Children’s Development in Light of Evolution and Culture

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“All child rearing is based on beliefs about what makes life manageable, safe, and fertile for the spirit” so that “even with the best, most rational, kindest advice from outside, child rearing will likely always be so.”
—(Bruner, 2000, p. xii)

Individual humans cannot grow up alone. Like all social mammals, humans need intensive caregiving in early life to survive, thrive, and disperse (Konner, 2010; Williams, 1966). Because child care takes a great deal of energy, mother–child dyads are necessarily aided by families and communities (Hrdy, 2009). Indeed, the contexts for raising children among all human societies include multiple layers of influence and support (Bronfenbrenner, 1979). Culture—socially transmitted and shared beliefs, understandings, and practices—is one of those influences.

Around the world, families and children are embedded in cultures and subcultures that support and encourage different approaches to childrearing. Some cultures encourage and others discourage physical closeness, based on potential psychological or physical outcomes; some consider babies to be in need of wooing into interdependence, whereas others consider them to be in need of strict discipline to learn independence (DeLoache and Gottlieb, 2000; Doi, 1981; Georgas, Berry, van de Vijver, Kağıtçıbaşı, and Poortinga, 2006; Levine and Norman, 2001). Even within a particular society, the culture of child caregiving can change over time in terms of family constellation, community traditions, and everyday family pragmatics. Such variations in practices may challenge universalistic models like attachment theory, which affixes attachment labels to particular child behaviors that are matched to particular types of parental behavior (Bowlby, 1969, 1988; Main, 1995). But if some societies encourage psychological distance, demonstrating high levels of social detachment (avoidant attachment), one argue, as some do, that
avoidant attachment is adaptive—which is contrary to the claims of attachment theory (Levine and Norman, 2001). The book delves into several issues. First, it probes the question of whether there is an optimal range of infant and childhood care and what that might look like. The beneficial or “expectable” range of care might to some degree be inferred from the common dimensions of care in other social mammals, especially primates. We can also discern an expectable range of care from humans living in ways consistent with our evolutionary past, to the degree that we can infer this from diverse lines of evidence. Such evidence includes paleoecological reconstructions and contemporary ethnographic studies elucidating a range of adaptations, beginning with nomadic foragers (also known as small-band hunter-gatherers; we use the term hunter-gatherer to represent this type of society). Mobile communities like these represent a characteristic social structure for much of human history up until about 10,000 to 15,000 years ago, when more sedentary, settled societies emerged (though hunter-gatherers have coexisted since then as well; Lee and Daly, 2005).

A second question is whether some societies have stepped out of the optimal range for childrearing (Edgerton, 1992). It can be said, for example, that children who are maltreated (i.e., neglected, abused, traumatized) exist outside the optimal range as inferred from their adult dysfunctions, mental disorders, or addictions, all of which are clinically evident (Lanius, Vermetten, and Pain, 2010). But what about those whose care does not reach the legal or clinically relevant levels of neglect or abuse? Are there other, less obvious forms of infant or child caregiving that damage them in more subtle but still significant ways? Although in the past, and to a certain extent even in the present, wide ranges in early life caregiving were considered fairly harmless, increasing evidence shows that traumatic early life experience can be toxic, with lasting effects on physiological and psychological wellbeing (Shonkoff and Phillips, 2000; Shonkoff and Garner, 2012).¹

Many investigators concur on the importance of having an empirically based, diverse but solid knowledge foundation regarding “healthy” development, in humans and other animals, in order to understand psychopathology (e.g., Cicchetti and Roisman, 2011; Panksepp, 2001). One can always ask how we will know what is abnormal without having a good sense of what the range of normal is. While recognizing the obvious pitfalls and difficulties of proposing an “optimal range” for our species, given humans’ great biological and cultural plasticity, this book intends to raise important new questions that challenge certain assumptions about the appropriateness of infant and child care practices, especially in the industrialized West. At the very least we need to start a conversation that moves toward understanding how to identify social caregiving innovations that push infants and children beyond their adaptive limits. Specifically, we hope to shed light on what the

¹ The sister book, Evolution, Early Experience and Human Development, addresses this question more directly.
evolved, expectable contexts for mammalian and human development really are. What are optimal and suboptimal contexts for human development? What are the effects on children's development and adult wellbeing of the wildly divergent physical and social habitats in which children grow up today, which require behavioral adjustments that were never tested in an evolutionary context?

We do not idolize ancestral forms of care, nor naively sing their collective praises without realizing that the usefulness of evolved behaviors can change through time. Nor do we dismiss the possibility that traits that may have been adaptive at earlier points in our prehistory are not necessarily compatible with present circumstances (but determining what is adaptive or not is difficult). Indeed, we are mindful of Stephen Jay Gould's insightful perspective that evolution is all about functional change with structural continuity. We certainly should not ignore Sarah Hrdy's whimsical but perceptive comments that "[a] mother today, whether in New York, Tokyo or Dacca is not just a gatherer caught in a shopping mall without her digging stick," nor the point that "continuous contact and proximity and carrying may be what infants want but it might not be what mothers want or more importantly what they can provide" (Hrdy 1999, p. 105). We take such observations seriously and know that translating the research presented in this book into "lessons learned" to apply where we can will not be an easy endeavor. But we are also confident that having a strong, empirically based beginning point, a baseline perspective, is the first step in understanding why infants respond and develop as they do. It will help us understand what can go wrong when estranged or biologically novel, current conditions push infants beyond their adaptive limits. To establish a baseline perspective, we begin with our heritage, what we call here the ancestral context.

The Ancestral Context

Mobile hunter-gatherer (hereafter, hunter-gatherer) societies represent a lifestyle that many of our ancient ancestors are presumed to have followed before the advent of agriculture about 10,000 to 15,000 years ago. Although archeology and paleontology provide important information about human ancestry, including inheritances from a long line of other animals including nonhuman primates, studies of contemporary hunter-gatherers offer live glimpses into probable components of humanity's past.

Hunter-gatherers are people who gain their sustenance from hunting wild animals and gathering wild plant materials. Anthropologists commonly distinguish between two categories of hunter-gatherers (Bird-David, 1994; Fry, 2006; Ingold, 1999; Kelly, 1995). One category, typified by the Kwakiutl of the American northwest coast and the Ainu of Japan, is variously referred to as collector societies, delayed-return hunter-gatherers, or non-egalitarian hunter-gatherers. They live in relatively permanent, relatively dense villages located near highly concentrated sources of food (commonly fish). These societies are generally organized
hierarchically, much like agricultural tribal societies. The other category, which is more common and is believed to reflect a more basal pattern of social demography, includes those referred to as band societies, immediate-return hunter-gatherers, or egalitarian hunter-gatherers. When anthropologists refer to hunter-gatherers or to foragers, unqualified, they are usually referring to this category, and that is the convention used in this chapter and elsewhere in the book. We note, however, that the hunter-gatherer societies described in this book, while subsisting largely through foraging, do engage in some farming and trading and therefore are not pure hunter-gatherer societies.

During the 20th century, researchers visited and studied dozens of different hunter-gatherer societies, in various remote parts of the world, some of which had been very little influenced by Western or industrialized contact. Examples of such societies are the Ju/hoansi (also called the !Kung, of Africa’s Kalahari Desert), Hazda (of Tanzanian rain forest), Mbuti (of Congo’s Ituri Forest), Aka (of rain forests in Central African Republic and Congo), Efe (of Congo’s Ituri Forest), Batek (of Peninsular Malaysia), Agta (of Luzon, Philippines), Nayaka (of South India), Aché (of Eastern Paraguay), Parakaná (of Brazil’s Amazon basin), and Yiwara (of the Australian Desert). There are good archaeological reasons to believe that these societies have core patterns similar to those of the human societies that predominated for at least 40,000 years before the development of agriculture, and possibly for much longer (Bochm, 2008). Although these and other hunter-gatherer groups still exist, their cultures have changed considerably in the past few decades because of pressures from the outside world.

Although there is much variability among small-band hunter-gatherer societies, they do share some remarkable similarities. We draw these generalizations from several sources (Lee and Daly, 1999; Fry, 2006, 2013; Hewlett and Lamb, 2005; Ingold, 1999).

Characteristics Shared Across Groups

Wherever they are found, hunter-gatherer societies display several common characteristics. They generally live in groups of about 20 to 50 people, counting children as well as adults. Each group shifts terrain as needed to follow the available game and edible plants, but moves can also be associated with alliance formation and social relationships between groups (Fry, 2006; Gowdy, 1998, 1999). At each campsite to which they move, families build, from natural materials, small, temporary huts, the construction of which usually takes just a few hours. Because the band moves frequently, material goods beyond what a person can easily carry are burdens, so there is very little accumulation of property.

Characteristics of hunter-gatherers include a companionship lifestyle that involves nonexclusive (widely shared) intimacy, characterized by sharing of company, food, residence, and movement (Bird-David, 1994; Gibson, 1985; Ingold,
Cooperation, sharing, and egalitarianism are common values. To survive, individuals within the group, whether or not they are kin (and mostly they are not), cooperate intensely in hunting, gathering, caring for children, and other activities (Hill et al., 2011). They share food and material goods (50% to 80% on average; B. Hewlett, personal communication, July 22, 2013), often following a general rule that nobody in the group should have more than anyone else. Although each group is an independent entity in which group members make all of the group’s decisions, boundaries are fluid, and there is generally a spirit of cooperation with nearby groups. Hunter-gatherers also display common childrearing practices that are shared with Old World primates and social mammals generally but have unique features (e.g., alloparenatal care, extensive cooperation, co-sleeping beyond childhood, pronounced social learning; Hewlett and Roulette, this volume).

**Ancestral Childrearing Practices: The Evolved Developmental Niche**

The evolved developmental niche (EDN; Narvaez, Wang, Gleason, Cheng, Lefever, and Deng, 2013) for young social mammals emerged more than 30 million years ago, and many of the characteristics of that niche remained true for humans (Konner, 2010). For young children, the EDN includes natural childbirth, extensive and infant-initiated breastfeeding, continuous contact with or proximity to caregivers, responsiveness to the needs of the child, free play in nature with multiple-aged playmates, extensive support of the mother-child dyad, and multiple adult caregivers (Hewlett and Lamb, 2005; Hrdy, 2009; Konner, 2005, 2010). The outcomes for the presence or absence of each of these parenting practices have only recently been studied scientifically, and results indicate that not only physiological but also psychological wellbeing is affected (McKenna, Ball, and Gettler, 2007; Narvaez, Gleason et al., 2013; Narvaez, Panskepp, Schore, and Gleason, 2013a,b; Narvaez, Wang, et al., 2013). For example, significant effects on brain development can be observed when breastfeeding does not occur in the first months of life (Deoni et al., 2013).

Today there are extensive conflicts between human biology and culture patterns (Eaton, Shostak, and Konner, 1988). For example, the emergence of the sudden infant death syndrome epidemic in Western industrialized societies was driven by the adoption of untested sociocultural infant care inventions and their underlying social values: having infants sleep in rooms by themselves (i.e., solitary infant sleep), not breastfeeding, and laying infants prone for sleep (to promote deep sleep) all proved to be independent risk factors for sudden infant death syndrome, leading to as many as a half a million infant deaths (Fitzgerald, 1995). There is no doubt, then, that much harm can be done when evolved developmental patterns are abandoned altogether for cultural reasons without exploration of the possible functionally damaging impacts these changes could have. Is there a core set of needs and
practices whose absence impedes wellbeing? Section I of this book addresses this question by focusing on several key features of mammalian parenting.

Cultures have shifted over millennia in terms of how much and what kind of support for child development is provided. On one end are the contexts that more closely follow the human developmental niche, which are found often among small-band hunter-gatherers. Although they experience many ecological and physical hardships, some hunter-gatherer groups experience greater social wellbeing than most in modern societies (e.g., Everett, 2009). Section II focuses on case studies of these groups.

On the other end of the spectrum are modern parenting practices, most of which have diverged greatly from the EDN for young children. The high social embeddedness and multi-aged, cooperative lifestyle of hunter-gatherer culture has been replaced, for example, in the United States with extensive social and age-related isolation and a productivity-focused lifestyle. Instead of a village of playful companionship support, many children do not experience characteristics of the EDN for very long—or worse, they are neglected or abused. Felitti and Anda (2005) suggest that child maltreatment has been experienced by the majority of adults in the United States. Indeed, on July 11, 2013, three agencies of the U.S. government sent a letter to state child welfare agencies to alert them about the issue of childhood trauma (U.S. Department of Health and Human Services, 2013). Currently, maltreatment is affecting approximately 1 million children each year (U.S. Department of Health and Human Services, 2012). Including a focus on the effects of early maltreatment will give insight into the extreme cases of the childrearing context. Section III will focus on issues of harm and maltreatment.

This Book

Overall, the interdisciplinary set of contributors to this book addresses contexts for development, with the aim of increasing understanding of basic mammalian, and human, emotional and motivational needs in varied contexts. In chapters 2 and 3 of this book, neurobiological research is reviewed, demonstrating what happens to development when young mammals do not receive beneficial and normative parenting.

In the first section, the needs of mammalian young are addressed. In chapter 2, “Epigenetics of Mammalian Parenting,” Frances Champagne details research on mammalian mother-infant interactions which suggests that maternal tactile stimulation has a profound effect on infant neuroendocrine and behavioral development. Among Long-Evans rats, for example, natural variation in maternal licking/grooming (LG) of pups, a primary forms of tactile stimulation during the postnatal period, leads to profound consequences for offspring: those who receive low compared with high levels of LG have elevated glucocorticoid levels in response to stress, increased fear reactivity, and impaired learning. Moreover, low LG
experienced among female offspring is associated with reduced levels of maternal behavior and increased sexual behavior in adulthood. Focusing on epigenetic mechanisms, which are factors that can change the expression of genes without altering the DNA sequence, Champagne provides evidence to support the hypothesis that maternal touch induces long-term effects on offspring’s brain development and behavior. For example, the experience of low LG leads to increased DNA methylation of the ESRI gene during postnatal development, and the persistence of this epigenetic effect into adulthood renders low-LG female offspring less sensitive to the priming effects of hormones that normally enhance maternal sensitivity. As such, reduced maternal sensitivity results in decreased LG toward the offspring reared by low-LG females, perpetuating a cycle of low maternal care. Implications of the epigenetic effects of early maternal care on child development and parenting are discussed, including their relevance for human development and evolution.

John Bowlby’s delineation of the significance of maternal-infant and infant-maternal attachment and his generic “perceptuo-motor mechanisms” that “tie” infants and mothers together are brought to life by the rich, integrative, endocrinological and psychobiological framework used by Amanda Dettmer, Stephen Suomi, and Katie Hinde in chapter 3, “Nonhuman Primate Models of Mental Health: Early Life Experiences Affect Developmental Trajectories.” Using a variety of observational, genetic, and physiological data, the authors provide multiple examples of new research explaining and interpreting the underlying neurohormonal transactions that are affected by, and respond to, the primate infant’s developmental conditions. These conditions include deficiencies that require compensatory responses, such as by cortisol, which can lead to more fearfulness, increased inhibition, and less play; on the other hand, they include more favorable environments that provide an abundance of maternal and peer-based social support, producing “confidence” and maximal resilience in individuals experiencing stress.

In the book’s second section, contributors explore how those who live in conditions comparable to patterns common in human evolutionary history care for their children. The level of access to their informants, and the detailed observations emerging out of their own important established personal commitments and connections to these communities, reflect the very best of ethnographic research and methods. The authors have immersed themselves in the practices of a particular mobile hunter-gatherer society. A focus on hunter-gatherer contexts can assist us in discerning the range of what is normal or how questions concerning what is optimal social development might be developed (in contrast to the focus on Western, educated, industrialized societies that predominates in most contemporary analyses of children’s social development; Henrich, Heine, and Norenzayan, 2010). Examining the details of several small-band hunter-gatherer societies regarding parenting, sleeping arrangements, personality, social relations, and morality (and their interconnections) can offer insights into how these factors relate to one another and influence children’s development in hunter-gatherer societies.
In chapter 4, "Relationships and Resource Uncertainty: Cooperative Development of Efe Hunter-Gatherer Infants and Toddlers," Gilda Morelli, Paula Ivey Henry, and Steffen Foerster describe the social landscape and development of Efe infants and toddlers. The Efe are pygmy hunter-gatherers in the Ituri Forest, in the northeast portion of Africa's Congo River Basin. Their world is one of uncertainty. Reliable access to nutritious foods is unpredictable, and reliable access to the same people day to day is not assured. Diseases can strike at any time, and it is not uncommon for parents to die before their children are grown. For the Efe, survival depends on sharing and cooperation with others beyond the immediate family (a trait that seems unique to humans) that is built on a history of trustworthy experiences. Morelli and her colleagues present narrative and empirical data showing how Efe infant relationships and trust develop in a highly variable ecology. Efe infancy is intensely social. Infants experience an active social network from birth, and prior research shows that they may be breastfed by other women, not just by their mothers. Infants and toddlers are in nearly constant physical or social contact with people for much of their waking time. They move from partner to partner at rates of roughly once every 3 minutes, and this is flexible as people move in and out of the camp. These young children are very successful at obtaining resources from other members of the forager band as well as visitors. At all ages children experience highly positive affect and reward their partners' engagement with smiles, laughter, and bright-eyed attentiveness. With increasing growth and mobility, toddlers play a more active role in determining with whom they spend time, and their networks grow and diversify, most likely, as a result. Children are active, not passive, partners in developing the trusting relationships that are essential to survival in such an uncertain world.

In chapter 5, "Batek Childrearing and Morality," Karen and Kirk Endicott report on their research in the mid-1970s with the Batek people of Malaysia, who largely followed a nomadic hunter-gatherer lifestyle but also traded forest products for cloth, metal goods, and some food commodities. The Endicotts' description of childrearing practices through adolescence provides a window into how these practices influence the personality of the adults and the culture generally. They describe socialization into nonaggression. For example, like all toddlers, Batek children show signs of aggression or possessiveness, but adults generally react minimally, usually gently redirecting them or using humor to relieve tension. The adults seem to have an understanding that the child will grow out of these impulses, and indeed they do without punishment or admonition. Older children are scared into staying close to camp with threats, as in many cultures, that a bogeyman might come if they do not comply with certain rules. In late childhood and early adolescence, children move into spending more time on sex-typed activities (gathering or hunting with the adult of the same sex). Adolescents set up their own households with each other, not under the direction of adult guidance, until they enter real marriages. Adults generally display enthusiasm, a "confident independence," a sense of responsibility to others, and a "cooperative autonomy," with no apparent personality differences between males and females.
Barry Hewlett and Jennifer Roulette's pioneering study of the social sleeping patterns and arrangements of juveniles, adolescents, and teens, described in chapter 6, "Co-sleeping Beyond Infancy: Culture, Ecology, and Evolutionary Biology of Bed Sharing Among Aka Foragers and Ngandu Farmers of Central Africa," among two well-studied farming and foraging peoples living adjacent to each other in Central Africa reminds us of just how far Western cultural ideologies have departed from our species-wide, universal practice of mothers and children co-sleeping (in some form), with infants breastfeeding throughout the night and older children never sleeping alone. Indeed, throughout the world, most parents would never even imagine the possibility of their infants or children sleeping outside of the company, protection, or social reach of their allopentals, defined either by kin, relationships through marriage, personal preferences, or friendships.

In section III, broader questions about evolution, family, children, and human nature are the focus. In chapter 7, "Environment of Evolutionary Adaptedness, Rough-and-Tumble Play, and the Selection of Restraint in Human Aggression," Douglas Fry addresses the evolution of aggression restraint. Evolution has favored nonlethal aggression in intraspecific competitive interactions in many species. Intraspecific aggression that causes significant harm is rare among animals, including humans in nomadic foraging conditions, and when it occurs it is a personal, not collective, action. Instead, displays of aggression between group collectives cause little physical harm and are characterized by drama and preservation of face. Fry discusses how rough-and-tumble play may be critical for learning aggression restraint because it provides a platform for learning vital social skills such as signaling intentions and maintaining a playful, non-injury-inducing interaction. It provides a way to establish dominance without serious injury.

In chapter 8, Peter Gray presents a "Play Theory of Hunter-Gatherer Egalitarianism." His thesis is that our hunter-gatherer ancestors used play, more or less deliberately, to counteract the tendency to struggle for status and dominance, which was inherited from our primate ancestors, and that this permits the high degree of cooperation and sharing that hunter-gatherer life requires. He explains that play, in all mammals, requires a temporary setting aside of aggressiveness and dominance, and he reviews research suggesting a negative correlation, across primate species, between adult playfulness and steepness of dominance hierarchies. Then, for the rest of the chapter, he reviews research on contemporary hunter-gatherers showing how their social life—including their games and dances, religious practices, approach to productive work, means of enforcing social norms, and approach to children's education—is imbued with the spirit of play. The hunter-gatherer culture represents a social landscape in which play and humor are valued and aggression and status seeking are devalued.

In chapter 9, "Incentives in the Family I: The Family Firm, an Evolutionary/Economic Theory for Parent-Offspring Relations," Joan Roughgarden and Zhiyu Song challenge the received view of parent-offspring behavioral conflict with its
emphasis on psychological manipulation by offspring of parents for the purpose of getting their needs met (and advancing their genetic fitness). Instead, derived from a social selection model, they emphasize honest communication of needs within the relationship, with a shifting balance of incentives in a type of family “team play.” Their cooperative theory better fits the parent–child behavioral data, as well as the social harmony that is found in small-band hunter-gatherer societies.

In chapter 10, “Preliminary Steps Toward Addressing the Role of Nonadult Individuals in Human Evolution,” Agustín Fuentes proposes a reconsideration of children in evolutionary theory. Children are often absent, or underrepresented, in our reconstructions of human behavioral evolution. However, there are emerging indications that we can envision nonadults as having substantive impacts in the ways in which early humans interfaced with local ecologies and each other. Modern evolutionary theory provides a toolkit for conceptualizing the role of children in human evolution, especially in the context of niche construction. Through broad cooperation that includes behaviors such as alloparenting, materials collection, and transport for tool making, immatures (children) may have played a critical role. Fuentes suggests that we consider the possibility that immatures are actors alongside adults in creating and shaping the social and ecological inheritance systems that enable behavioral flexibility and extended adaptation. Active participation by children may have been one of the key factors in the long-term success of the genus Homo.

In section IV, issues of changed childrearing contexts are addressed, including trauma and abuse. Chapters 11 and 12 describe the extremes for human development, when parents themselves are troubled and unresponsive. In chapter 11, “Child Maltreatment and Early Mother–Child Interactions,” Kristin Valentino, Michelle Comas, and Amy Nuttall provide a developmental psychopathology perspective on mother–child interactions among maltreating and nonmaltreating families from infancy through toddlerhood, addressing how a maltreating family environment affects developmental outcomes. Because child maltreatment represents an extreme deviation from the average expected early caregiving environment, the comparison of maltreating and nonmaltreating families serves as an experiment of nature and provides critical information regarding the contribution of early caregiving to young children’s development. In particular, early maltreatment is associated with attachment disorganization, decreased maternal sensitivity, and decreased maternal verbal interactions. Moreover, infants and toddlers from abusing families demonstrate persistent deficits in social initiation and autonomous behavior compared with children from neglecting and nonmaltreating families, which underscores the disruption in normative social development associated with an abusive family context. The authors conclude by providing specific examples of translational research interventions for young maltreated children informed by basic research on mother–child interactions during early childhood.

In chapter 12, “Importance of the Developmental Perspective in Evolutionary Discussions of Post-traumatic Stress Disorder,” Robyn Bluhm and Ruth Lanius
critique theoretical and evolutionary accounts of mental disorders, with an emphasis on post-traumatic stress disorder (PTSD). Focusing on chronic exposure to traumatic stress during early life (i.e., persistent childhood abuse), Bluhm and Lanius present data that demonstrate how early childhood trauma disrupts neural development, and they argue that several key deficits observed in patients with PTSD subsequent to early childhood trauma can be understood through these alterations to neural development and functioning. Thus, in contrast to current theoretical accounts of PTSD, which have largely ignored early life trauma, an alternative account that emphasizes the developmental context is presented.

Eugene Halton, in chapter 13, “From the Emergent Drama of Interpretation to Enscreenment,” takes a sweeping view of human evolution. Considering the development of self and the pervasive role of symbol and meaning in human evolution, he reviews the contexts of early development and hunter-gatherer practice, contrasting them with the modern world and highlighting how media and technology act as contemporary socializing agents. Social media and technology have taken such a dominating influence in socialization that they can be viewed as inversions of evolutionarily central socializing practices. In this chapter, Halton lays out how contemporary techno-consumption culture mimics aspects of human behavior and perception related to evolutionary processes, yet subverts their action and outcomes.

The final chapters consider childhood environments and their relation to child flourishing. Tracy Gleason and Darcia Narvaez, in “Childhood Environments and Flourishing,” incorporate insights from book chapters, and James McKenna provides a postscript on the larger issues. It is still unclear which biological needs are particularly essential for optimal development, although attending to 30 million years of evolved practices might be a place to start as a baseline for examination. The quality of the early caregiving context has significant ramifications for later physiological and psychological functioning. Central to this nurturing environment are the responsibility of the primary caregiver and the provision of adequately sensitive social and emotional care associated with many positive outcomes. However, flourishing, defined as emotional, psychological, and social wellbeing, along with appropriate physiological regulation and a sociomoral orientation toward others, might require an intense level of caregiving on the part of the community that is atypical in the United States. Attention to caregiving practices common among small-band hunter-gatherer behaviors, which are positively associated with sociomoral development, as well as to the broad social context of early development might provide important steps toward creating proactively moral, prosocial communities.

Conclusion

The interdisciplinary set of contributions to this book provides insight into human development, broad and particular cultural customs, and evolutionary features of
social structure in light of human evolution. The integration of eclectic methods and theories breaks previously existing traditional disciplinary boundaries separating anthropology, psychology, sociology, and neuroscience. As a result of cooperative research efforts by scientists from different fields, each discipline is in a strengthened position to find answers to questions that a single discipline working alone might not even have known were important to ask.

The shifting baselines for childrearing that have occurred over generations in settled societies may have long-term effects on the psychology, anthropology, and sociology of subsequent generations. Social environments consistent and inconsistent with ancestral conditions may have long-term effects on individual outcomes. The cultures of mobile hunter-gatherer societies examined here may offer a glimpse at the contexts for child flourishing. With the information provided by these scholars, we may be in a better position to understand what optimal childrearing entails and thereby be able to facilitate changes in social structures and support systems that better foster wellbeing in human development. This next step, however challenging, will require understanding that our evolutionary legacies are relevant to helping us adjust our lifestyles to provide a fit between our more conservative biology and cultures, which can be at odds with one another to greater or lesser degrees. Only our imaginations are stopping us.

References


