familiar animal, thus indicating that they formed a category of animals. Interestingly, infants examined the novel animal of novel material, but not the novel animal of familiar material, significantly longer than the familiar animal, thus indicating that they could extend their familiarity with an animal of one type of material to the same animal made of another material (e.g., a plastic model cat to a wooden model cat), but not to a different animal made of another material. This suggests that generalizing across different materials may be fragile and perceptually based. Although American infants were only familiar with the plastic models, while Malawian infants were familiar with neither wooden nor plastic models, they performed similarly in this categorization task. Together, these results indicate that infants' previous experience with task stimuli may not necessarily affect their categorization.

6. Suspended personhood and the bio-puzzle of anemia: Forming an inclusive and effective approach to health among the Poqomchi' Maya of Guatemala

James W. Herynk and Kelsey D. Needham

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Anemia affects over two billion people worldwide and has been identified as a leading cause of morbidity among Guatemala's indigenous population. The condition significantly impairs the cognitive development and general wellbeing of the afflicted, especially women and children. Current research on anemia focuses too heavily on single factors rather than on the multifactor reality. A study on Iron tells little about the interacting effects with hookworms, coffee consumption, or even other micronutrient deficiencies. Several factors contribute to the incidence of anemia: nutrition, parasites, absorption inhibitors, blood loss, cooking fire smoke, and genetics. Furthermore, it is only possible to identify factor relations of anemia by examining them within the context of sociocultural factors such as diet, labor, or agriculture; including issues as broad as subjugation of the body and postcolonial structures. Research should emphasize more comprehensive treatment strategies that involve culture as well as biomedicine to solve this complex problem.

In research with the Poqomchi' Maya of north central Guatemala in the municipality of Tamahú, where anemia was reported by local health officials to severely affect almost all children, we were able to look at anemia in its entirety. First, we identified several of the direct biomedical causes of anemia. Then, we interviewed community members in order to understand their perceptions and the cultural significance of the illness. Finally, we analyzed anemia within the context of historical, political, and economic structural determinants. We found several insights as to the origin of the illness and the cultural constructions that hinder current treatment efforts. We assessed the physical practices and mental perceptions surrounding the condition that the Poqomchi' refer to as, "lack of force." Culturally, the research revealed a concept of the body, personhood, and health that is essential in order to grasp its complex epidemiology. In terms of biomedicine, it was apparent that nutritional studies examining one variable were insufficient for application in the field. With this information, development organizations and governmental agencies could design more efficient and effective programs for the treatment and prevention of anemia and the betterment of child wellbeing.

Univariate studies that address the etiology of anemia have little application unless they are connected to other studies or adapted into multivariate design. The social sciences must utilize biomedical research within the context of cultural meaning for a specific population. Comprehensive multidisciplinary approaches to target community health issues could result in truly solvent projects, especially among peoples of the Americas, Africa, and Asia.

7. Constructing masculinities under abusive conditions

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Given the preponderant identification of men with aggression and women with victimization in western culture, how do men who are abused by women understand their masculinity?

This study explores the question of how men construct and re-construct self-representations under conditions of abuse within a cultural framework. My method includes interviews with a sample of eleven men who, provided life history accounts from early childhood to adulthood. Of particular interest to this study are the self-representations these men provided of their masculinities in relation to being a victim in abusive situations with women as perpetrators.

The interrelationship between the extrapersonal world structures and intrapersonal mental structures are particularly significant to this study. I present an interpretation of the self-definitions and self-representations of the men who participated in this study using a framework derived from ideas about social construction, schema and attachment theory.

I discuss abuse and various public and private definitions, how masculinities are understood at both the public, extrapersonal and private, intrapersonal levels and how the study participants constructed and reconstructed their self-identity and self-representation before, during and after the situations they described as abusive.

My analysis of these interviews suggests that the diverse and complex public or extrapersonal influences and experiences, inter-woven with the private or intrapersonal interpretation that occurs at the cognitive level are significant in the construction and self-representation of masculinities under abusive conditions. As I argue, making sense of their day-to-day experiences via cultural schemas informs the intrapersonal re-construction and representation of their own masculinity. My analysis also suggests that positive or negative attachment experiences during childhood impact on public and private constructions about relationships in later years with romantic love partners.

**8. Prosocial behavior and general cognitive abilities in early childhood:
The role of genetics, socialization, and development**

Ariel Knafo, The Hebrew University of Jerusalem, Israel

Emma Hayou-Thomas, University of York, UK,

Robert Plomin, Institute of Psychiatry, London, UK

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We address the development of prosocial behavior, using a longitudinal-genetic-environmental design. We focus on the role of general cognitive abilities, because to help, children have to identify others' need for help and consider peers' feelings.

British twins (N=6000 pairs) participated at ages 3 and 4. Children's global prosocial behavior was rated by parents, cognitive abilities were indexed by a battery of tests, and a measure of household chaos indexed family functioning.

Results from 1312 twin girl pairs exemplify the findings. As hypothesized, moderate positive correlations were found at both age 3 ($r = .29$) and 4 ($r = .26$), between general cognitive abilities and prosocial behavior. Moreover, cognitive abilities at age 3 predicted prosocial behavior at 4, over and above prosocial behavior at age 3. Because past prosocial behavior is controlled for, the results indicate that cognitive abilities may induce (positive) change in prosocial behavior from age 3 to 4. At both ages, the two traits correlated negatively with chaos ($r = -.16$ to $-.25$), indicating family influences.

Next, within-twin and between-twin covariance matrices of prosocial behavior and cognitive ability at 3 and 4 were entered into a longitudinal genetic analysis. As hypothesized, *genetic* effects affected both traits. Genetics contributed to both stability and change in the two traits. *Non-Shared environment* influences (environmental influences making twins different) were found for both traits, at both ages, but no cross-trait or longitudinal effects were found, indicating that this environment is responsible mainly for change, and does not account for the relationship between prosocial behavior and abilities.

Shared environment (SE) effects (environmental influences making twins similar regardless of their genetic relatedness) were strong for cognitive abilities at both ages, and were substantial for prosocial behavior at 3 (but not 4). SE effects on cognitive abilities at 3 largely accounted for stability in cognitive abilities towards age 4. In addition, these age 3 effects were important also for prosocial behavior at age 4. Thus, at least for general cognitive abilities, the idea that factors making children in some families relatively intelligent overlap with those making them relatively prosocial is supported.

We next uncovered some of the shared environment effect. Chaos, predicting low adjustment in both abilities and prosocial behavior, accounted for 14% of the relationship between the two.

The results show that age, cognitive abilities, genetics and family processes are all implicated in prosocial development, and call for an interdisciplinary outlook on this important issue.

9. Hypocortisolism and disruptive behavior in boys: findings from high-risk populations in Mongolia and Nepal

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Background: Increasing reports of associations between hypocortisolism and disruptive behavior are appearing in the child psychopathology literature. However, until the relationship is confirmed in cross-cultural findings, the universality of hypocortisolism in disruptive behavior is tenuous. The lack of cross-cultural studies of neuroendocrine functioning and child psychopathology motivated our investigation of salivary cortisol and disruptive behavior among boys in two distinct Asian cultures.

Method: Two separate studies were conducted among high-risk populations of boys in Mongolia and Nepal. In Ulaanbaatar, Mongolia, 46 boys, aged 4-10, were recruited from orphanages ($n=16$), urban poor settings ($n=11$), the countryside ($n=9$), and middle class families ($n=10$). Salivary cortisol was collected in the home or orphanage four times daily (morning, early afternoon, late afternoon, and evening) for five days. Diagnoses were made with the Emory Combined Rating Scale (ECRS). In Kathmandu, Nepal, 17 boys in an orphanage and 12 boys in boarding schools, ages 6-8, were recruited. Salivary cortisol was collected five times per day (30, 60, and 90 minutes post-waking; noon; 7pm) for three days. Diagnoses were made from teacher report with the ECRS and the Behavioral Assessment Scale for Children (BASC). For both studies, mixed effects models were used to estimate the association of psychopathology and risk factors with salivary cortisol levels.

Findings: Mongolian boys diagnosed with oppositional defiant disorder (ODD) displayed consistently lower cortisol levels compared to boys without ODD diagnoses. No group differences were found in cortisol levels. Psychiatric diagnosis accounted for 17% of between individual variation in cortisol levels unexplained by other covariates. In a separate model, caregivers' beliefs regarding physical violence accounted for 9% of between individual difference with boys showing lower cortisol levels when under the care of persons deeming physical violence necessary for discipline. Nepali boys diagnosed with ODD displayed a non-significant trend toward lower cortisol compared to boys without ODD. Using the BASC 'aggression' score, we found that children with greater occurrences of aggressive behavior exhibited lower tonic cortisol levels. Aggression accounted for 11% of between individual variation in cortisol levels unexplained by other covariates. Furthermore, group differences were identified with Nepali boys in the orphanage displaying lower cortisol levels compared with boys living as boarders.

Conclusion: Disruptive behavior was associated with low cortisol levels in both non-western populations. For Mongolian boys, a diagnosis of ODD was associated with lower cortisol. Nepali boys exhibited a similar trend, which was not statistically reliable probably due to the smaller sample size and smaller number of ODD cases (6 in Nepal, 10 in Mongolia). However, a scaled aggression score intended to reflect the same underlying behavioral tendencies as the ODD diagnosis did show a strong and statistically reliable association with low cortisol. In addition to psychopathology, low cortisol was related to risk environments in both populations. In Mongolia the risk was parental endorsement of physical punishment. In Nepal the risk was living in an orphanage. These findings suggest that hypocortisolism's association with child disruptive behavior may not be restricted to specific cultural/ethnic groups.

10. Effects of childhood maltreatment on skills and behavior

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Children who experience maltreatment encounter extra challenges in meeting expected developmental milestones and in establishing satisfying interpersonal relationships, both in their growing-up years and in their adulthood (Kinard, 1999, Maughan & Cicchetti, 2002, Perez & Widom, 1994, Shonk & Cicchetti, 2001, Zima et al., 2000). To understand what some of these effects might be in the day-to-day life of maltreated children and how learning and behavior are influenced by maltreatment, the records of 650 school-age children in foster care were examined. The data studied included the age of the child at placement, reasons for the placement (e.g. type of maltreatment), academic skills, behavioral functioning in the foster home and in the classroom, changes in functioning over time, and the relationships between these factors.

In this study, the average age of the foster children at placement was 8.16 years; the children represent different cultures in a large city (37% African American, 36% Latino, 25% Caucasian, and 2% other nationalities) and 50.1% were males. The primary reason for placement was: neglect (32%), physical abuse (30%), parental drug use (17%), prenatal drug exposure (4%), domestic violence (3%), and other reasons such as sexual abuse, parental incarceration, and parental mental health illness (13%). Many of the children (57.6%) experienced more than one form of maltreatment. Academic skills measured early in placement were at the 23rd percentile in reading and math and at the 21st percentile in spelling, substantially below the average of their peers (50th percentile). In the area of behavior regulation, the children in foster care had high levels of problems in attention modulation (at the 84th percentile) and in their social relationships (at the 72nd percentile) as rated by their caregivers and also as rated by their teachers (at the 75th percentile and the 72nd percentile respectively) while the average for such problems is at the 50th percentile (Child Behavior Checklist). Statistical analyses of these and later-in-placement academic scores and behavior ratings revealed significant improvements in academic skills (e.g., reading advanced to the 34%, t-test, $p < .001$) while behavioral functioning in the foster home and at school did not change. Behavioral regulation and academic skills were significantly related (e.g., reading scores related negatively with attention problems, $[r = -.185, p < .01]$) showing that the children with the most problems in attention or focus also had the poorest academic skills.

These findings show a number of ways that maltreatment can influence a child's development and behavior. Maltreatment (and other adverse social experiences associated with maltreatment such as poverty, instability, insecurity, etc.) can leave young children with delays in age-expected skills and difficulties regulating emotions and activity level. Problems with attention modulation most likely affect learning and delays in skills can add to behavior regulation problems. Peer problems can be closely intertwined with issues of self-worth, lack of trust, and inappropriate, ineffective and hurtful models for conflict resolution. These behaviors may have been encoded in neurobiological mechanisms early in life and reinforced in abusive circumstances and may be slow to change. Future research may show that improvements in one area of functioning, such as in academic skills, may lead gradually to changes in emotional regulation by increasing resilience, feelings of self-efficacy and accomplishment, and may reduce the risk of later psychopathology. The improvement in skills of children in foster care reported here may be due to removal from abusive situations, psychotherapy, and placement in non-threatening and nurturing environments that include appropriate guidance and management of problem behaviors (see Fisher et al., 2000), regular patterns of eating and sleeping, medical care, support of learning, and consistent school attendance.

11. Using neuropsychological data to assess at-risk children in order to implement effective educational interventions

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Introduction: Neuropsychological evaluations often yield valuable information to assist in the development of educational strategies for at-risk children. Oftentimes this information is not sought in the educational process; yet it can have a significant impact on the child's overall resilience and emotional/educational well being. A particular circumstance (e.g., seizure disorder, hypoxic event, brain injury, abuse), however, often results in the need for neuropsychological input. When obtained, these data must be translated into effective learning strategies. This paper will address this necessary identification/translation process.

Methods: Six male children, three African American and three Caucasian, between five and ten years of age, presented for neuropsychological evaluation for school-related behavior difficulties. All received comprehensive workups that included neuropsychological, cognitive, intellectual, developmental, memory, attentional, educational, behavioral, and affective measures.

Results: All six children qualified for special academic accommodations under PL 94-142. Individualized Educational Plans were developed. The neuropsychological data was translated into meaningful strategies that were implemented in the classroom. Once these children, who were formerly identified as primary behavior problems, began to achieve academic understanding/success, their school-related behavioral difficulties became more manageable.

Conclusions: The neuropsychological data yielded valuable insights as to how to educate and manage these at risk children in the classroom. Intervention strategies were developed in the following areas: Reading, Math, Written Expression, General Academics, Affect and Behavior, and Psychopharmacology. A School Psychologist was used as a liaison between the clinic and school to assist in the implementation of these strategies.

9. **Session Chairs, Moderators, Speakers, and Panelists**

Eileen Anderson-Fye, EdD

Eileen Anderson-Fye, Ed.D., is an FPR-UCLA Center for Culture, Brain, and Development postdoctoral fellow. She is a psychological anthropologist interested in gender, cultural change, and well-being among adolescents. Dr. Anderson-Fye is currently studying: (1) the intersection of culture and brain in developmental psychopathology related to child abuse trauma in contexts of cultural change, and (2) comparative development of adolescents in a rapidly-changing community in Belize and Belizean adolescent immigrants in Los Angeles with respect to mental health. Her current projects include continuation of her longitudinal study with young women in Belize and investigation into Belizean boys' development with respect to cultural change, psychopathology, and gender-based violence. She is also extending the interdisciplinary Transitions to Adulthood Project investigating the lives of African-descended Belizean immigrant and African American youth. She completed her doctorate in Human Development at Harvard University in 2002. Her study was a five-year longitudinal investigation into psychocultural development of adolescent girls in Belize, particularly focused on developmental ethnopsychology, trauma, body image, and gender.

Mark Barad, MD, PhD

Mark Barad, M.D., Ph.D., is Assistant Professor of Psychiatry and Behavioral Sciences at the University of California, Los Angeles. He is the recipient of National Institutes of Health Medical Scientist Training Program, Young Investigator Award from the National Alliance for Research on Schizophrenia and Depression, and the Forest Junior Faculty Research Award from the West Coast College of Biological Psychiatry. He has been the Tennenbaum Scholar from the Department of Psychiatry at the University of California, Los Angeles. Dr.

Barad's research has investigated the cellular basis of learning and memory, especially understanding the cellular and molecular mechanisms underlying the extinction of Pavlovian fear conditioning. His current research and writing further explores the development of adjunctive treatments to accelerate and facilitate the behavioral psychotherapy of anxiety disorders. In addition to his research and teaching, Dr. Barad has supervised at the UCLA Anxiety Disorders Clinic and the UCLA General Outpatient Psychiatry Clinic. He also has a private practice as a psychiatrist.

Jean Briggs, PhD

Jean Briggs, Ph.D., is Professor Emeritus in the Department of Anthropology at Memorial University of Newfoundland. Her current and future research includes: (1) dictionary of the central Canadian Inuktitut dialect of Utkuhiksalingmiutit, funded to date largely by the Social Science Research Council of Canada. She is presently transcribing and analysing 600 tapes of words originally collected in 1968 and 1992, and corrected in Gjoa Haven (February-March 1997, March 1998, February-March 1999, March 2000, March 2001, November 2002) and in Baker Lake (February-March 1998, March-April 1999). (2) In connection with this dictionary work, continued field trips to Gjo Haven, Nunavut. Past research included: (1) the language of emotion in everyday Inuit life; Inuit emotional expression; and the emotional socialization (including values) of Inuit children; (2) interpersonal psychology in Inuit camp settlements.

Her 1998 book, *Inuit Morality Play: the Emotional Education of a Three-Year-Old*, won the Victor Turner Prize for Ethnographic Writing, from the Society for Humanistic Anthropology, American Anthropological Association (1999). It also won the Boyer Prize for "a significant contribution to Psychoanalytic Anthropology," awarded by the Society for Psychological Anthropology, American Anthropological Association (1999).

Nathan A. Fox, PhD

Nathan A. Fox, Ph.D., is Professor of Human Development, Institute for Child Study and Director of the Laboratory of Child Development at the University of Maryland, College Park. He has focused much of his research on the biologic bases of temperament. This work has been funded continuously for the past 15 years by the National Institutes of Health. Subsequent to receiving his Ph.D., Dr. Fox worked on a longitudinal study of high-risk infants at Roosevelt Hospital, which was part of a federally funded institute for the study of handicapping conditions in infants and young children. He served as the first President of the International Society for Infant Studies, and is President of Division 7 of the American Psychological Association.

Dr. Fox was a Lady Davis Fellow in the Department of Psychology at Hebrew University, Program Chair of the International Conference on Infant Studies (1988) and was a Member of the National Institute of Mental Health Emotion and Personality Review Committee. He is currently a member of the Early Experience and Brain Development Network of the John D. and Catherine T. MacArthur Foundation and the Network on Early Stress and Behavioral Development funded by NIMH. He was Editor of *Infant Behavior and Development* (1996-1999), Associate Editor of *Developmental Psychology* (1992-1998), Associate Editor of *Psychophysiology* (1987-1990) and served on the editorial board of the *Journal of Applied Developmental Psychology* (1990-1993). He also serves as a Consulting Reviewer for Science, the *International Journal of Behavioral Development* and *Developmental Psychobiology*, among others.

Widely published, Dr. Fox has co-edited four texts, among them *The Development of Social Engagement*, *The Psychological Effects of War and Violence on Children* and *The Psychobiology of Affective Development*. He has also authored or coauthored more than 130 empirical papers, scientific papers, scientific abstracts, and text chapters. He served as Moderator for the 1999 Johnson & Johnson Pediatric Round Table and is currently serving as advisor to the Johnson & Johnson Pediatric Institute, L.L.C. for the Round Table Meetings.

Darlene D. Francis, PhD

Darlene D. Francis, Ph.D., is Assistant Professor in the Department of Psychology and the School of Public Health (Division of Community Health and Human Development) at the University of California at Berkeley. She completed her postdoctoral work at Yerkes Regional Primate Center at Emory University. Her research focuses on the bi-directional relationship between genes and the environment, and how this relates to the development of individual differences in behavior. It appears that *how* genes get regulated and processed becomes as important as one's given genetic material when attempting to understand sources of individual variability. She contends that we can no longer discuss the role of genes versus the role of the environment in regulating a given phenotype, but instead, must necessarily phrase our questions in terms of how the two interact! The need for robust animal models to study the interplay between genes and the environment is evident. Dr. Francis currently uses an animal model using inbred mouse strains in which we combine prenatal embryo transfers and postnatal cross-fostering to demonstrate the critical role of the early environment in regulating complex behavior.

Takao K. Hensch, PhD

Takao Hensch, Ph.D., is Group Director, Critical Period Mechanisms Research; Group Director (acting), Human Learning; and Laboratory Head, Neuronal Circuit Development at RIKEN Brain Science Institute. After even a brief period of monocular occlusion in early life, input to visual cortex from the closed eye is functionally weakened, then anatomically reduced in size. For the first time, his research group has achieved direct control over the timing of this classical plasticity by manipulating inhibitory (GABAergic) transmission. To further understand the cellular and molecular mechanisms that produce changes in connectivity within cortical circuits, Dr. Hensch and colleagues at his lab are pursuing the pharmacological or genetic disruption of candidate plasticity proteins using a mouse model. Moreover, they are investigating the interplay between visual experience-dependent plasticity and endogenous sleep

rhythms emerging along the same thalamocortical circuits. Dr. Hensch has presented several invited lectures throughout the world, including Japan, Europe, and the U.S. He is associate editor of the journals, *Neuron* and *NeuroSignals* and has published the book *Excitatory-Inhibitory Balance: Synapses, Circuits, Systems* (Kluwer).

Gilbert Herdt, PhD

Gilbert Herdt, Ph.D., is Director and Professor of the Human Sexuality Studies and Professor of Anthropology at San Francisco State University. He is also founder of an interdisciplinary institute, Institute on Sexuality, Inequality and Health and Director of National Sexuality Resource Center at San Francisco State University. He has served on or consulted to a variety of international committees or agencies (WHO), major national committees and academic committees (NIMH, SSRC), and has served on the faculty at Stanford University and the University of Chicago, and has been a visiting professor at The University of Amsterdam and the University of Washington.

Dr. Herdt's is the recipient of various awards and research grants, including a William Simon Henry Guggenheim Memorial Fellowship, and Individual NIMH Postdoctoral Fellowships, and a Pre-doctoral Fulbright Scholarship to Australia. Dr. Herdt's research has been supported by the National Institute of Mental Health, Wenner-Gren Foundation, UCLA, Stanford University, the University of Chicago, Spencer Foundation. Dr Herdt is the recipient of major long-term funding from the Ford Foundation for the National Sexuality Resource Center in San Francisco, for which he serves as Director. He is a fellow of American Anthropological Association, the International Academy of Sex Research, among other associations.

Dr. Herdt's most recent works include a co-edited book, *Sexual Inequalities and Social Justice: Essays from the Field* (with N. Teunis, editor; University of California Press). He has published a major review article in January 2004: "Sexual Development, Social Oppression, and Local Culture," *Sexuality Research and Social Policy* 1:1-24. Dr. Herdt is a general editor of a series of books at the University of Chicago Press, "Worlds of

Desire," and the General Editor of a new significant journal, *Sexuality Research and Social Policy*. Herdt is also an associate editor of a variety of journals, including *Oceania, Journal of Culture, Sexuality, and Health; Journal of Men and Masculinities*; etc.

Dr. Herdt has authored 8 books, edited 15 books, and 10 monographs, and has published approximately 50 peer-journal articles and 50 chapters in books. His signature book, *Guardians of the Flutes*, is now in its third edition. His most recent books are: *Sambia Sexual Culture: Essays From the Field*, University of Chicago Press, 1999; *Something to Tell You: The Road Families Travel With a Gay Child* (translated into Portuguese and Spanish), Columbia University Press, 2000; and *Secrecy and Cultural Reality: Utopian Ideologies of the New Guinea Men's House*, his magnum opus published in 2003 by the University of Michigan Press.

Barry S. Hewlett, PhD

Barry S. Hewlett, Ph.D., Professor at Washington State University-Vancouver, received his A.B. in Cultural Transmission (self-designed major) from California State University, Chico in 1971 and his M.A. in anthropology from the same institution in 1977. After working several years for child development and social service agencies, he returned to graduate school at the University of California, Santa Barbara and obtained his Ph.D. in 1987. His dissertation became the basis of a monograph, *Intimate Fathers: The Nature and Context of Aka Pygmy Paternal Infant Care* (1991). A new book, edited with Michael Lamb, *Hunter-Gatherer Childhoods: Evolutionary, Developmental and Cultural Perspectives*, should be available in February 2005. His current research interests include the cultural nexus of the Aka and Ngandu infant development; the cultural contexts of various tropical diseases, such as Ebola hemorrhagic fever; the impact of new African tropical forest parks and reserves on the local people; and cultural transmission and biocultural evolution. He is a cultural anthropologist.

Helianti Hilman, SH, LLM

Helianti Hilman is Executive Director of Yayasan Bina Usaha Lingkungan (YBUL), a

non-governmental organization established in 1993 that helps innovative social and environmental enterprises secure financing.

Douglas Hollan, PhD

Douglas Hollan is Professor and Chair of the Department of Anthropology at University of California, Los Angeles; Instructor at the Southern California Psychoanalytic Institute; and Editor of Book Series for the Society for Psychological Anthropology. His research interests include psychological anthropology; cross-cultural psychiatry; person-centered ethnography; and the cross-cultural study of mind, consciousness, and mental disorder. Dr. Hollan is currently conducting cross-cultural studies of dreams, consciousness, and cultural idioms of distress. He is a member of the FPR Board of Directors as well as the FPR Advisory Board, and holds a PhD in Anthropology and in Psychoanalysis.

Kim L. Huhman, PhD

Kim L. Huhman, Ph.D., is Associate Professor of Psychology and Deputy Director at the Center for Behavioral Neuroscience at Georgia State University. The research in her laboratory is focused on understanding how exposure to stress (particularly social stress) leads to long-term changes in behavior. She uses Syrian hamsters because they are naturally a solitary, aggressive species that readily produces agonistic behavior in the laboratory. This behavior is easily quantifiable and very rarely results in injury, yet the defeated individual exhibits a striking behavioral change that we call conditioned defeat. When a hamster exhibits conditioned defeat, the territorial aggression that is normally displayed by hamsters disappears completely and is replaced by high levels of submissive and defensive behavior. She is exploring the neural circuits and neurochemical signals that mediate this change using behavioral, cellular and molecular techniques. Her research is supported by the National Institute of Mental Health and the National Science Foundation.

Livia Iskandar-Dharmawan, Dra., M.A.

Livia Iskandar-Dharmawan, is currently the Coordinator for PULIH Foundation- Centre for

Trauma Recovery and Psychosocial Intervention, whose main office is in Jakarta, Indonesia. PULIH has 2 field offices, one in Ambon and another in Aceh, as well as a special project on Urban Refugees in Jakarta and West Java with UNHCR. She has had several experiences in designing community based psychosocial recovery program for Internally Displaced Persons in conflict affected areas and was part of a team in writing the book on the community based approach with other psychologists from Pulih. She has presented at several international conferences on trauma, including at the International Traumatic Stress Studies in the US in 2001 and 2002. She established PULIH with 2 colleagues in July 2002 as their dream is that psychologists can contribute significantly to the society- in being part of the civil society movement, integrating human rights and mental health. She holds an MSc in Psychological Counselling from City University, London, UK (1996-1997) and graduated as a psychologist from the Faculty of Psychology, University of Indonesia in 1994. Her interests are in the fields of Community Psychology, Community Mental Health-building a referral system in resource poor settings; Trauma Recovery as an integral part of Community Reconstruction in Conflict Affected Areas and Natural Disasters.

Jaana Juvonen, PhD

Jaana Juvonen, Ph.D., is a Professor and Chair of Developmental Psychology at UCLA and Adjunct Behavioral Scientist at RAND. Her area of expertise is in young adolescent peer relationships and school adjustment. For the past seven years, her main topic of research has been on bullying. Dr. Juvonen has co-authored a recent book, *Focus on the wonder years: Challenges facing the American middle school*, 2004, and co-edited *Social motivation: Understanding children's school adjustment*, 1996, as well as *Peer harassment in school: The plight of the vulnerable and victimized*, 2001. Dr. Juvonen is currently a co-PI on a longitudinal study of 2,000 public middle schools students, funded by the National Science Foundation and the W. T. Grant Foundation. She is a former recipient of a National Academy of Education Spencer Fellowship, Senior Fellowship of the Academy of Finland, and the

UCLA Psychology Department Distinguished Adjunct Faculty Teaching Award.

Harvey Karp, MD

Dr. Harvey Karp, assistant professor at the UCLA School of Medicine, has been a pediatrician and child development specialist for more than 25 years. He is the author of the popular parenting books/dvds "The Happiest Baby on the Block" and "The Happiest Toddler on the Block." His innovative theories have been endorsed by leaders of the American Academy of Pediatrics, Zero-to-Three, and the former Surgeon General of the United States. Dr. Karp's baby work employs a cross cultural and evolutionary approach to argue that human infants need an extra-uterine "4th trimester" and that imitating the sensory milieu of the uterus activates a previously overlooked neonatal response (the "calming reflex"), which is a virtual off switch for infant crying. Using this paradigm he offers a novel solution to the 3000-year-old medical puzzle, "What causes colic and how can it be remedied?" His infant calming approach is being taught in medical centers and hospitals across the country and around the world. Dr. Karp's toddler work presents an intriguing exploration of the principle "ontogeny recapitulates phylogeny" through toddlerhood (ages of 1-4 years). Parents using his toddler techniques report up dramatic reduction in tantrums and a comparable increase cooperative behavior.

Melvin J. Konner, MD, PhD

Melvin J. Konner, M.D., Ph.D. is Samuel Candler Dobbs Professor in the Department of Anthropology and the Program in Neuroscience and Behavioral Biology at Emory University. He studied at Brooklyn College, CUNY, earned a Ph.D. in biological anthropology at Harvard University, and did postdoctoral work at the Laboratory of Neuroendocrine Regulation, MIT. He has an M.D. (Harvard Medical School) but does not practice medicine.

Dr. Konner spent two years doing fieldwork among the Kalahari San or Bushmen, studying infant development and the hormonal mechanism of lactational infertility. After six years on the Harvard faculty, he attended Harvard Medical School and subsequently

moved to Emory. He has held NIMH and NSF research grants, and been a Fellow of the Center for Advanced Study in the Behavioral Sciences, the John Simon Guggenheim Memorial Foundation, the Social Science Research Council, and the Foundations Fund for Research in Psychiatry. He is a Fellow of the American Association for the Advancement of Science.

He was a senior adviser and wrote the books for two public television series, *Childhood and Medicine at the Crossroads*. He has long advocated single-payer health reform and has testified twice at U.S. Senate hearings. He has often written for *The New York Times*, *Newsweek*, *The Sciences*, and other general publications, and has had articles in *Science*, *The New England Journal of Medicine*, *Nature*, *Child Development* and other leading journals. Dr. Konner's book, *The Tangled Wing: Biological Constraints on the Human Spirit*, (now in a completely revised edition) was nominated for the American Book Award (Science). He received the 2004 Anthropology in Media Award of the American Anthropological Association. His most recent book is *Unsettled: An Anthropology of the Jews*.

Jill E. Korbin, PhD

Jill E. Korbin, Ph.D., is Associate Dean, Professor of Anthropology, Co-Director of the Schubert Center for Child Development and Co-Director of the Childhood Studies Program in the College of Arts and Sciences at Case Western Reserve University. She earned her Ph.D. in 1978 from the University of California at Los Angeles. Korbin was awarded the Margaret Mead Award (1986) from the American Anthropological Association and the Society for Applied Anthropology and a Congressional Science Fellowship (1985-86) through the American Association for the Advancement of Science and the Society for Research in Child Development. Korbin served on the National Academy of Sciences Panel on Research on Child Abuse and Neglect, the Institute of Medicine Panel on Pathophysiology and Prevention of Adolescent and Adult Suicide, and has consulted for the United States Advisory Board on Child Abuse and Neglect. Professor Korbin has published numerous articles on culture and child maltreatment, including her

edited book, *Child Abuse and Neglect: Cross-Cultural Perspectives* (1981, University of California Press), which was the first volume to examine the relationship of culture and child maltreatment. She also has published and conducted research on women incarcerated for fatal child maltreatment, on health, mental health and child rearing among Ohio's Amish population, and on the impact of neighborhood factors on child maltreatment and child well-being.

Robert Lemelson, PhD

Robert Lemelson is a Lecturer in the Departments of Psychology and Anthropology at the University of California, Los Angeles, and is the President of the Foundation for Psychocultural Research. His research centers on the intersection of culture, personal experience and psychopathology. Dr. Lemelson was a Fulbright Scholar in Indonesia in 1996-1997, has worked for the World Health Organization, and is trained as a clinical psychologist in addition to his PhD in anthropology. His areas of specialty are Southeast-Asian Studies, psychological anthropology and transcultural psychiatry. Dr. Lemelson recently finished a documentary film based on his research, filmed in both Java and Bali, and is currently finishing two other films. He is also a director of The Lemelson Foundation, a family foundation whose mission is to promote innovation and invention in American society.

Robert A. LeVine, PhD

Robert A. LeVine, Ph.D., is Roy E. Larsen Professor of Education and Human Development, Emeritus, at the Harvard Graduate School of Education. He is an anthropologist who has studied parenting and child development in Kenya, Nigeria, Mexico and Nepal and investigated the effects of schooling on maternal behavior in diverse cultural contexts.

Dr. LeVine has, with his collaborators, published 11 books and more than 100 articles, contributing to psychological anthropology and comparative education as well as the cross-cultural study of parenting, childcare and enculturation. His recent books include *Child Care and Culture: Lessons from Africa* (1994), *Japanese*

Frames of Mind: Cultural Perspectives on Human Development (2001) and *Childhood Socialization: Comparative Studies of Parenting, Learning and Educational Change* (2003). He has also written on comparative personality research, person-centered ethnography and the relationship of psychoanalysis to anthropology.

The awards received by Dr. LeVine include the Career Contribution Award of the Society for Psychological Anthropology (1997) and the Distinguished Contributions Award of the American Educational Research Association (2001). He was Chairman of the Social Science Research Council (1980-83) and Distinguished Visiting Professor of the University of Hong Kong (2001-02).

In 2004-2005, Dr. LeVine is a John Simon Guggenheim Memorial Fellow, living in Berlin, Germany and writing a book on the anthropology of parenting.

Alicia F. Lieberman, PhD

Alicia F. Lieberman, Ph.D. is Professor of Psychology and Vice Chair for Academic Affairs at the UCSF Department of Psychiatry, and Director of the Child Trauma Research Project, San Francisco General Hospital. She is also a clinical consultant with the San Francisco Department of Human Services. Born in Paraguay, she received her B.A. from the Hebrew University of Jerusalem and Ph.D. from The John Hopkins University. She is on the Board of Directors and Vice President of Zero to Three: The National Center for Infants, Toddlers and Families and on the Professional Advisory Board of the Johnson & Johnson Pediatric Institute. She is the author of *The Emotional Life of the Toddler* (The Free Press, 1993), which has been translated to seven languages and is extensively used by parents and as a textbook. She is also senior author of *Losing a Parent to Death in the Early Years: Treating Traumatic Bereavement in Infancy and Early Childhood* (Zero to Three Press, 2003) and a forthcoming treatment manual, "Don't Hit My Mommy!": A Manual for Child-Parent Psychotherapy with Young Witnesses of Family Violence, due in November 2004 from Zero to Three Press. She is Senior Editor of *DC: 0-3 Casebook: A Guide to the Use of Zero to Three's Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early*

Childhood, and co-author of *Infants in Multiproblem Families* with Stanley Greenspan and others, as well as the author of more than 50 articles and chapters. She lectures extensively in four continents and is a consultant to government agencies and private foundations nationally and abroad. Her major interests include infant mental health, disorders of attachment, child-parent interventions with multiproblem families, and the effects of trauma in the first years of life. Her current research involves treatment outcome evaluation of the efficacy of child-parent psychotherapy with traumatized children aged birth to six. As a bilingual, bicultural Latina, she has a special interest in cultural issues involving child development, childrearing, and child mental health.

Emeran Mayer, MD

Emeran Mayer, M.D., is a professor in the Departments of Medicine, Physiology and Psychiatry & Biobehavioral Sciences at UCLA, and has more than 15 years of experience in the study of clinical and neurobiological aspects of brain gut interactions in health and disease. He has published more than 110 original peer reviewed articles, 60 chapters and reviews, co-edited two books, and organized several interdisciplinary symposia in the area of visceral pain and mind body interactions. He has made seminal contributions to the characterization of physiologic alterations in patients with functional disorders, particularly in the area of interoceptive mechanisms, including visceral pain and altered brain responses in humans. Specifically, his research efforts include the study of cellular and molecular mechanisms of chemo- and mechanotransduction of primary afferent nerves; animal studies on stress modulation of visceral pain and associated autonomic responses; human physiology studies on cerebral, autonomic, neuroendocrine, and perceptual responses to visceral stimulation; and health outcomes, quality of life, and epidemiological studies in populations suffering from chronic gastrointestinal disorders.

Dr. Mayer is Director of the NIH-funded Center for Neurovisceral Sciences & Women's Health and Co-Director of the CURE Digestive Diseases Research Center. He has two active R01 grants, one on basic mechanisms of

NMDA receptors in visceral nociception, the other on brain and perceptual responses to visceral stimuli. He has served on the editorial boards of the leading journals in digestive diseases, including *Gastroenterology*, *Gut*, *Digestion* and the *American Journal of Physiology*, and has served as reviewer for a wide range of medical and neuroscience journals, as an ad hoc reviewer for national and international funding agencies, and on ad hoc NIH study sections.

Claudia Mitchell-Kernan, PhD

Claudia Mitchell-Kernan, Ph.D., is an anthropologist currently serving as Vice Chancellor for Graduate Studies and Dean of the Graduate Division as well as interim Vice Chancellor for Student Affairs. She is also a Professor in the Departments of Anthropology and Psychiatry and Biobehavioral Sciences.

She received her Ph.D. from the University of California, Berkeley and her B.A. and M.A. from Indiana University. She was a member of the faculty at Harvard University before coming to UCLA in 1973. Much of Dr. Mitchell-Kernan's early work was in the area of linguistic anthropology and her classic research in the late 1960s and early 1970s on the speech patterns of Black children is widely cited to this day. Her most recent book, *The decline in marriage among African Americans*, co-edited with M. Belinda Tucker, was published in 1995 by Russell Sage. Other books include such topics as children's discourse, television and the socialization of ethnic minority children, and linguistic patterns of African American children. She currently conducts research on marriage and family formation patterns in the United States among Americans and West Indian immigrants.

Throughout her career she has maintained an active record of service nationally to federal agencies that sponsor research. President Clinton appointed her to the National Science Board for a six-year term in 1994. The National Science Board provides advice to the President and Congress on issues affecting science and technology and governs the National Science Foundation, our country's premier agency for the support of basic science. At the national level, she is currently serving on the

Board of Higher Education and Workforce of the National Research Council, on the Board of Directors of the Council of Graduate Schools, and on the Advisory Committee on Minorities in Graduate Education of the Council of Graduate Schools. She has also recently served as Chair of the Board of Directors of the Graduate Record Examination, the Advisory Board of the National Security Education Program, and the Board of Deans of the African American Institute.

Charles B. Nemeroff, MD, PhD

Dr. Nemeroff was born in New York City in 1949 and educated in the New York City Public School System. After graduating from the City College of New York in 1970, he enrolled in graduate school at Northeastern University and received a Master's degree in Biology in 1973. He received his MD and PhD (Neurobiology) from the University of North Carolina at Chapel Hill. His residency training in psychiatry was conducted at both the University of North Carolina and at Duke University, after which he joined the faculty of Duke University. At Duke he was Professor of Psychiatry and Pharmacology and Chief of the Division of Biological Psychiatry before relocating in 1991 to Emory University School of Medicine in Atlanta, Georgia, where he is the Reunette W. Harris Professor and Chairman of the Department of Psychiatry and Behavioral Sciences. His research has concentrated on the biological basis of the major neuropsychiatric disorders, including affective disorders, schizophrenia, and anxiety disorders. His clinical research has recently focused on the use of neuroendocrine, neuroimaging and neurochemical methods to elucidate the pathophysiology of depression. In recent years he has sought to determine the neurobiological mechanisms that mediate the increased risk for depression in individuals who were victims of child abuse. He has also contributed to the burgeoning area of research concerning the relationship of depression to cardiovascular disease.

Dr. Nemeroff has received numerous honors during his career, including the A.E. Bennett Award from the Society of Biological Psychiatry (1979), the Judith Silver Memorial

Young Scientist Award from the National Alliance for the Mentally Ill (1989), both the Kempf Award in Psychobiology (1989) and the Samuel Hibbs Award (1990) from the American Psychiatric Association, and the Gold Medal Award and the Research Prize (1996) from the Society of Biological Psychiatry. In 1993 he was awarded the Edward J. Sachar Award from Columbia University and the Edward A. Strecker Award from The Institute of Pennsylvania Hospital. In 1997, he was the recipient of the Gerald Klerman Award from the National Depressive and Manic-Depressive Disorders Association and the Selo Prize from the National Alliance for Research in Schizophrenia and Depression. In 1998 he was the recipient of the Research Award in Mood Disorders from the American College of Psychiatrists and in 1999 he received the Bowis Award from the same organization. He was awarded the Menninger Prize in 2000 from the American College of Physicians, the Research Award from the American Foundation for Suicide Prevention in 2001, and the Burlingame Prize from the Institute of Living in 2002. Dr. Nemeroff is the Editor-in-Chief of *Neuropsychopharmacology*. With Alan F. Schatzberg, MD, he is co-Editor of the *Textbook of Psychopharmacology*, now in its Third Edition, published by the American Psychiatric Association Press. He has served on the Mental Health Advisory Council of the National Institutes of Mental Health and the Biomedical Research Council for NASA. He is past President of the American College of Neuropsychopharmacology and the American College of Psychiatrists. In 2002 he was elected to the Institute of Medicine.

He is currently the recipient of several research grants from the NIH, including a Conte Center for the Neurobiology of Major Mental Disorders, and has published more than 750 research reports and reviews.

Paul Okami, PhD

Paul Okami, Ph.D., earned his degree in the Personality area of the Department of Psychology at UCLA in 1995. Since that time he has worked, among other positions, as a Post-Doctoral Scholar at UCLA Neuropsychiatric Institute, supervised by Dr. Thomas Weisner.

He has taught regularly since 1998 in the Department of Psychology and the Department of Communication Studies at UCLA. Dr. Okami's most recent work include a long-term study of parent-child bedsharing, co-authored by Thomas Weisner and Richard Olmstead, published in *Journal of Developmental and Behavioral Pediatrics*; guest editing a special issue of *Journal of Sex Research* devoted to evolutionary and neurohormonal perspectives; and beginning work on a new undergraduate textbook in General Psychology to be published in 2007 by Wadsworth. His interests include the evolutionary psychology of mating, sex differences, and human development.

Sergio M. Pellis, PhD

Sergio Pellis, Ph.D., is Professor and Chair of the Department of Psychology & Neuroscience at University of Lethbridge. He was born in Trieste, Italy. He received his B.Sc., Dip. Ed., and Ph.D. from Monash University in Australia. He teaches statistics, comparative psychology, sex and human ethology, behavioural neuroscience, and behavioural development. His research interests include play and its control, and the organization of movement.

Paul M. Plotsky, PhD

Paul M. Plotsky, Ph.D., is Director, Stress Neurobiology Laboratory and GlaxoSmithKline Professor in the Department of Psychiatry and Behavioral Sciences at Emory University School of Medicine.

Plotsky joined the Emory faculty as a professor of psychiatry in 1992; since then he has directed the Stress Neurobiology Lab and has been a collaborating scientist in the Division of Neurobiology at Yerkes. He holds adjunct professorships in the Department of Psychology and in the Department of Anatomy and Cell Biology. Before coming to Emory, Plotsky was a Mellon Foundation Faculty Scholar and Associate Professor at the Salk Institute for Biological Studies in La Jolla, California. He also taught at the University of California at San Diego, where he was an adjunct faculty member of the Department of Biology.

Plotsky's research interests are focused on the determination of the neuroendocrine, behavioral and central nervous system

consequences of adverse early experience during the perinatal period in rodent and nonhuman primate models as well as humans; the role of glucocorticoids on central nervous system gene expression and neurocircuitry; and clinical studies of the long-term consequences of childhood abuse on neuroendocrine, autonomic nervous system and behavioral function.

He has authored over 100 research articles. He currently sits on the editorial board for the journals, *Stress*, *Biological Psychiatry*, *Journal of Neuroendocrinology* and *Current Psychiatry Reviews*. He was past associate editor of the journal *Endocrinology*.

Robert S. Pynoos, MD, MPH

Dr. Robert Pynoos is Professor of Psychiatry in the UCLA Department of Psychiatry and Biobehavioral Sciences. Dr. Pynoos is a graduate of Harvard University and Columbia University Schools of Medicine and Public Health. He is Co-Director of the National Center for Child Traumatic Stress and Director of the UCLA Trauma Psychiatry Service.

In his current role as Co-Director of the National Center for Child Traumatic Stress, funded through the Substance Abuse and Mental Health Services Administration, Dr. Pynoos is responsible for leading and coordinating a nationwide network of 54 academic- and community-based centers dedicated to raising the standard of care and improving access to services for traumatized children, families, and communities throughout the United States.

Over the past two decades, Dr. Pynoos has made significant contributions to understanding the impact of children's exposure to violence and disaster and to elevating the standards of mental health care for child victims and witnesses. He has written extensively about child development and the impact of disaster, violence, and loss on families and school communities. He has edited several widely respected books on posttraumatic stress in children and adolescents, and is a leader in research into the neurobiology of childhood trauma and the impact of trauma on moral development.

Dr. Pynoos has served as Chair for the William T. Grant Consortium on Adolescent Bereavement and for the MacArthur Foundation Network Study Group on Children's Responses to Traumatic Stress. He has been a consultant to UNICEF for Kuwait after the Gulf War and has had a collaborative partnership with UNICEF to conduct a long-term post-war recovery program for adolescents in Bosnia-Herzegovina. He was an invited participant to the 1999 White House Strategy Session on Children, Violence, and Responsibility; the 1999 White House Conference on Mental Health; and the 2000 White House Conference on Teenagers. Dr. Pynoos provided consultation with First Lady Laura Bush in regard to the needs of children and family after 9/11. He served as a consultant to the United States Department of Education after the Oklahoma City bombing; to the Springfield, Oregon Public School District after the Thurston High School shooting; to Jefferson County Mental Health after the Columbine High School tragedy; to the New York City Board of Education, the New York State Office of Mental Health, and the New York City Department of Health in planning post-September 11 mental health responses.

Dr. Pynoos has received numerous honors including the American Psychiatric Association and the American Academy of Psychiatry and the Law Award for his outstanding contribution on child witnesses to homicide, the National Organization for Victim Assistance Award for research, the American Psychiatric Association Bruno Lima Award for excellence in disaster psychiatry, and the 2001 Lifetime Achievement Award from the International Society for Traumatic Stress Studies. Most recently, in August 2004, he received the America Professional Society on the Abuse of Children's Outstanding Professional Achievement Award.

Naomi Quinn, PhD

Naomi Quinn, Ph.D., is Professor Emeritus in the Department of Cultural Anthropology and the Department of Psychology, Social & Health Sciences at Duke University. She received her Ph.D. from Stanford University in 1971. Her research has pursued the reconstruction, from

reasoning, metaphor, and other features of their discourse on it, of Americans' cultural understandings of marriage. Her enduring interest is in the nature of culture: its sharedness, force, enduringness, and thematicity. She is part of a current effort in cognitive anthropology to explain these and other properties of culture on the basis of schema theory, and within this framework, to relate culture to language, cognition, motivation, affect, psychodynamic processes, and individual experience. Her newest research pursues the internalization of culture in infants and children, with special attention to cross-cultural universals and variation in early attachment and separation as it influences adult intimate relationships; and to child rearing as it shapes cultural selves. She is co-author of *A Cognitive Theory of Cultural Meaning* (1997), co-editor of *Cultural Models in Language and Thought* (1987) and editor of *Finding Culture in Talk: A Collection of Methods* (forthcoming in 2005). Her research is described in chapters of these books and in a series of articles, including "Culture and Contradiction: The Case of Americans Reasoning About Marriage" (1996), "The Motivational Force of Self Understanding: Evidence from Wives' Inner Conflicts" (1992), and "The Cultural Basis of Metaphor" (1991). She has, as well, an ongoing interest in anthropological research on gender, reflected in an early review article, "Anthropological Studies of Women's Status" (1977) and a more recent critique, "The Divergent Case of Cultural Anthropology" (2000).

Geoffrey Robinson, PhD

Geoffrey Robinson is Associate Professor of History and Director of the Center for Southeast Asian Studies at UCLA. He has written extensively on questions of political violence, popular resistance, human rights, and U.S. foreign policy in Southeast Asia. His works include: *The Dark Side of Paradise: Political Violence in Bali*, Cornell University Press (1995); "Rawan Is As Rawan Does: The Origins of Disorder in New Order Aceh," *Indonesia* (1998); and "People's War: Militias in Indonesia and East Timor," *South East Asia Research* (2001). Before coming to UCLA, he worked for six years at Amnesty International's Research Department in London. From June to November 1999 he

served as a Political Affairs Officer with UNAMET in Dili, East Timor.

Daniel S. Schechter, MD

Daniel S. Schechter, M.D., is Assistant Professor of Clinical Psychiatry (in Pediatrics) at Columbia University College of Physicians & Surgeons, Divisions of Developmental Psychobiology and Trauma Studies and Services. He is also Director of Research for The Parent-Infant Program at Columbia University Psychoanalytic Center, and is Medical Director for The Infant-Family Service, Departments of Pediatrics and Pediatric Psychiatry at Children's Hospital of New York, The New York-Presbyterian Hospital. He attended the Oberlin Conservatory of Music, Columbia College, and the Columbia University College of Physicians and Surgeons. He completed his adult and child psychiatry clinical and research training also at Columbia. Dr. Schechter's research interests include the impact of relational disturbances during early childhood on the development of affect regulation, the psychobiological influence of parental posttraumatic stress on parent-child perception and interactive behavior, as well as interventions aimed at interrupting cycles of familial violence. Dr. Schechter's research is currently funded in large part through an NIMH Research Career Award. He is co-editor of and contributor to the book *September 11: Trauma and Human Bonds* (The Analytic Press).

Daniel J. Siegel, MD

Daniel J. Siegel, M.D., received his medical degree from Harvard University and completed his postgraduate medical education at UCLA with training in pediatrics, general adult psychiatry, and child and adolescent psychiatry. He has served as a National Institute of Mental Health Research Fellow at UCLA, studying family interactions with an emphasis on how attachment experiences influence emotions, behavioral regulation, autobiographical memory, and narrative processes.

Dr. Siegel's clinical activities include work as a child, adolescent, adult, and family psychiatrist. An award-winning educator, he formerly directed the training program in child psychiatry and the Infant and Preschool Service at UCLA. He is the recipient of the

departmental teaching award and several honorary fellowships. He is currently an associate clinical professor of psychiatry at the UCLA School of Medicine and is a Co-Investigator at the Foundation for Psychocultural Research-UCLA Center for Culture, Brain, and Development. He is also the Director of the Center for Human Development, an educational organization that focuses on how the development of individuals, families, and communities can be helped by examining the interface of human relationships and basic biological processes.

Dr. Siegel's integrated developmental approach has led him to be invited to local, national, and international organizations to address groups of educators, parents, public administrators, healthcare providers, policy-makers, clergy, and neuroscientists. He is the co-editor of a handbook of psychiatry and the author of several articles, chapters, and the internationally acclaimed text, *The Developing Mind: Toward a Neurobiology of Interpersonal Experience* (Guilford Press, New York, 1999). This book has been of interest to and utilized by a number of organizations, including the Council on Technology and the Individual, the Sundance Institute, the U.S. Department of Justice, the Vatican, and numerous academic departments worldwide. Dr. Siegel also serves as Editor-in-Chief for the Norton Series on Interpersonal Neurobiology. With Mary Hartzell, M.Ed., Dr. Siegel has published *Parenting from the Inside Out: How a Deeper Self-Understanding Can Help You Raise Children Who Thrive* (Tarcher/Penguin, New York, 2003). The overall goal of these educational efforts is to provide a scientifically grounded view of human experience to a wide audience that can help facilitate the development of psychological wellbeing and emotional resilience across the lifespan.

Stephen J. Suomi, PhD

Stephen Suomi, Ph.D., is Chief of the Laboratory of Comparative Ethology at the National Institute of Child Health and Human Development (NICHD), National Institutes of Health (NIH) in Bethesda, Maryland. He also holds appointments as Research Professor at the University of Virginia (Psychology), the

University of Maryland, College Park (Human Development), and The Johns Hopkins University (Mental Hygiene), and is an Adjunct Professor at Pennsylvania State University (Human Development) and the University of Maryland, Baltimore County (Psychology). Dr. Suomi studied Psychology as an undergraduate at Stanford University, then continued his studies as a graduate student at the University of Wisconsin-Madison, receiving his Ph.D. in Psychology in 1971. Dr. Suomi then joined the Psychology faculty at the University of Wisconsin-Madison, where he eventually attained the rank of Professor. In 1983 he left Wisconsin to join the NICHD when he began his present position.

Dr. Suomi has received international recognition for his extensive research on biobehavioral development in rhesus monkeys and other primate species. His initial postdoctoral research successfully reversed the adverse effects of early social isolation, previously thought to be permanent in rhesus monkeys. His subsequent research at Wisconsin led to his election as Fellow in the American Association for the advancement of Science for "major contributions to the understanding of social factors that influence the psychological development of nonhuman primates." Since joining the NICHD he has identified heritable and experiential factors that influence individual biobehavioral development, characterized both behavioral and physiological features of distinctive rhesus monkey phenotypes, and demonstrated the adaptive significance of these different phenotypes in naturalistic settings. His present research focuses on three genera issues: the interaction between genetic and environmental factors in shaping individual developmental trajectories, the issue of continuity vs. change and the relative stability of individual differences throughout development, and the degree to which findings from monkeys studied in captivity generalize not only to monkeys living in the wild but also to humans living in different cultures.

Throughout his professional career Dr. Suomi has been the recipient of numerous awards and honors. To date, he has authored or co-authored more than 300 articles published in scientific journals and chapters in edited

volumes. He has also delivered more than 300 invited colloquia, symposium and workshop presentations, and convention papers in the U.S. and in 12 foreign countries.

Allan J. Tobin, PhD

Allan J. Tobin, Ph.D., is Managing Director of MRSSI, which advises the High Q Foundation and CHDI Inc. on the development of therapies for Huntington's disease. Dr. Tobin is Professor Emeritus in the Departments of Physiological Science and Neurology at UCLA, former Director of the UCLA Brain Research Institute (1995-2003) and former Scientific Director of the Hereditary Disease Foundation (1979-2002). Dr. Tobin's laboratory at UCLA used molecular and cellular techniques to study the function, regulation, and degeneration of GABA-producing neurons in the brain and spinal cord, in order to address basic mechanistic questions important for Huntington's disease, Parkinson's disease, epilepsy, and spinal cord injury.

Thomas S. Weisner, PhD

Thomas S. Weisner, Ph.D., is Professor in the Department of Psychiatry and Biobehavioral Sciences, Center of Culture and Health (Neuropsychiatric Institute) at UCLA and Department of Anthropology, UCLA. Dr. Weisner's research program explores the relationships between culture and human development. He is currently directing a Program Project in the Culture and Health Center studying child competence and family adaptation. He is following children with developmental disabilities and their families in Los Angeles since 1985. His current work follows up the sample at adolescence. He is also doing an ethnographic study of economically poor families making the transition through welfare reform (the New Hope study), focused on the effects on children and families. Several of these studies are testing ecocultural theories of child development and family adaptation using the Ecocultural Family Interview, which assesses on the cultural models of childhood and the everyday routine of family activities as central influences on development and family life. He directs the Fieldwork and Qualitative Data Laboratory in the Center and the MRRC,

which provides consultation on integrating qualitative and quantitative data.

Carol M. Worthman, PhD

Carol M. Worthman, Ph.D., currently holds the Samuel Candler Dobbs Chair in the Department of Anthropology, Emory University (Atlanta), where she also directs the Laboratory for Comparative Human Biology. After taking dual undergraduate degrees in biology and botany at Pomona College, Dr. Worthman took her PhD in biological anthropology at Harvard University, having also studied endocrinology at UCSD and neuroscience at MIT. She joined the nascent anthropology faculty at Emory University in 1986, and has helped to build its biocultural focus and establish its leadership position in the field.

Professor Worthman takes a biocultural approach to pursuit of comparative interdisciplinary research on human development, reproductive ecology, and biocultural bases of differential mental and physical health. She has conducted cross-cultural ethnographic and biosocial research in ten countries, including Kenya, Tibet, Nepal, Egypt, Japan, and Papua New Guinea, as well as in rural, urban, and semi-urban areas of the United States. For the past 12 years, she has collaborated with Jane Costello and Adrian Angold in the Great Smoky Mountains Study, a large, longitudinal, population-based developmental epidemiological study. Her early work demonstrated the impact of cultural practices on biological outcomes, including breastfeeding effects on infant survival and birth spacing, of child care on child survival and growth, of sex differentiated care on the timing of puberty, and reproductive life history on chronic health risk. Her later work has focused on mental health outcomes, including pubertal bases for gender differences in adult rates of depression, interactions of endocrine with experiential factors in child behavior problems, and biomediation of long-term consequences of early abuse and neglect. Recent work incorporates fine-grained, household-based studies of everyday life that incorporate biological, behavioral, and cultural markers and measures, to track the proximal pathways in the

social ecology of stress and its sequelae. In addition to empirical contributions, Professor Worthman's theoretical work includes life history theory and human development, biocultural anthropology, comparative developmental ecology of sleep and state regulation, and the emerging field of evolutionary medicine generally.

Since 1987 Professor Worthman has been Principal Investigator or Co-Principal Investigator on grants from major funding agencies, including the NIH, NSF, W.T. Grant Foundation, Ford Foundation, National Geographic Society, and the Spencer Foundation. She is currently a Principal Investigator on the NIH Research Center for Developmental Epidemiology. During 2004-5, she is a Fellow at the Russell Sage Foundation to complete *Their Lives, Our Future: Learning from the youth and families of southern Appalachia*, with Jane Costello and Ryan Brown.

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