

Identification and Classification of Childhood Developmental Difficulties in the Context of Attachment Relationships

Catherine Ann Cameron PhD¹

Abstract

Objective: This paper addresses challenges in identification and classification of childhood difficulties in the context of the current psychological literature on early attachment relations and normative development. **Method:** A review of the literature on childhood development and attachment relationships was conducted in relation to recent advances in developmental psychology. **Results:** Findings include recommendations for studying the child in ecological context, focusing on positive assets and resiliency, and seeing children as active participants in the construction of their own environmental niches. Studying the active strong child in context involves taking an integrative view by investigating the interactions of all basic biopsychosocial facets of the child's world, recognizing the delicate balance between pathologizing and insisting that all behaviour and psychological states are equally valid expressions of a normative developmental course. Further, developmental science now has amassed the requisite data to establish the need for taking attachment relationships into careful account in assessing a child or youth's biopsychosocial wellbeing. **Conclusions:** It is thus argued here that identification of children in psychological distress requires an holistic, contextually inclusive, examination of their early and subsequent attachment experiences and positive relations if a diagnosis is to lead to appropriate, efficacious, intervention.

Key words: attachment, classification, developmental difficulties, resilience

Résumé

Objectifs: Cet article présente les défis que posent la définition et la classification des difficultés des enfants qui sont évoquées dans la littérature sur l'attachement. **Méthodologie:** Les auteurs passent en revue la littérature sur le développement normatif et sur l'attachement. **Résultats:** Les récents travaux de la psychologie développementale étudient notamment l'enfant dans son contexte écologique, en se concentrant sur ses points forts et sa résilience. Ils considèrent que l'enfant participe activement à la construction de son propre environnement. Pour étudier l'enfant sur son contexte, il convient d'avoir une vue d'ensemble et d'étudier les différentes interactions entre les facettes biopsychologiques fondamentales du monde de l'enfant, de reconnaître le délicat équilibre entre les pathologies et de mettre l'accent sur le fait que les comportements et les états psychologiques expriment aussi, de manière tout aussi valable, le cheminement du développement normatif. En outre, la science du développement permet maintenant de recueillir les données qui confirment qu'il est nécessaire de prendre l'attachement en considération lorsqu'on évalue le bien-être psychosociologique de l'enfant ou de l'adolescent. **Conclusions:** Pour donner lieu à des interventions appropriées et efficaces, la classification de la détresse psychologique des enfants doit intégrer une étude holistique contextuelle de l'expérience du nourrisson et de l'enfant en matière d'attachement et de relations positives.

Mots clés: attachement, classification, difficultés développementales, résilience

¹ Department of Psychology, University of British Columbia, Vancouver, British Columbia

Corresponding email: acameron@psych.ubc.ca

Submitted: March 2, 2008; Accepted: April 10, 2008

A number of salutary advances in the basic psychological study of human growth and developmental change have had what could affect profound consequences for the clinical assessment of childhood psychological wellbeing. First, children are more commonly studied in context today, dissolving boundaries between what we know of them and the contexts within which they thrive. The cultural psychology of development contributes to a richer, deeper, understanding of children and youth. Second, explorations of resiliency, health psychology, and a focus on asset-based analyses of personal, social, and community strengths have provided positive roadmaps for successful interventions that can reroute delayed or disrupted human development and growth. Thirdly, children are now most likely to be theorized as

active participants in their own development, not passive recipients of environmental stimulation. Without blaming victims, we now understand that individuals have a constructive hand in creating their own ecological niches.

Fourth, artificial boundaries between cognitive, linguistic, social, emotional and physiologic functioning are dissolving as a result of careful studies of basic psychological process interactions. Recent new knowledge of the interpenetration of psychological processes contributes to the rigour of our accumulating science of human development and obviates resort to misleadingly simplistic characterizations of development as being colonized by one process, such as cognition or physiology. It also has rescued developmental social science from misleading expectations for human devel-

opment that adhere to monolithic “ages and stages” maturational timetables (few twos are truly terrible and they may [fortunately] be only challenging in one domain at a time!). And fifthly, the subtle boundaries between normative and atypical development are today observed with more sensitivity to the fact that assessments made today may be tomorrow’s irrelevancies, and determinations of normal development regularly trump ominous depictions of failure to thrive. Spontaneous remission and normal development have an astonishing amount in common. Sixth and by no means least, a major exemplar of this relatively new integrative study of psychological processes in the active child in context is exemplified in an examination of the effects of early experience on early and ongoing intimate attachment relationships. These early experiences affect development across the life-course of social, intellectual, affective, and even indeed physiologic functioning.

This paper will briefly document and then address in turn the implications of each of these recent developments in human developmental science, and then focus on one specific advance that might arguably have especially vast implications for diagnostic fidelity in pediatric psychiatry. Recent empirical research confirms the longstanding hypothesis that early emotional experience can profoundly affect life-course development in all biopsychosocial spheres as McCain and Mustard (1999) have cogently and forcefully demonstrated.

1. The developing child in ecological context:

Urie Bronfenbrenner first called for the study of the child in ecological context in 1979. Since Bronfenbrenner’s long-since rallying cry for investigating real children in real places with real questions, methodological advances in developmental studies have afforded ample opportunity to conduct cultural studies of children at all contextual levels, from micro-through meso-, and exo- to macro-systemic analyses just as Bronfenbrenner proposed. Michael Cole (1996) has articulated the scope and benefits of a “once and future” cultural psychology of development and pioneered studies exemplifying the benefits of investigating children in cultural context, and Barbara Rogoff (2003) has tirelessly insisted on the

place, and demonstrated the benefits, of exploring culture in development. Significantly, it is the Russian psychologist Lev Vygotsky (1932/1987), who from the 1920s and 30s affirmed that to assess children adequately, one must examine them in action, and even more importantly, observe them while more mature interlocutors, tutors, or mentors support them. He argued that to identify present functioning accurately, the context of both children’s independent performance as well as their skills in interaction with a more experienced guide should be taken into account. Vygotsky called this supportive developmental evaluation context the child’s “*Zone of Proximal Development (ZPD)*”. What are the implications of successful advances in the study of ordinary children in ecological context for taxonomic investigations? It seems reasonable to suggest that classification of psychological distress in developing individuals might best be made in ecological context, within the child’s *ZPD*.

2. The resilient, the strong, the indomitable child

For the past five decades investigators have explored the question as to how some individuals thrive under circumstances that could put others at tremendous risk (Garmezev, 1991; Luthar, 2003; Masten, 2001; Sroufe, Egeland, Carlson, & Collins, 2005; Werner & Smith, 1992, 2001). Many of these studies are life-course longitudinal in method, tracking a cohort of individuals across the duration of their lives. Some participants commenced under great adversity, and others were more advantaged at the start. Debates as to the conceptualization of resilience as either a process or a product are endemic to the field and remain unresolved in the literature. Consensus of the researchers is that there is not a single major factor that determines resiliency, nor is there a type of person who is entirely impervious to life insults. Resilience represents a constellation of variables at multiple ecological levels and depends upon individual constitutions in interaction with family, neighbourhood, and larger community inputs. Some children are vulnerable to events and social situations that might enhance the development of another child. Goodwyn and Acredolo (2005) differentiate between what

they call “Dandelion” (very sturdy or invincible) as opposed to “Orchid” (delicate or very sensitive) children. However, there is some consensus that certain constellations of personal and social factors shore up resistance to vulnerability and other factors create increased risk for damage (Garbarino, 1999). Some of these factors reside within individuals, but most interact at multiple ecological levels of those individuals’ lives from early to later experiences, and interpersonal histories, family fortunes and challenges, neighbourhood and school effects, community resources, cultural, spiritual, environmental influences and global factors all can make a difference (Jeliki, Bobek, Phelps, Lerner, & Lerner, 2007).

More recently, there has been a concerted effort to determine whether the factors identified in the western psychological literature to be players in the resiliency story are similar in global context. Cameron, Tapanya, & Gillen (2006), Cameron, Ungar, & Liebenberg (2007), and Ungar, et al. (2005), among others, have focused upon the contexts internationally, in which children are being raised. Furthermore, better care is now being taken than previously, to ensure that investigations in diverse multicultural contexts be sensitive to differing resource needs. Studies of risk and resilience implicate the necessity of making space in taxonomic activities to explore divergent risk and protective factors in alleviating psychologic distress both across global locations and in minority or immigrant populations within any particular context (Wenar & Kerig, 2006).

3. The active child as niche-maker

When children are investigated as active participants in interaction with their own worlds, and their worlds have been more seriously explored, it has become clear that they are not simply *tabulae rasae* navigators of unalterable terrains, but rather that they seize the materials available to them and transform them into their own (Scarr & McCartney, 1983). They often help construct the beds in which they lie. The establishment of a relatively new human science, the “geography of childhood”, interrogates the impacts that children have on their surroundings just as they inspect the effects environments have on children. Children make it their business to create their own playgrounds out of

their built and natural environments even where no play is intended (Goodnow, 2002, 2005; Hancock & Gillen, 2007; Gaskins, 1999; Rasmussen, 2004). Early nature vs. nurture debates were staunchly by Anastasi in 1954, when she argued that the real question was not one or the other, but how and to what extent each factor interacts to produce the effects we observe. McCarthy and Scarr went farther in demonstrating that gene expression depends upon environmental input and further, that interactions between the two yielded situations in which individuals create their own contextual niches.

Just demand that a child stop dawdling along a new path and encounter the difficulty in preventing the child’s exploratory imperative (see Hancock & Gillen 2007). What might be the role of an awareness of developmental niches on psychological classificatory activities? A systematic examination of the interactions between familial heritage and contextual factors could raise awareness of coexisting, and multiply determined conditions that highlight the great care necessary to disentangle them. Designating a child with the burden of a label, say, of being excessively active within the context of an environment that excessively proscribes childhood activity can do that child an injustice.

4. The child as a bio-psycho-socio-emotional creature

Developmental researchers are now sensitive to the dangers of focusing exclusively on cognition to the exclusion of emotion (Damasio, 1994; Doidge, 2007; LeDoux, 1996), of focusing on the individual to the exclusion of family (Cowen, Cohen, Cowen & Pearson, 1996), or of focusing on context to the exclusion of this individual’s genetic physiological constitution (Moffitt, Caspi, Rutter, & Silva, 2001). This new balance enriches theory construction immeasurably (Susman, 2001, 2006). We are now increasingly cognizant of the interconnections between the many factors in development and appreciate the importance of keeping in mind Bornstein’s (2002) concept of a “multiculture, multi-age, multimethod science” of development open to all processes, and this makes the study of development increasingly multidisciplinary, multi-

modal, and multi-perspectival.

No longer can claims of incommensurability block the way of researchers who seek to combine, mend, blend or indeed create new methods of exploring the worlds of the child (Cameron, in press). It is now feasible to inspect not simply verbal self-reports of therapeutic outcomes. In future, it may be advised to check the physiological responses of intervention participants as well as their self-reports when examining whether an anger management or an attachment therapeutic intervention changed participants' emotions as well as their thoughts and behaviours in response to stress (Cassidy & Shaver, 1999; Moretti, DaSilva, & Holland, 2004; van Goozen, Matthys, Cohen Kettenis, Gispen de Wied, Wiegant, & van Engeland, 1998; Wright & Cameron, 1997).

Asynchrony across and even within domains of psychological development highlights the critical importance of isolating and then reintegrating basic processes and of deploying multiple methodologies and replications. This is especially the case given the flaws inherent within all social scientific methods (Cameron, in press). Long ago, Jean Piaget (an arch-cognitivist and founder of the study of genetic epistemology, or the study of cognitive development) insisted that emotions are the engine of the intellect (Piaget, 1970). Biology is not unfixed destiny. See the pioneering work of Bryan Kolb and Michael Meaney and their colleagues (see Kolb & Gibb, 2007, and Liu, Diorio, Day, Francis, & Meaney, 2000 for research on neural plasticity). But we have for too long looked for one or other basic psychological process to afford us a unified science of human life, assuming some processes to be more equal than others, or more basic, or more amenable to scientific inspection. We now know that biopsychosocial processes are intertwined and that those must be examined on concert one with another, which often requires working in interdisciplinary teams to address questions of development.

Why should this be any different for diagnosticians, clinicians, and therapists? They too can be informed by this integration of perspectives and develop new ways to piece together the puzzle of a child not by separate disciplinary analyses stitched together *post hoc*, but rather by asking questions in advance of the assess-

ment process. They can thus discover how different disciplinary boundaries might be crossed in the initial stages of assessment so that all the players are at the table throughout the entire process of diagnostic problem solving.

5. The normative child

The study of developmental psychopathology often commences with a focus on the aberrant. Driven by genuine community-based needs to respond to anomalies that make the lives of some children and their families very difficult, practitioners strive to relieve discomfort and do no harm. Unfortunately, the path to effective intervention commences at the initial diagnostic stage, just as articulating the research question is the obvious start for an experimental programme of research. On a practical level, even if in order to get systemic support for the troubled child, a diagnostic label is required, nomenclatures can become unfortunate self-fulfilling prophecies (Montcrieff, 2007; Oatley, 2007). Many of our professional identifications of aberration are based on insufficient empirical evidence: The sensitive teacher, the empathic parent, the gifted coach with positive expectations and the time and space to devote to scaffolding successful functioning can elicit normative behaviour from a surprisingly unusual individual (Vygotsky, 1932/1987). So while the challenging child or adolescent might require inordinate contextual efforts that are simply unavailable, assigning a psychopathological label to that individual, when it is actually the situation that is inadequate, calls for a level of discernment not available in classification systems.

6. The attachment-seeking child

After having experiencing early emotional hardship himself, and then observing the same in some of his young institutionalized patients, John Bowlby (1969; 1973; 1980) identified and studied the attachment relationships between those patients and their care-givers. Bowlby discerned from the findings of such associates as Niko Tinbergen and Konrad Lorenz that humans, like other organisms, retain a biological imperative to affiliate with each other, to seek contact comfort, and to use secure relational bases as sources of security when engaging in the necessary explorations critical

to normative development.

Bowlby's longstanding colleague, Mary Ainsworth took up his propositions and conducted studies first in Africa (Ainsworth, 1967) and then in North America (Ainsworth et al. 1978) to document different attachment styles in her young experimental participants. Subsequently, other colleagues such as Bretherton, 1992, and van IJzendoorn & Sagi, 1999, reported that the phenomenon of secure attachment can be detected around the globe, although ecological variations must be taken into consideration in appreciating their diverse manifestations. We know enough now to accept that attachment relations play a profound role in the development of the growing individual.

We thus have a significant bit of professional education to deliver so that assessments include an exploration of attachment experiences with primary care givers early on, and other intimate relations later in life. Understanding the role of attachment relations as children mature (and this can be observed even in the very young infant – see Legerstee, 2005); their adaptations to peers and their growing appreciation of what is or is not trustworthy; and their acquisition of mental models of self and other will all impinge upon how we are most justifiably to assess and treat puzzling, troubling, and possibly troubled youth. Consideration must also be given to emerging individual differences in correlates of attachment relationships, including some factors with gendered pathways (such as internalizing and externalizing behaviours, emotional status, and stress reactivity, as reported by Cameron, Wright, & Susman, 2008). These developmental factors signal a need for diagnostic caution. For instance, Pollack (1998) stressed that externalizing behaviours of unhappy boys can go unrecognized as a cover for depression, as the boys' scripts for masculine comportment in times of challenge are infrequently expressed as internalizations. Therefore, developing individual differences in certain attachment correlates (many already been well identified by Gilligan, 1982, and Pipher, 1994, for females; as well as by Pollack and Garbarino, 1999, for males) require additional consideration.

The place of attachment in assessment

In light of these six important advances in

developmental science, this paper finally examines in more detail recent evidence for the importance of taking attachment relations into consideration in assessments of child and youth functioning. The impacts of attachment are ubiquitous and pervasive whilst not necessarily consistent, as accommodations must always be made for individual differences. Attachments have powerful impacts upon both thriving and failures to surmount environmental and personal life challenges. It is important to recognize the role children themselves play, the myriad of ecological influences outside primary intimate relationships, and the intricate interconnections of patterns of the simultaneous impacts of many processes brought to bear on even the most discrete of human engagements. It is also necessary now to deny the efficacy of employing narrow, uni-dimensional tools, be they interviews, tests, observations, or checklists in determining the history, the current state, and the prospects for the future of a distressed child or youth.

As already indicated, based upon his clinical pediatric experiences and insights and his fascination with ethological observations of imprinting, John Bowlby (1969) developed his theory first of maternal deprivation and ultimately, of the critical importance of early attachment experiences not only for emotional development across the lifespan, but also its critical impact on many other biopsychological systems like cognition and hormonal stress reactivity. Attachment strivings are, according to Bowlby, both inborn and critical to normative survival. He posited, for instance, that a fundamental contributor to intellectual growth is exploratory experiences and if critical attachment experiences do not construct the necessary secure base, normal exploratory impulses are compromised. Bowlby's theory was not greeted with universal approbation, but several developmental psychologists were intrigued by the propositions and set to work to test and extend them.

Ainsworth's life work focused on her explorations of Bowlby's clinical propositions with community samples of children and their parents (using "the Strange Situation" in which there are standardized, manipulated, departures and reunions of a caregiver and her 1-year-old child). She not only confirmed the core

of Bowlby's assertions, but also developed the parameters to include characterizations of both *Avoidant* (type A) and *Resistant or Ambivalent* (type C) attachments as well as the domain of *Secure* (type B) early attachments that are characterized by relative ease in attaining comfort when distressed, which were the majority case in all her samples. Children demonstrating *avoidant* attachment styles tend not to seek comfort from their primary care givers even after a period of separation. *Ambivalent/resistant* attachment patterns are characterized by distress at separation but not comfort at reunion. Mary Main extended Ainsworth's classification system to include a category of *Disorganized* (type D) attachment (Main & Solomon, 1986) and careful subsequent work, summarized in Lyons-Ruth and Jacobvitz, 1999, confirms this as an incoherent admixture of avoidance and resistance that signals the greater incidence of distress, and which researchers had theretofore found difficult to isolate.

These attachment styles are not articulated categorically in diagnostic manual terms but in this paper the argument is that these patterns of responses can mediate and/or moderate an extensive array of behaviours of children and thus that they should be taken into account in juvenile assessments. The single disorder listed in the Diagnostic and Statistical Manual IV, Text Revision (DSM-IV-TR), the relatively rare Reactive Attachment Disorder category, with inhibited and disinhibited types listed, is not reflective of the enormous amount of research on the continua of attachment etiologies, nor does the diagnostic manual adequately integrate attachment relationships into its consideration of other developmental trajectory challenges. Although attachment insufficiencies are not necessarily psychopathological in themselves, their presence contributes risk to normal development.

Main (1990) went on to develop an investigative procedure called the *Adult Attachment Interview* (the *AAI*) that is a clinical protocol for identifying the cohesion of the mental models that individuals hold of their early familial experiences. Individuals are scored as having a *Secure/Autonomous* attachment style if they provide a coherent accounting of that early experience whether it was positive or negative,

coherence being an index of psychological resolution. Since the development of the *AAI* there has been an enormous amount of confirmation of the role attachment styles play in many aspects of everyday life as well as on the perspectives individuals take on their parenting roles, and strong relationships have been established between parental and offspring attachment status (Cowan et al, 1996; Griffin & Bartholomew, 1994; Kobak, 1999; Moretti et al, 2004). Attachment has been reliably documented to play a large role in emotional status, behavioural disturbances, and intellectual functioning. The importance of adult attachment patterns to a developmental perspective resides in part in the well-established intergenerational effects of attachment styles.

The physiology of the critical attachment emotions of fear and anger have begun to be investigated and such hormonal responses to stress as cortisol on the HPA-axis have shown associations in early and middle childhood attachments, and adolescent and adult mental models of self and others (Fox & Card, 1999; Perry, 2001; Rutter & O'Connor, 1999; van Goozen et al, 1998). Evaluations of therapeutic initiatives are especially needed to determine the most effective treatments when developmental challenges are a result of comorbidity with other conditions, be they the result of abuse or neglect early on, or later in nurturance. Therapeutic interventions addressing troubled attachment patterns have yet to be empirically evaluated to determine definitively their efficacy (Moretti et al, 2004), however initial soundings in this arena have produced promising early findings. A clinical population of note in this regard is the Romanian orphanage sequelae studies (Chisholm, Carter, Ames, & Morison, 1995; Gunnar, Morison, Chisholm, & Shuder, 2001; Rutter & O'Connor, 1999).

As to the implications of attachment theorizing and conceptualizations, it becomes plain that assessment of childhood wellbeing is most safely conducted with a thorough investigation of the roles that attachment security might play in whether children or youths are thriving in context. The assessment should take into consideration whether clients are in a position to explore personal options in day-to-day functioning, and whether the resources are present for them to confront risks in order to

achieve the rewards of an active environmental engagement. Thriving in context can be more to do with resource management, environmental circumstances, and opportunities, than personal characteristics (Ungar, Clark, Kwong, Makhnash, & Cameron, 2005).

The earliest years

Normal developmental changes in needs make both diagnosis and treatment challenging. These changes are not necessarily stage wise, meaning that cognitive growth can readily lag behind the social, and the emotional might be slower to ignite at some points than the others, so the life course of any child's development can be discontinuous both within and between domains. Thus, while neonatal and infant needs for protection, nurturance, and prompt care-giving responses are crucially pervasive, the forms these needs take change drastically over a very short period of time. It is during this early childhood time that concerns about cognitive delays or mental retardation, autistic spectrum, and attachment insecurity might emerge. Attachment security will serve as a protective factor in normative challenges and even ameliorate more severe challenges to healthy psychosocial development (Bell & Ainsworth, 1974; Caldji, Doirio, & Meaney, 2000; Cassidy, 1999; Legerstee, 2005; Kaye, 1982; Stern, 1977; Thompson, 1999).

In toddling and just-talking children, more distal attentiveness can result in healthy exploration, and toddlers' tolerance of delays and distance from caregivers becomes more sustainable as they mature (Cameron, et al, 2006; Cassidy, 1999; Rogoff, Mistry, Goncu, & Mosier, 1993). Normative hazards for children at this age can be enuresis, oppositional defiance, and again, attachment insecurities, but these can also be normative problems in children of this age with no call for concern as to potential psychopathology (Wenar & Kerig, 2005).

In the preschool years, attentional and behavioural control and cognitive leaps enhance independence strivings. Oppositional behaviours, basic language and learning difficulties, attentional issues and activity levels can exacerbate threats to wellbeing and also make assessments challenging (Thompson, 1999). By middle childhood, the critical impor-

tance of primary caregivers starts to give way for many children, when peer friendships, school personnel, and community mentors start to take a hold on the child's imagination as they start to regulate their own socio-emotional wellbeing. However, emotional irregularities, anxiety, and mood disruptions can undermine psychosocial functioning. Both the individual characteristics of children and their increasingly complex levels of social interaction play a part in psychological outcomes (Cole, 1997; Perry, 2001).

The adolescent years

Peers and romantic partnerships can begin to predominate in the adolescent transition to adulthood and young adults initiate relationships that are more likely to be longstanding over the life course (Allen & Ladd, 1999; Kobak, 1999). Conduct disorders and antisocial behaviours, as well as the emergence of the psychopathologies of mood disorders, substance abuse, and eating disorders can derail either temporarily or over the longer-term normative development in the transition to adulthood. But even in this late developmental period, parental and peer attachments moderate stressors during life transitions. The transition to parenthood (Cowan, et al, 1996) perhaps brings the developing individual round to new beginnings (or old ones as the case might be) as the replication of parental patterns of nurturance becomes an option, depending upon the individual's choices as to whether to conceptualize their early experiences coherently and then act upon their own socialization experiences. The handling of the newborn in many species sets the stage for socio-emotional, social cognitive, and physiological development (Fonagy, 1999; Masten, Hubbard, Gest, Tellegen, Garmezy, & Ramirez, 1999).

Psychosocial challenges to physiological wellbeing

Animal models of both attachment (as is the case of the primate research of Stephen Suomi, eg., 1978; 1997) and the rodent early experience research of Michael Meaney (eg., Francis, Diorio, Liu, & Meaney, 1999; Meaney, Mitchell, Aitken, Bhatnagar, Bodnoff, & Sapolsky, 1991) have lead to the exploration of

physiological reactivity to stress of humans in recent decades, as well as other organisms. In general, stressors leading to high anxiety are associated with enhanced HPA-axis (and specifically cortisol) reactivity; whereas stressors stimulating anger and aggression are associated with dampened cortisol responsivity. A study of individual differences in adolescent stress responsivity showed angry adolescent girls who self-reported weak current attachment to their mothers and whose teachers indicated that they were aggressive, to evidence decreases in cortisol production when confronted with a psychosocial stressor (Cameron, Wright, & Susman, 2008). It would seem that their ambient relationships, and perhaps early childhood precursors, dampened normative stress responding. These findings suggest that primary cognitive-behavioural interventions designed to arm such teenagers against inappropriate responding in stressful situations might not be effective until secondary or even tertiary interventions addressing trust of self and others in relationships are instituted. It is also noteworthy that boys in this study demonstrated a differently gendered pathway in stress reactivity and its associated individual difference correlates.

Insufficiencies at any time in the developmental course can create impediments and derailments having a multiplicity of consequences. Depending upon the system that yields vulnerability, effects can be identified in capacity to trust, anger (possibly eventuating in conduct disorder), fear (resulting in anxiety and depression), eating disorders, and many other maladies. These factors implicate challenges to developmental trajectories that can either exacerbate or ameliorate difficulties. Secure attachment mental models serve as protective factors, yielding resilience in face of either physical or psychological threats. Remember that active, niche-attracting, dynamic children interact with dynamic interrelated systems that have the potential to compound complex social processes. Bowlby reminded us to observe organisms seeking security and build on reciprocal processes. Irregularities, such as lack of coordination between systems may exacerbate asynchronies, but evidence is strong in the lifespan literature that amelioration is comparably possible.

Implications for practice

The extensive findings in the literature with respect to the impacts of early experience on the development of human capital in our society today, have been effectively documented in the comprehensive reports of Margaret McCain, Fraser Mustard, Daniel Keating and Clyde Hertzman and their associates in the Canadian Institute for Advanced Research (see Keating & Hertzman, 1999; McCain & Mustard 1999; McCain, Mustard, & Shanker, 2007). Their calls for action to accommodate this accumulating human science knowledge are in the best interests not only of developing children but also of the community contexts in which they are intended to thrive.

Attachment is a universal propensity. How it plays out depends upon cultural expectations, familial circumstances, social artifacts, community assets, individual limitations and strengths, and combinations of all of the above. The unendingly complex, active, developing, individual seems perpetually at the ready with surprises for even the most experienced child development observer. Expecting resilience in development even in unfavourable circumstances can be a positive observational position from which to start, with respect to a good proportion of children and youths. Earliest attachment relationships do not spell the individual's destiny because the plasticity of developmental processes is of critical import. But an appreciation of the dynamics of attachment patterns and mentations puts clinicians in a strong position to assess and support the healthy adaptations of clients at all developmental phases of the lifespan.

Acknowledgements/Conflict of Interest

The author has no financial relationships to disclose.

The author gratefully acknowledges the BC Ministry of Children and Family Development through the Human Early Learning Partnership, the Social Sciences and Humanities Research Council of Canada, and the US National Institutes of Health for support of research programmes out of which these deliberations emanate, and the encouragement of Normand Carrey to write the reflections down.

References

- Ainsworth, M. D. S. (1967). *Infancy in Uganda: Infant care and the growth of love*. Baltimore, MD: Johns Hopkins Press.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E. & Wall, S. (1978). *Patterns of attachment: A psychological*

- study of the strange situation*. Hillsdale, NJ: Lawrence Erlbaum.
- Allen, J. P. & Land, D. (1999). Attachment in adolescence. In J. Cassidy & P. R. Shaver (Eds.) *Handbook of attachment: Theory, research, and clinical applications*. New York, NY: Guilford Press.
- Anastasi, A. (1954). *Psychological testing (1st ed)*. New York, NY: Macmillan.
- Bell, S. M. & Ainsworth, M. D. S. (1972). Infant crying and maternal responsiveness. *Child Development*, 43(4):1171-1190.
- Bornstein M.H. (2002). Toward a multiculture, multi-age, multimethod science. *Human Development*, 45 (4), 257-263.
- Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. London: Hogarth Press.
- Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation: Anxiety and Anger*. New York: Basic Books.
- Bowlby, J. (1980). *Attachment and loss: Vol. 3. Loss*. New York, NY: Basic Books.
- Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental Psychology*, 28:759-775.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Caldji, C., Diorio, J. & Meaney, M. J. (2000). Variations in maternal care in infancy regulate the development of stress reactivity. *Biological Psychiatry*, 48(12):1164-1174.
- Cameron, C.A. (in press). Constructing syntheses: Converging methods for investigation youth in diverse cultures. In L. Liebenberg & M. Ungar, (Eds.). *Researching youth across contexts and cultures*. Toronto, ON: University of Toronto Press.
- Cameron, C. A., Tapanya, S. & Gillen, J. (2006). Swings, hammocks, and rocking chairs as secure bases during *A Day in the Life* in diverse cultures. *Child and Youth Care Forum*, 35(3):231-247.
- Cameron, C. A., Ungar, M. & Liebenberg, L. (2007). Cross-cultural understandings of resilience: Roots for wings in the development of affective resources for resilience. In N. Carrey & M. Ungar (Eds). *Resilience Special Issue. Child and Adolescent Psychiatric Clinics*, 16(2):285-301.
- Cameron, C. A., Wright, J. M., & Susman, E. J. (under revision, 2008). Cortisol social-stress responses of angry adolescent girls and boys.
- Cassidy, J. (1999). The nature of the child's ties. In J. Cassidy & P. R. Shaver (Eds). *Handbook of attachment: Theory, research, and clinical applications*. New York, NY: Guilford Press.
- Cassidy, J. & Shaver, P. R. (Eds.) (1999). *Handbook of attachment: Theory, research, and clinical applications*. New York, NY: Guilford Press.
- Chisholm, K., Carter, M. C., Ames, E. W. & Morison, S. J. (1995). Attachment security and indiscriminately friendly behavior in children adopted from Romanian orphanages. *Development and Psychopathology*, 7:283-294.
- Cole, M. (1996). *Cultural psychology: A once and future discipline*. Cambridge, MA: Harvard University Press.
- Cole, M. (1997). Cultural mechanisms of cognitive development. In E. Amsel, K. A. Renninger (Eds.). *Change and development: issues of theory, method and application*, London: Erlbaum, pp. 245-263.
- Cowan, P., Cohen, D., Cowan, D. & Pearson, J. (1996). Parents' attachment histories and children's externalizing and internalizing behavior: Exploring family systems models of linkage. *Journal of Consulting and Clinical Psychology*, 64:53-63.
- Damasio, A. R., (1994). *Descartes' error: Emotion, reason, and the human brain*. New York: Grosset/Putnam.
- Doidge, N. (2007). *The brain that changes itself*. New York: Viking.
- Fonagy, P. (1999). Psychoanalytic theory from the viewpoint of attachment theory and research. In J. Cassidy & P. R. Shaver (Eds.) *Handbook of attachment: Theory, research, and clinical applications*. New York, NY: Guilford Press.
- Fox, N. A. & Card, J. A. (1999). Psychophysiological measures in the study of attachment. In J. Cassidy & P. R. Shaver (Eds.) *Handbook of attachment: Theory, research, and clinical applications*. New York, NY: Guilford Press.
- Francis, D., Diorio, J., Liu, D. & Meaney, M. J. (1999). Nongenomic transmission across generations of maternal behavior and stress responses in the rat. *Science*, 286:1155-1158.
- Garbarino, J. (1999). *Lost boys*. New York, NY: Free Press.
- Garnezy, N. (1991). Resiliency and vulnerability to adverse developmental outcomes associated with poverty. *American Behavioral Scientist*, 34(4):416-430.
- Gaskins, S. (1999). Children's daily lives in a Mayan village. In A. Goncu (Ed.) *Children's engagement in the world - sociocultural perspectives*. Cambridge, UK: Cambridge University Press. pp. 25-81.
- Gilligan, C. (1982). *In a different voice: Psychological theory of women's development*. Cambridge, MA: Harvard University Press.
- Goodnow, J. J. (2002). Adding culture to studies of development: Toward changes in procedure and theory. *Human Development*, 45:237-245.
- Goodnow, J. J. (2005). Family socialization: New moves and next steps. *New Directions for Child and Adolescent Development*. 109. New York, NY: Wiley.
- Goodwyn, S. & Acredolo, L. (2005). *Baby hearts*. New York, NY: Bantam.
- Griffin, D. & Bartholomew, K. (1994). Models of the self and other: Fundamental dimensions underlying measures of adult attachment. *Journal of Personality and Social Psychology*, 67(3):430-445.
- Gunnar, M., Morison, S. J., Chisholm, K. & Shuder, M. (2001). Salivary cortisol levels in children adopted from Romanian orphanages. *Development and Psychopathology*, 13: 611-628.
- Hancock, R. & Gillen, J. (2007). Safe places in domestic spaces: two-year-olds at play in their homes. *Children's Geographies* 5(4):337-351.
- Jeliki, H., Bobek, D. L., Phelps, E., Lerner, R. M. & Lerner, J. V. (2007). Using positive youth development to predict contribution and risk behaviors in early adolescence: Findings from the first two waves of the 4-H Study of Positive Youth Development. *International Journal of Behavioral Development*, 31:263-273.
- Kaye, H. (1982). *The mental and social lives of babies*. Chicago, IL: University of Chicago Press.
- Keating, D. P. & Hertzman, C. (1999). *Developmental health and the wealth of nations: Social, biological and educational dynamics*. New York, NY: The Guilford Press.

- Kobak, R. (1999). The dynamics of disruptions in attachment relationships: Implications for theory, research, and clinical implications. In J. Cassidy & P. R. Shaver (Eds.) *Handbook of attachment: Theory, research, and clinical applications*. New York, NY: Guilford Press.
- Kolb, B. & Gibb, R. (2007). Brain plasticity and recovery from early cortical injury. *Developmental Psychobiology*, 49:107-118.
- LeDoux, J. (1996). *The emotional brain*. New York: Simon & Schuster.
- Legerstee, M. (2005). *Infants' sense of people: Precursors to a theory of mind*. New York, NY: Cambridge University Press.
- Liu, D., Diorio, J., Day, J. C., Francis, D. D. & Meaney, M. J. (2000). Maternal care, hippocampal synaptogenesis and cognitive development in rats. *Nature Neuroscience*, 3:799-803.
- Luthar, S. S. (Ed.) (2003). *Resilience and vulnerability: Adaptation in the context of childhood adversities*. Cambridge, UK: Cambridge University Press.
- Lyons-Ruth K. & Jacobvitz, D. (1999). Attachment disorganization: Unresolved loss, relational violence, and lapses in behavioural and attentional strategies. In J. Cassidy & P. R. Shaver (Eds.) *Handbook of attachment: Theory, research, and clinical applications*. New York, NY: Guilford Press.
- Main, M. (1990). Cross-cultural studies of attachment organization: Recent studies, changing methodologies, and the concept of conditional strategies. *Human Development*, 33:48-61.
- Main, M. & Solomon, J. (1986). Discovery of an insecure disorganized / disoriented attachment pattern: Procedures, findings and implications for classification of behaviour. In M. W. Yogman & T. B. Brazelton (Eds.) *Affective development in infancy*. Norwood, NJ: Ablex. pp. 95-124.
- Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist*, 56(3):227-238.
- Masten, A. S., Hubbard, J. J., Gest, S. D., Tellegen, A., Garmezy, N. & Ramirez, M. (1999). Competence in the context of adversity: Pathways to resilience and maladaptation from childhood to late adolescence. *Development and Psychopathology*, 11:143-169.
- McCain, M. N. and Mustard, J. F. (1999). *Reversing the real brain drain: Early years study: Final report*. Toronto, ON: Ontario Children's Secretariat and The Founders' Network.
- McCain, M. N., Mustard, J. F. & Shanker, S. (2007). *The early years Study 2: Putting science into action*. Toronto, ON: Council for Early Child Development.
- Meaney, M. J., Mitchell, J. B., Aitken, D. H., Bhatnagar, S., Bodnoff, S. R. & Sapolsky, A. (1991). The effects of neonatal handling on the development of the adrenocortical response to stress: Implications for neuropathology and cognitive deficits in later life. *Psychoneuroendocrinology*, 16(1-3):85-103.
- Moffitt, T. E., Caspi, A., Rutter, M. & Silva, P. A. (2001). *Gender differences in antisocial behavior*. Cambridge, UK: Cambridge University Press.
- Montcrieff, J. (2007). Diagnosis and drug treatment. *The Psychologist*, 20(5):296-297.
- Moretti, M. M., DaSilva, K. & Holland, R. (2004). Aggression from an attachment perspective: Gender issues and therapeutic implications. In M. M. Moretti, C. L. Odgers & M. A. Jackson (Eds.). *Girls and aggression: Contributing factors and intervention principles*. Norwell, MA: Kluwer Academic. pPp. 190-200.
- Oatley, K. (2007). Slings and arrows: Depression and life events. *The Psychologist*, 20(4):228-230.
- Perry, B. D. (2001). The neurodevelopmental impact of violence in childhood. In D. Schetky & E. Benedek (Eds.). *Textbook of child and adolescent forensic psychiatry*. Washington, DC: American Psychiatric Press, Inc. pp. 221-238.
- Pipher, M. (1994). *Reviving Ophelia*. New York, NY: Ballantine Books.
- Piaget, J. (1970). Piaget's theory. In P. H. Mussen (Ed.), *Carmichael's handbook of child psychology: Vol. 1*. (3rd Ed.). New York, NY: Wiley. pp. 703-732.
- Pollack, W. (1998). *Real boys*. New York, NY: Random House.
- Rasmussen, K. (2004). Places for children – children's places. *Childhood*, 11(2):15-173.
- Rogoff, B. (2003). *The cultural nature of human development*. New York, NY: Oxford University Press.
- Rogoff, B., Mistry, J., Goncu, A. & Mosier, C. (1993). Guided participation in cultural activity by toddlers and caregivers. *Monograph of the Society for Research in Child Development*, Serial No. 236, Vol. 58, No.8.
- Rutter, M. & O'Connor, T. G. (1999). Implications for attachment theory for child care policies. In J. Cassidy & P. R. Shaver (Eds.) *Handbook of attachment: Theory, research, and clinical applications*. New York, NY: Guilford Press.
- Scarr, S. & McCartney, K. (1983). How people make their own environments: A theory of genotype à environment effects. *Child Development*, 54:424-435.
- Sroufe, L. A., Egeland, B., Carlson, E. A. & Collins, W. A. (2005). *The development of the person: The Minnesota study of risk and adaptation from birth to adulthood*. New York, NY: The Guilford Press.
- Stern, D. (1977). *The first relationship*. Cambridge, MA: Harvard University Press.
- Suomi, S. J. (1978). Maternal behavior by socially incompetent monkeys: Neglect and abuse of offspring. *Journal of Pediatric Psychology*, 3(1):28-34.
- Suomi, S. J. (1997). Early determinants of behaviour: Evidence from primate studies. *British Medical Bulletin*, 53:170-184.
- Susman, E. J. (2001). Mind-body interaction and development: Biology, behavior, and context. *European Psychologist*, 6(3):163-171.
- Susman, E. J. (2006). Psychobiology of persistent antisocial behavior: Stress, early vulnerabilities and the attenuation hypothesis. *Neuroscience and Biobehavioral Reviews*, 30:376-389.
- Thompson, R. A. (1999). Early attachment and later development. In J. Cassidy & P. R. Shaver (Eds.). *Handbook of attachment: Theory, research, and clinical applications*. New York, NY: Guilford Press.
- Ungar, M., Clark, S. E., Kwong, W-m., Makhnach, A. & Cameron, C. A. (2005). Studying resilience across cultures. *Journal of Ethnic and Cultural Diversity in Social Work*, 14, 3/4:1-19.
- van Goozen, S. H., Matthys, W., Cohen Kettens, P. T., Gispen de Wied, C., Wiegant, V. M., van Engeland, H. (1998). Salivary cortisol and cardiovascular activity during stress in oppositional defiant disorder boys and normal controls. *Biological Psychiatry*, 43:531-539.
- van IJzendoorn, M. H. & Sagi, A. (1999). Cross-cultural

patterns of attachment: Universal and contextual dimensions. In J. Cassidy & P. R. Shaver (Eds.) *Handbook of attachment: Theory, research, and clinical applications*. New York, NY: Guilford Press.

Vygotsky, L. S. (1932/1987). *Collected works of L. S. Vygotsky: Volume 1: Problems of general psychology, including the volume 'Thinking and Speech'*. New York, NY: Plenum Press.

Wenar, C. & Kerig, P. (2006). *Developmental psychopathology: From infancy through adolescence*. (5th Ed.) New York, NY: McGraw Hill.

Werner, E. E. & Smith, R. S. (1992). *Overcoming the odds: High-risk children from birth*. Ithaca, NY: Cornell University Press.

Werner, E. E. & Smith, R. S. (2001). *Journeys from childhood to midlife: Risk, resiliency, and recovery*. Ithaca, NY: Cornell University Press.

Wright, J. M. & Cameron, C. A. (1997). A reconceptualization of anger development. *American Journal of Forensic Psychiatry*, 18:1-14.

CONFERENCE WATCH 2008

69TH ANNUAL CANADIAN PSYCHOLOGICAL ASSOCIATION (CPA) CONVENTION

June 12 - 14, 2008, Halifax, Nova Scotia

Website: www.cpa.ca/convention

85TH THE CANADIAN PAEDIATRIC SOCIETY ANNUAL CONFERENCE

June 24 - 28, 2008, Victoria, British Columbia

Website: www.cps.ca

58TH ANNUAL CANADIAN PSYCHIATRIC ASSOCIATION CONFERENCE

September 4 - 7, 2008, Vancouver, British Columbia

Website: www.cpa-apc.org

28TH ANNUAL CANADIAN ACADEMY OF CHILD AND ADOLESCENT PSYCHIATRY CONFERENCE

September 7 - 9, 2008, Vancouver, British Columbia

Website: www.cacap-acpea.org

55TH ANNUAL AMERICAN ACADEMY OF CHILD AND ADOLESCENT PSYCHIATRY

October 28 - November 2, 2008, Chicago, Illinois

Website: www.aacap.org

Editorial staff invite CACAP members and Journal readers to forward listings for upcoming conferences and meetings to be promoted in the Journal of the Canadian Academy of Child and Adolescent Psychiatry "Conference Watch".

Please submit listings to:
MS VICKI SIMMONS, *Editorial Assistant*
vsimmons@shaw.ca