Chapter 5 Humility in Four Forms: Intrapersonal, Interpersonal, Community, and Ecological

Darcia Narvaez

Narvaez, D. (2019). Humility in four forms: Intrapersonal, interpersonal, community, and ecological. In J. Wright (Ed.), *The virtue of humility*. In book series, *Multidisciplinary perspectives on virtues* (N. Snow, series Ed.). New York, NY: Oxford University Press.

ABSTRACT: Relational humility is not simply an intellectual thing, but embodied, all the way down to neurobiological systems. Humility is a developmental process, shaped and expressed within social systems from the beginning of life. Humility emerges naturally from beingness coconstructed by family and community. When parents and caregivers are humble before the needs of children, providing the evolved nest or developmental system for raising the young, a cascade of long-term effects ensues. When a baby is not treated with respect and empathy, with needs met promptly, neurobiology develops in the direction of self-protection with a cacostatic (too much or too little) orientation (dominance or submission) toward others, undermining capacities for humility. The cascade of effects shape cultural practices from the ground up, as individuals form and shape community cultures that carry across generations. Relational humility is defined as multilayered, including intrapersonal, interpersonal, community, and ecological humility—relational attunement with others and with the web of life. evolved nest, humility, neurobiology, culture, ecology, development

Introduction

The definition of humility that is proposed here is multilayered. 1 The general thesis of this chapter is that a disposition of interpersonal humility develops from the ground up in wellraised human beings within well-supported families and communities where children are supported in meeting their evolved basic needs. Thus, interpersonal humility relies on the behavior of prior generations, making interpersonal humility a developmental, intergenerational affair that also fosters an internalized, or intrapersonal, humility. But in order to provide appropriate care to the youngest generation, a society or culture needs to be humble toward the basic needs of its members. A third layer of humility occurs at the community level. Modern nations today typically do not fully provide for the evolved basic needs of their youngest members. As a result, they raise individuals whose neurobiological and social grounding presses against a disposition of humility and toward self-protective mechanisms that form in response to the stress of unmet needs. Lack of provision for basic needs results, in part, in a lack of humility on the part of a community that in effect moves against the nature of Nature.2 This contrariness extends to the treatment of the natural world itself, representing another realm of humility I discuss, ecological humility. All four forms of humility-intrapersonal, interpersonal, community, ecological-are interrelated and interactive. See table 5.1 for an outline of the types of humility that I examine in more detail ahead. See figure 5.1 for their interrelations.

Table 5.1

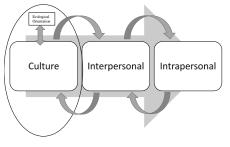
The Layers of Humility with Examples of Each Type

	Intrapersonal Humility	Interpersonal Humility (person to person)			Community Humility	Ecological Humility (e.g.,
		Embodiment	Emotion	Cognition	(intergroup)	interspecies)
Modesty	Content with self-in-body	Not socially threat reactive	Self- accepting; other- accepting	Open; self- knowledgeable; self-monitoring (e.g., of ego, intellect)	Behaves as a fellow member of a community of communities	Honorable harvest does not take too much; leaves resources for others
Selflessness	Automatically cooperative with own spirit and self's unique needs	Sociality is pleasurable	Empathic	Minimal ego; communal in thought and habit	Older generation yields to basic needs of younger generation	Limits wants and desires; lives with the biocommunity in mind
Respectfulness	Self-accepting	Relationally attuned to others in multiple nonverbal ways	Emotionally present with others	Hospitable; honors individuality; socially flexible		Honors other-than- human lifeforms

Figure 5.1.

Layers of Interactive Influence in Humility Development: Four Types Interrelated Across Generations

Figure 5.1 Layers of Interactive Influence in Humility Development



Interpersonal Humility

I start with interpersonal humility, which is the typical focus of discussions about humility. As listed in table 5.1, I identify three aspects of interpersonal humility, first, embodiment—the functioning of one's neurobiological structures, such as the stress response whose parameters are established in early life. The other two aspects of interpersonal humility mentioned here are emotion and cognition (the latter could be divided into explicit and implicit cognition, but there is no room here to spell that out, so cognition will be described as one category). Some basic features of embodiment and emotion are listed in table 5.1, reflecting species-normal human development as a social mammal, but these will be illuminated later, under the section on the development of humility below. The cognitive aspects are the usual focus of discussion, and so I start there.

Openness has been identified as a key component of intellectual humility. For example, intellectual humility embraces openness to experience (e.g., Kruse, Chancellor, and Lyubomirsky, 2017). Interpersonal humility, however, must be defined differently. Spezio, Peterson, and Roberts (2019) define relational humility as openness to the "I" in the other, "the inclusion of the other as valued together (inseparably) with the self," and they find empirical support for their view in examining interpersonal relations in a L'Arche community.3 Contrasting intellectual humility's openness with that of relational humility, they point out that intellectual humility can be fairly static and one-way, whereas interpersonal humility is necessarily interactive. One must demonstrate ongoing humility in interactions with the person at hand. This definition is a good starting point for what is posited here. But what is the nature of interpersonal interactions characterized by humility?

Interpersonal humility, in my view, manifests in behavior that is modest, selfless, and respectful. Modesty in terms of cognition concerns openness to the other as a dynamic being, accompanied by realistic self-knowledge in terms of capacities and one's place in the world. (This undergoes development throughout childhood and adolescence as one tests and discovers one's capacities and place in the world.) Modesty also includes self-monitoring to keep the ego from inflating or deflating-that is, feeling superior or inferior to the other. Communalism in thought and habit represent the cognitive aspect of selflessness, a personal connectedness and egolessness that one brings to a situation, which occurs in supportive growth environments. In contrast, one can become self-conscious (and deflated) in environments where needs are not met and/or emotional expressions are unrecognized or dismissed. However, even in these circumstances the fully humble (adult) person embraces a larger frame than the self and its discomfort, maintaining selflessness, aware that interpersonal connections are deeper, as part of a continuum of being, than they appear. Respectfulness is an attitude of hospitality; honoring individuality; and maintaining a readiness to be socially flexible, pliable, and responsive to the other. The expression of humility shifts by situation according to which relationships are salient and which actions are needed. Humility moves with the relational flow in the moment, co-coordinating action with the well-being of others in mind, maintaining modesty, selflessness, and respectfulness.

The embodied bases for humility are also mentioned in table 5.1. The modest individual is not socially threat reactive and selflessly finds social experience pleasurable rather than aversive. The respectful individual is relationally attuned to others in multiple nonverbal ways (coordination of proxemics, kinesics, prosody, and other forms of nonverbal communication4). On the emotional level, modesty requires a sense of self-trust, rather than distrust, and self-acceptance, a yielding to the deep self, but also to the other, accepting them as they are. Selflessness and respectfulness are apparent in empathy and emotional presence, respectively. Humility is visible in face-to-face encounters when an individual demonstrates appropriate interpersonal and self-coordinated responsiveness to the other in the moment, represented in intersubjective interpersonal verbal and nonverbal communication.

Taking interpersonal humility to be interactive, it won't do for humility to be apparent only once in a while—i.e., in particular situations with specific people, say with one's mother when she is ill. When fully formed, humility is a way of being that individuals carry with them into all situations, infused into all encounters. What I add to the usual discussions of interpersonal humility is a well-constructed neurobiology, the embodiment that underlies the aforementioned capacities. Interpersonal humility is grounded in early experience—support in getting basic needs met without social distress; feeling accepted, loved and respected; having mutually responsive and respectful experiences with multiple different others. The neurobiological substrates of humility development are the next topic.

Developmental Foundations for Humility

Most scholarship focuses on an individual adult's humility. But according to the multilayered definition proposed here, individual interpersonal humility does not develop in social isolation. A child does not come into being alone. She first has a mother, a family, a community, and a system of care. Interestingly, the subsystems and capacities that undergird individual humility are initially shaped in early life by caregivers and communities. Humble communities mold humble members. As a result, humility cannot be considered an individual characteristic alone but must involve multiple generations. Though humility can adhere (or not) to an individual, it can also be attributable (or not) to the community that raises and influences her. We examine this broader framing as we go along.

How does one develop fully blown interpersonal humility? Its groundings are fostered in childhood, especially during babyhood when critical foundations of a human being are established. Humans are born with only 25% of adult brain size at full-term birth. Thus, a great deal of neurobiology is molded after birth, especially in the first months and years of life based on the biochemical "bath" promoted by caregivers (Schore, 2003a, 2003b). Epigenetic and plasticity effects are occurring on multiple levels in multiple sensitive periods, laying the groundwork for capacities later (Knudsen, 2004).

What do babies need to grow well? Every animal evolved a nest to match the maturational schedule of its young. Humans inherited many characteristics of their evolved nest from their social mammalian line (most components are over 30 million years old), but the human neonate increased in immaturity over the course of human evolution to accommodate bipedalism. Human babies need at least another 18 months before resembling a newborn of other animals, save marsupials (Trevathan, 2011). Humanity's evolved nest (or evolved developmental niche) for babies includes a set of experiences provisioned by the community: soothing perinatal experience, extensive breastfeeding and fairly constant affectionate touch, prompt response to needs, multiple adult responsive caregivers, self-directed play with multiaged mates in the natural world, and positive climate and support (Hewlett and Lamb, 2005). The importance of each of these components has been supported with neurobiological studies (for brief reviews, see Narvaez, Panksepp et al., 2013). When parents yield to the evolved set of needs (e.g., for companionship, affectionate touch, frequent breastfeeding, movement), the child builds a good neurobiology that allows her to be responsive in return. Yielding to the baby means that caregivers maintain the baby's optimal arousal levels, biochemically and psychologically, responding to needs with kindness (in Winnicott's, 1957, term, letting the baby feel "omnipotent"), optimizing normal growth.

The companionship caregiving the human nest provides allows babies to surrender into the arms of the caregiver day after day, night after night.5 They rehearse a surrender to being-inplace and learn to build and trust intuition and interrelational signaling (Stern, 1985). In these circumstances, emotions and their undergirding neurobiological systems develop well (Schore, 2013). The child learns how to express and interpret emotional signals accurately, learning when to test them or trust them. Trust and humility are interrelated and go hand in hand. Parental trust is transferred to the baby as they humbly meet the child's needs— responding to needs quickly with kindness, promoting calming. When the child communicates their needs and they are met, the child builds confidence that the world will provide, often measured in psychological research as secure attachment, and the young child develops into a cooperative community member (e.g., Bolin, 2010).

Interpersonal humility relies on systems and capacities "all the way down," that is, it is an embodied (neurobiologically-felt) orientation. A well-functioning neurobiology includes self-regulatory systems (e.g., vagus nerve, stress response, neuroendocrine systems like the oxytocinergic system) (Carter and Porges, 2013). These undergird social relations and must function well for virtue enactment generally and for humility specifically. In a neurobiologically well-functioning individual, social skills and microskills are able to develop well (e.g., emerging from good right hemisphere development that is scheduled to take place in early life) (Narvaez, 2014).6 Concertedly, all these components lead to relational attunement and flexibility in the moment.

Within this developmental nest of support, the child builds layers of self-regulatory capacities, contentment with self-in-body, automatically cooperating with his or her own internal spirit or soul and the self's unique needs, in effect, accepting the self. The individual's implicit social

worldview forms into one that is prosocial and trusting because well-functioning subsystems allow one to "lose the ego" appropriately (with compassion and increasing wisdom) in social situations. She develops a modesty of self, feeling like she belongs to and is appreciated by the social group. As she feels respected, she learns to respect others. As her needs are met, she can lose herself in selfless group collaboration. These propensities are capped by deliberate or conscious understandings, narratives, and framings that support relational cooperation and giving over oneself to the other in mutual cooperation.

In this way, the seeds of humility are sown by parents and caregivers.7 Humility is reliant on neurobiological capacities for emotional resonance with others, which humble parenting supports. As children grow up, they yield in return, allowing themselves to be socialized according to the wishes of parents and community ("committed compliance," Kochanska, 2002). Humble adults raise humble children who are ready to fit into their communities, who go with the flow of communal engagement, leading to an adulthood that supports a community responsive to the needs of its members. Converging evidence across scientific disciplines shows the effects of the nest on capacities (self-regulation, empathy, conscience) for living well and wisely with others (see Narvaez, 2014, 2016, for discussion, and these empirical studies: Narvaez, Gleason et al., 2013; Narvaez, Wang, and Cheng, 2016; Narvaez, Wang, et al., 2013). "Bottom-up" development of humility is a human heritage that emerges from the provision of the evolved nest which is apparent in societies that represent the type of society where humans spent 99% of their genus history, as well as in societies that promote tender care of the young (Narvaez, 2013, 2015). In these societies, great pleasure is taken in babies by the community generally, so that meeting their needs is not onerous but an enjoyable part of social life.

In contrast, nonhumble parenting is exhibited in detached parenting that avoids being too attached or resonant with baby's needs, and instead controls the baby according to adult needs, schedules, and whims. Unhumble treatment of babies starts with medicalized birth practices where babies are forced to be born (instead of signaling when they are ready and starting labor, which varies by about 50 days among babies) and are treated harshly after birth with painful procedures and separation from mother (Klaus and Kennell, 1976/1983; Liu et al., 2007). The ignoring of babies' pain in medicalized birth is mimicked by parents when they proudly ignore baby's cries in order to be "in charge" and "get their lives back," and when they force babies into "independence," for example, by using cry-it-out sleep training to get baby to sleep without them. Most of these practices are based on false beliefs about babies (e.g., you spoil babies if you give them too much attention) that started long ago when parents were isolated from extended family and, lacking community support, began to turn to books for advice. The early advocates were interested in baby control either for reasons of religion (Holt, 1935) or "science" (Watson, 1928) and their behavioristic views still pervade the US parenting landscape (Braden and Narvaez, in press).8

As can be inferred from the prior discussion, cultural humility, outlined in table 5.1, supports the development of both intrapersonal humility (toward the self) and interpersonal humility

(toward others). But the embodied-self-in-right-relation with multiple layers of functioning includes not only face-to-face relationship(s) in the present moment, which scholarship typically emphasizes, but is intergenerational. That is, humble parents and caregivers pass on humility to their children through their actions toward the child's needs.

The reader no doubt realizes that few children in financially advanced nations today live in developmental systems that foster humility as described earlier. What are the results of a degraded evolved nest? When babies don't receive expected care, the life course gets set on a less-than-optimal trajectory (Cole, Michel, and Teti, 1994). We examine that next.

Developmental Foundations for a Lack of Humility

Too often industrial civilization's practices and capitalism's ideology discourage providing babies with what they crave (need) for optimal development, thereby toxically stressing a developing brain. For example, the US culture promotes unhumble parenting. As one of only three nations with no paid parental leave, parents are pressured to force their babies to be "independent," to leave their children to cry, to consume infant formula, and sleep alone, plus spend many hours separated from parents—all mitigating against species-typical development. When the evolved nest is degraded like this, we can document that fundamental capacities are misdeveloped and trajectories for multiple systems become less than optimal (for reviews, see Narvaez, 2014; Narvaez, Panksepp, Schore and Gleason, 2013), including the development of humility (Narvaez, Thiel, Kurth, and Renfus, 2016).

When communities are not humble toward the needs of the child (due to cultural beliefs or adult self-preoccupation) or are unable to provide the nest due to social circumstances (e.g., war zone), interpersonal humility is not fostered from the bottom up. When parents are set against being humble to their children's needs, they exhibit a hierarchicalism that they imbue into their children (Tomkins, 1965). Children become alienated from their own natures and the natural flow of human existence. By not providing the companionship of the evolved nest, such communities foster people with rigid, brittle, self-protective orientations, "all the way down." That is, their more primitive survival systems are enhanced while the otherwise postnatal growth of humble prosociality is undermined. The survival systems are by their nature not humble because they are about routine self-protection through self-aggrandizement or self-diminishment (guided by the stress response: fight-flight-freeze-faint, and by basic inborn emotions of fear, anger, panic, and seeking; Panksepp, 1998). Instead of growing prosocial capacities after birth, undercared for individuals are forced into resonating with survival systems ("reptilian" brain; stress response) and resorting to self-protectionist actions such as territoriality, rigid routines, and dominance (sympathetic nervous system) or paralysis (parasympathetic nervous system) (Narvaez, 2008, 2014, 2016). Neurobiology develops in the direction of self-protection with a cacostatic (too much or too little) social orientation (dominance or submission), undermining capacities for humility. Individuals become threat reactive and move routinely into one-up/one-down inegalitarian social relations. Denial of basic need fulfillment forces children into calculated manipulation and deception once they

have these capacities. It requires that they take up arms against the resulting anxiety and fear and set themselves against self and others in some fashion. They will necessarily build either a "chip on the shoulder" or self-abnegation (or both)—i.e., a self-protective ego. They become stress reactive, building an ego-dominant self, whose (large, self-protective) ego is easily irritated by things not going their way, manifest in preconscious reactions to perceived threat. Stress hyper- or hypo-reactivity can result in a panicking self that rages, freezes up or shuts down.

Children who are denied the mystery of being alive in the moment, of feeling connected with mother and others, relaxing and sleeping in their arms without survival systems being triggered, do not learn to live well nor with well-constructed emotion systems. They miss the training of the emotion systems through appropriate limbic resonance with caregivers.9 Limbic resonance is a mammalian need and mammals veer off kilter without it (Lewis, Amini, and Lannon, 2000). Lack of positive reciprocal resonance with mother and others results in a lack of capacity for, then interest in, resonating with others. When caregivers are not responsive and synchronous, the baby learns to prefer the subset of resonance that does work, which can be depressive with a depressed caregiver or erratic with inconsistent care.10 In any case, toxically stressed youngsters are forced into an isolated one-person psychology, with a sense of loneliness and a restless seeking—for what was not provided when needed for proper development.

Undercare (missing or degraded nest components) in early life undermines human capacities and potential, shaping the individual to be more self-centered, impairing the development of another component of humility, the child's humility toward having needs and accepting vulnerability. When infant needs are disrespected, the child is set on a trajectory of mistrust, need denial, and defensiveness against vulnerability through self-authoritarianism and contempt for needs in others. The child suffers a "primal wound" that will follow him the rest of his life, barring extensive therapy, setting up defensive systems against vulnerability, neediness, and self-awareness (Finman and Gila, 1997). His defensive systems require extensive energy to maintain as they work to suppress emotion and memory, a suppression extended to others through wanting to keep them under control too.

When undercare occurs in early life or trauma is experienced, self-protectionism can become a conditioned reaction that is difficult to mend later. The individual then lacks freedom in the present moment; free will is undermined. The person easily and automatically downshifts to primitive survival systems—shutting down in relationship or moving into the flow of power over others through manipulation and control. Humility is viewed as doormat-ism, as humiliation and submission, a view that comes from underconfidence and lack of trust. Flexible relational attunement falters.

We can take the case of bully and silent victim. Neither is humble. Bullies dominate out of protectionism—they take refuge in feeling powerful because they do not have the capacities to be relationally attuned and egalitarian. Silent victims, or "doormats," are not humble either. They have withdrawn because they don't feel strong enough to demand equal respect. Neither is capable in the moment of honoring their unique selves (see also Morinis, this

volume). Domination and submission are cacostatic responses because the flexible attunement of proper development was not supported "all the way down."

To reiterate, for humility to develop in its members from the ground up, rather than intentionally top-down later on, the community needs to be humble before the needs of children (and of families so that families can provide the evolved nest). Humans are social mammals whose biology and sociality are co-constructed by their social experience— experiences that are guided by culture and the capacities of elders. In small-band hunter-gatherer societies around the world the co-construction is very similar because child raising is very similar (evolved nest provision), leading to consistent adult dispositions—calm, cooperative, generous—and cultures that support the companionship described (Ingold, 2005). Humility comes easily for a child raised with companionship care of the evolved nest where resonance with the spirit of others is experienced and practiced from the beginning of life. One learns to move with others (including other-than-humans), as part of a web of life in which one's self is connected to all other selves—a Commonself, moving with instead of against them (Ingold, 2005). In short, adults who are humble to the needs of young children initiate societies that are more broadly humble. Intergenerational effects solidify into cultural practices, and culture influences family practices.

Bronfenbrenner's (1979) ecological systems theory identified several social domains of influence on a child's development: microsystem: child's realms such as family and school; mesosystem: the relations among those systems; exosystem: the interrelation of systems beyond the child's experience such as parent workplace and health systems; macrosystem: cultural values and laws; and the chronosystem: the historical context. In my view, each of these systems can also be assessed for humility, which will support (or not) the development of humility in the child. Do the family and school meet the basic needs of the child? Do they coordinate the provision of needs? Are workplaces and health systems attuned to the parents' needs, which allow them to be better attuned to the child's needs? Do cultural values and laws match up with human needs? In these ways, humility adheres to cultures or communities. This aspect of humility formation aligns with the human capabilities approach (Nussbaum, 2009)11 where meeting basic needs is required for social justice. In my view, provision of all the components of the evolved nest is a social justice issue for children (Narvaez, Kurth, and Noble, 2018).

Ecological Humility

To be thorough about the description of humility, we must address a now obviously key component within a culture—its ecological humility. Can we sort societies into ecologically humble and nonhumble? Robert Redfield (1953, 1956) made a useful sorting of cultural worldviews, boiling them down to two basic incommensurable types (see also Four Arrows, 2016; Four Arrows and Narvaez, 2016). I suggest that in order to distinguish them, we must look not at attitudes but at actions—i.e., worldview in action. I propose that one type of worldview in action is humble and the other not.

The first, more ancient worldview considers the cosmos to be unified, sacred, and moral. This worldview in action is apparent in earth-centered societies around the world. Redfield (1953) calls it the primitive worldview, but I will call it the indigenous worldview (Four Arrows and Narvaez, 2016). What have these earth-centered societies understood intuitively and applied to their behavior (which science now corroborates; Cajete, 2000; Deloria, 2006; Kimmerer, 2013; Scott, 2017)?

- The earth is full of sentience or living spirit.
- The earth is a self-organizing, complex mystery of dynamic systems that interact on every level (as science now tells us—from physics and chemistry, to water cycles and atmospheric transformations).
- When a person or society breaks the laws of the earth, suffering ensues.
- Humans are one among many entities living in community.
- Animals and plants must be respected where they are (and science confirms that each ecological system or landscape has a unique balance and needs).

Notice the humility toward nature and natural processes. How these orientations are expressed varies by community, even in the same part of the world, based on the particular nature of the landscape (Descola, 2013). Ecological humility is characteristic of sustainably wise indigenous cultures, including many traditional native American societies (see Cooper, 1998; Deloria, 2006; for reviews, see Narvaez, 2013, 2014).

To walk the way of the Human . . . the will for the individual person must seek the wisdom to walk a path of harmony with all of life. To walk the Way of the Human is to walk with humility and seek the wisdom to align our will in harmony with the Great Spirit. (WindEagle and RainbowHawk, 2003, 68)

In societies with this orientation, humans are considered one among many siblings in the biocommunity, and they are sometimes most in need of guidance from the older forms of life (plants, animals) (Kimmerer, 2013). Respectful interactions with all relations (animals, plants, rivers, etc.) are fundamental (Descola, 2013). The community exists in a specific landscape, yielding to its needs and facilitating flourishing for all. Food and water sources are shared with other animals. Societies guided by this worldview attend to the basic needs of humans but also to the landscapes in which they move. Earth is viewed as mother, provider of all. Although all living things struggle against the elements (e.g., weather, earthquakes), they live in cooperation with one another (Kropotkin, 2006). Cooperative contracts with predators are maintained, and it is understood that predators eat only when hungry and then tend to take the weaker members (animals might share a watering hole with a predator when it is not hungry). Human hunters prepare themselves to ask respectfully for prey, and a specific animal will give its life to the respectful hunter. In long-time sustainable communities, like the Australian Aborigines and the !Kung of southern Africa who have existed for tens of thousands of years (Balter, 2012; Lawlor, 1991), keeping the biocommunity in balance is essential and guides behavior, requiring deep knowledge of and relationships with the local landscape, knowledge embodied in wise elders who guide the younger, 12 There is a sensitivity to the

dangers of ego and intellect (and nonhumility), as wise elders guide the younger away from these pitfalls.13

As noted in <u>table 5.1</u>, ecologically humble societies behave modestly in following the "honorable harvest" (Kimmerer, 2013), multiple principles for relating to the natural world that are often implicitly held (e.g., do not take too much of a plant community; leave at least half for others). They maintain a selflessness in limiting wants and desires, living with the biocommunity in mind (Gowdy, 1998). Among the hundreds of uncivilized societies still in existence, as well as the many who still maintain similar worldviews, respect for other-than-humans are built into cultural practices; community rules and traditions inveigh right relationship with the animals and plants that sustain human life (Descola, 2013).

For most of their existence, humans have followed such practices or perished, acting as "fellow-voyagers with other creatures in the odyssey of evolution" (Leopold, 2016, 109). But in the last centuries, humans of dominator cultures have acted differently (Latour, 2013; Sale, 2006; Turner, 1994). This may be due in part to the second worldview in action that began to hold sway. It considers the cosmos to be fragmented, disenchanted, and amoral. Promulgated by dominator worldviews like Enlightenment philosophy, forms of Enlightenment science, 14 and Enlightenment economics, while maintained by neoliberal forces predominant today (Harvey, 2005), this modern worldview is evident in scientism—the belief that science alone has a claim to truth; in capitalist economics—which detaches from responsible relationships to human, community, and planetary welfare; and in religious traditions that emphasize the earth as a temporary waystation for humans on their way to eternal afterlife (Latour, 2013). Clearly, ecological humility often is hard to discern in these beliefs and accompanying practices.

Europeans colonizing the rest of the world brought with them such views and initially derided the different beliefs about the world they encountered as "superstitious." But it turns out that they are the ones with destructive beliefs, particularly in the United States (Andersen, 2017). A host of false beliefs are destroying life on the planet. What are the false beliefs that exploiters in the Western world have operated under for the last 500 years, still widespread in the United States today and forcefully spread around the world through the primacy and hegemony of capital (Chomsky, 2017; Korten, 2015; Perkins, 2016)? Here is a short list:15

- Humans are the pinnacle species.
- Only humans have spirit; the rest of nature is largely inert.
- Nature should be tamed and defeated.
- Humans can separate themselves from natural laws (and live ignorant of them) without risk.
- Western technological and cultural progress are the best/good/right ones/God's will.
- Humans are so smart that their technology will take care of any crises their lifestyles create.

These are not humble beliefs, yet they comprise elements of the narratives that have guided Westernized culture and behavior in recent centuries, leading to colonialization and extermination of people, cultures, and species. "From stories we absorb our goals in life, our morals, and our patterns of behavior" (Merchant, 2003, 3). Accompanying these beliefs has been an elevation of finance over all other areas of life, a belief in the sacredness of money and markets (Korten, 2015), confirmed by a focus on the still common index used to determine societal well-being: gross domestic product (GDP), despite the fact that it rises after natural disasters.16 When financial concerns come first, basic needs are not necessarily met.

Remedies to Foster Humility

The civilized world is full of unnested humans, the walking wounded. We escape into intellectual pursuits or ways we can feel dominant and we are much less social than our ancestors, nearly unable to resonate with other-than-humans. We have difficulty with interpersonal humility if we are stressed or have been raised to be dispositionally distressed (anxious, depressed, stress reactive), which puts us in a more primitive neurobiological substrate that works against humility, undermining higher order perceptions, conceptions, and actions (Narvaez, 2014).

How do we move away from resonance with self-protection, dominance, and conformity? How do we get the chip off the shoulder? How do we learn to stand up with heart? How do we restore our human potential for humility and virtue? First, we need to understand humility as a developmental virtue that is grounded initially in early experience. Next, we need to understand that humility adheres not only to people but also social systems (families, neighborhoods, communities, states). Finally, we need to understand that ecological humility is also required for a full-hearted humility. How can we foster humility in the Capitalocene where everything is being commodified and extracted (Moore, 2015)?

Education

To develop interpersonal humility, community members, including future parents, need to be educated about the evolved nest and its effects. Films and videos of humble parenting and its effects need to be part of the cultural landscape. Guided experience with babies during childhood and adolescent provides insight into the benefits of good care. Educational programs like the Roots of Empathy, implemented across Canada, brings a mother and infant into the classroom for nine months (Gordon, 2003).

For children who come from a degraded nest, educators will need to promote calming and healing of dysregulated neurobiological systems to decrease the use of self-protective mechanisms to feel safe and enable better learning and cooperation (Narvaez and Bock, 2014). Educators can provide opportunities to build social trust and social resonance through free play and creative endeavors, which will grow the social self-regulatory skills needed for

relational attunement. To develop communal humility, they can expand the child's imagination for multiperspective taking. To develop web-of-life humility, educators can ensure the child's connection to the natural world by helping them develop ecological attachment, landscape consciousness and nature-focused skills and sustainable, wise practices for living. Forest schools are attempting to do these things for younger children but higher education continues to foster Enlightenment's views (Orr, 1991).

Social Policy

To foster interpersonal humility within a society, extended families should be treated by policymakers as the fundamental unit of society (rather than corporations; Michaels, 2011).17 This would mean providing extensive support (e.g., three years of family leave that includes fathers), not traumatizing babies (e.g., at birth with painful procedures or separation from mother), and through parenting education in schooling and in the community, ensuring that everyone understands child development and evolution's "design" for child raising. Children provided the evolved nest turn into humble adults, as demonstrated by the type of personality among those providing the nest (Ingold, 2005; Narvaez, 2013). In the case of an unnested upbringing, individuals can work on healing themselves (usually with help), though it takes some suffering to overcome one's resistance to being vulnerable and humble.18

Culture

Humility does not come about through mere desire or the will to be humble. One needs layers of self-regulation and skills to accomplish it, and these are initially constructed by one's caregivers, community experiences, and only later co-constructed by one's choices of situations and activities. To foster communal humility, meeting basic needs must be central to the goals of a community or society. The human capabilities approach (Nussbaum, 2009) is moving in this direction, but a focus on basic psychosocial needs provided by the evolved nest can provide added guidance (Narvaez, Kurth, and Noble, 2018). When the evolved nest is provided along with lifelong positive social support, we may again see the common emergence of wise and humble elders who ensure that the cycle of basic needs provision continues across generations.

Hopeful Signs

As the neurobiological sciences increasingly demonstrate the lifelong impact of early experience, several initiatives have been taking root around the world such as First Thousand Days, Zero to Three, Child First. The increase in bottom-up efforts to restore "commoning"— the management of earth's riches for collective benefit—represents an effort to promote humility toward nature's ecologies and the benefits of mutual relations for human communities (Bollier and Helfrich, 2015).

Conclusion

Humility is essential for the survival of the human species. The current dominant culture of unhumble beliefs and practices is speedily destroying our common wealth. Humility in this chapter has been defined with multiple interacting layers. Humility entails intrapersonal and interpersonal humility—comprised of modesty, selflessness, and respectfulness toward self and others—and shaped by adult humility toward the evolved needs of babies and children. Humble social systems provide for basic humans needs (e.g., the evolved nest for children and social support for all ages), fostering well-being in its effects, and avoiding hubris of ego or intellect. Cultural humility toward the needs of young children is related to a culture's attitude toward natural systems generally.

Ecological humility is the constant awareness that the self is "inseparable from the web of relationships that sustain it" (Macy, 2013, 148). "Wherever we step, whatever we touch and disturb, is a form of interaction with the Earth and therefore should be done with sacred awareness, the awareness of what effect it has on our interdependence" (Brink, 2016, 11).

References

- Andersen, K. 2017. Fantasyland: How America Went Haywire, A 500-Year History. New York: Penguin/Random House.
- Balter, M. 2012. "Ice age tools hint at 40,000 years of Bushman culture." Science, 337(6094), 512.
- Bigelow, A. & Rochat, P. (2006). <u>Two-month-old infants' sensitivity to social contingency in mother-infant and stangerinfant interaction</u>. Infancy, 9(3), 313-325.
- Bolin, I. 2010. "Chillihuani's culture of respect and the circle of courage." Reclaiming Children and Youth Worldwide, 18(4), 12–17.
- Bollier, D., and S. Helfrich, eds. 2015. Patterns of Commoning. Amherst, MA: Commons Strategies Group and Off the Common Books.
- Bourgeault, C. 2003. The Wisdom Way of Knowing: Reclaiming an Ancient Tradition to Awaken The Heart. San Francisco, CA: Jossey-Bass.
- Braden, A., and Narvaez, D. Forthcoming. Primal Parenting: Lasso the Parent Handlers and Embrace Your Parenting Gifts. New York: Oxford University Press.
- Brink, N. E. 2016. Trance Journeys of the Hunter-Gatherers: Ecstatic Practices to Reconnect with the Great Mother and Heal the Earth. Rochester, VT: Bear.
- Bronfenbrenner, U. 1979. The Ecology of Human Development. Cambridge, MA: Harvard University Press.
- Bronstein, J. L., ed. 2015. Mutualism. New York: Oxford University Press.
- Cajete, G. 2000. Native Science: Natural Laws of Interdependence. Santa Fe, NM: Clear Light.
- Carter, C. S., and S. W. Porges. 2013. "Neurobiology and the evolution of mammalian social behavior." In Evolution, Early Experience and Human Development: From Research to Practice and Policy, edited by D. Narvaez, J. Panksepp, A. N. Schore, and T. Gleason, 132–151. New York: Oxford University Press.
- Chomsky, N. 2017. Requiem for the American Dream: The 10 Principles of Concentration of Wealth and Power. New York: Seven Stories Press.
- Cole, P. M., M. K. Michel, and L. O. Teti. 1994. "The development of emotion regulation and dysregulation: a clinical perspective." Monographs of the Society for Research in Child Development, 59(s), 73–100.

Cooper, T. 1998. A Time Before Deception: Truth in Communication, Culture, and Ethics. Santa Fe, NM: Clear Light. Deloria, V. 2006. The World We Used To Live In. Golden, CO: Fulcrum.

Descola, P. 2013. Beyond Nature and Culture. Translated by J. Lloyd. Chicago: University of Chicago Press.

- Di Paolo, E. A., T. Buhrmann, and X. E. Barandiaran. 2017. Sensorimotor Life: An Enactive Proposal. Oxford: Oxford University Press.
- Dunbar-Ortiz, R. 2014. An Indigenous People's History of the United States. Boston: Beacon Press.

Finman, J., and A. Gila. 1997. The Primal Wound: A Transpersonal View of Trauma, Addiction and Growth. Albany: State University of New York Press.

- Four Arrows. 2016. Point of Departure. Charlotte, NC: Information Age.
- Four Arrows, and D. Narvaez. 2015. "A more authentic baseline." In Working for Social Justice Inside and Outside the Classroom: A Community of Teachers, Researchers, and Activists, edited by N. McCrary and W. Ross, 93–112. Series of Social Justice across Contexts in Education, S. J. Miller and L. D. Burns, eds. New York: Peter Lang.
- Gordon, M. 2003. "Roots of empathy: Responsive parenting, caring societies." Keio Journal of Medicine, 52(4), 236– 243.
- Gowdy, J. 1998. Limited Wants, Unlimited Means: A Reader on Hunter-Gatherer Economics and the Environment. Washington, DC: Island Press.
- Grip, G. 2016. "Prologue: The meaning of life." In Trance Journeys of the Hunter-Gatherers: Ecstatic Practices to Reconnect with the Great Mother and Heal the Earth, edited by N. E. Brink, vii–xi. Rochester, VT: Bear.
- Hall, E. T. 1966. The Hidden Dimension. New York: Random House.
- Harvey, D. 2005. A Brief History of Neoliberalism. New York: Oxford University Press.
- Hewlett, B. S., and M. E. Lamb. 2005. Hunter-Gatherer Childhoods: Evolutionary, Developmental And Cultural Perspectives. New Brunswick, NJ: Aldine.
- Hogarth, R. M. 2001. Educating Intuition. Chicago: University of Chicago Press.
- Holt, L. E. 1935. The Care and Feeding of Children: A Vatechism for the Use of Mothers and Nurses. 15th ed. New York: Applegate.
- Ingold, T. 2005. "On the social relations of the hunter-gatherer band." In The Cambridge encyclopedia of hunters and gatherers, edited by R. B. Lee and R. Daly, 399–410. New York: Cambridge University Press.
- Kimmerer, R.W. 2013. Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants. Minneapolis, MN: Milkweed Editions.
- Klaus, M. H., and J. H. Kennell. (1976)1983. Maternal-Infant Bonding: The Impact of Early Separation or Loss on Family Development. St. Louis, MO: C. V. Mosby.
- Knudsen, E. I. 2004. "Sensitive periods in the development of the brain and behavior." Journal of Cognitive Neuroscience, 16 (8), 1412–1425.
- Kochanska, G. 2002. "Committed compliance, moral self, and internalization: A mediational model." Developmental Psychology, 38, 339–351.
- Kolbert, E. 2014. The Sixth Extinction: An Unnatural History. New York: Henry Holt.
- Korten, D. 2015 Change the Story, Change the Future. Oakland, CA: Berrett-Koehler.
- Kropotkin, P. 2006. Mutual Aid: A Factor of Evolution. Charleston, SC: BiblioBazaar.
- Latour, B. 2013. Modes of Existence. Cambridge, MA: Harvard University Press.
- Lawlor, R. 1991. Voices of the First Day: Awakening in the Aboriginal Dreamtime. Rochester, VT: Inner Traditions.
- Leopold, A. 2016. A Sand County Almanac. New York: Oxford University Press.
- Lewis, T., F. Amini, and R. Lannon. 2000. A General Theory of Love. New York: Vintage.
- Liedloff, J. 1977. The Continuum Concept. Cambridge, MA: Perseus Books.
- Liu, W. F., S. Laudert, B. Perkins, E. MacMillan-York, S. Martin, and S. Graven for the NIC/Q 2005 Physical Environment Exploratory Group. 2007. "The development of potentially better practices to support the neurodevelopment of infants in the NICU." Journal of Perinatology, 27, S48–S74.
- Kruse, E., J. Chancellor, and S. Lyubomirsky. 2017. "State humility: Measurement, conceptual validation, and intrapersonal processes." Self and Identity, 1–40. doi: papers3://publication/doi/10.1080/15298868.2016.1267662.
- MacLean, N. 2017. Democracy in Chains: The Deep History of the Radical Right's Stealth Plan for America. New York: Viking.

- Macy, J. 2013. "The greening of the self." In Spiritual Ecology: The Cry of the Earth, edited by L. Vaughan-Lee, 145– 158. Point Reyes Station, CA: Golden Sufi Center.
- Martin. C. 1978. Keepers of the Game: Indian-Animal Relationships and the Fur Trade. Berkeley: University of California Press.
- Means, M. L., and J. F. Voss. 1985. "Star Wars: A developmental study of expert and novice knowledge structures." Journal of Memory and Language, 24(6), 746–757.
- Merchant, C. (1980) 1990. The Death of Nature: Women, Ecology, and the Scientific Revolution. New York: HarperOne.
- Merchant, C. 2003. Reinventing Eden: The Fate of Nature in Western Culture. New York: Routledge.
- Michaels, F. S. 2011. Monoculture: How One Story Is Changing Everything. Canada: Red Clover Press.
- Moore, J. 2015. Capitalism in the Web of Life: Ecology and the Accumulation of Capital. London: Versa.
- Narvaez, D. 2008. "Triune ethics: The neurobiological roots of our multiple moralities." New Ideas in Psychology, 26, 95–119.
- Narvaez, D. 2013. "The 99 Percent—Development and socialization within an evolutionary context: Growing up to become 'A good and useful human being." In War, Peace and Human Nature: The Convergence of Evolutionary and Cultural Views, edited by D. Fry, 643–672. New York: Oxford University Press.
- Narvaez, D. 2014. Neurobiology and the Development of Human Morality: Evolution, Culture and Wisdom. New York: W.W. Norton.
- Narvaez, D. 2015. "The co-construction of virtue: Epigenetics, neurobiology and development." In Cultivating Virtue, edited by N. E. Snow, 251–277. New York: Oxford University Press.
- Narvaez, D. 2016. Embodied Morality: Protectionism, Engagement and Imagination. New York: Palgrave-Macmillan.
- Narvaez, D. 2019. "Moral development and moral values: Evolutionary and neurobiological influences." In Handbook of Personality, edited by D. McAdams. New York: Guilford.
- Narvaez, D., and T. Bock. 2014. "Developing ethical expertise and moral personalities." In Handbook of Moral and Character Education (2nd ed.), edited by L. Nucci and D. Narvaez, 140–158. New York, NY: Routledge.
- Narvaez, D., T. Gleason, L. Wang, J. Brooks, J. Lefever, A. Cheng, and Centers for the Prevention of Child Neglect. 2013. "The Evolved development niche: Longitudinal effects of caregiving practices on early childhood psychosocial development." Early Childhood Research Quarterly, 28 (4), 759–773. doi: 10.1016/j.ecresq.2013.07.003.
- Narvaez, D., A. Kurth, and R. Noble. 2018. Basic Needs, Wellbeing and Morality: Fulfilling Human Potential. New York: Palgrave-MacMillan.
- Narvaez, D., J. Panksepp, A. Schore, and T. Gleason, eds. 2013. Evolution, Early Experience and Human Development: From Research to Practice and Policy. New York, NY: Oxford University Press.
- Narvaez, D., A. Thiel, A. Kurth, and K. Renfus. 2016. "Past moral action and ethical orientation." In Embodied Morality: Protectionism, Engagement and Imagination, edited by D. Narvaez, 99–118. New York: Palgrave-Macmillan.
- Narvaez, D., L. Wang, and A. Cheng. 2016. "Evolved developmental niche history: Relation to adult psychopathology and morality." Applied Developmental Science, 20(4), 294–309. http://dx.doi.org/10.1080/10888691.2015.1128835.
- Narvaez, D., L. Wang, T. Gleason, A. Cheng, J. Lefever, and L. Deng. 2013. "The evolved developmental niche and sociomoral outcomes in Chinese three-year-olds." European Journal of Developmental Psychology, 10, 2, 106–127.
- Nussbaum, M. C. 2009. Creating Capabilities: The Human Development Approach. Cambridge, MA: Belknap.
- Orr, D. 1991. "What is education for? Six myths about the foundations of modern education, and six new principles to replace them." In Context: A Quarterly of Humane Sustainable Culture, Winter, 52. https://www.eeob.iastate.edu/classes/EEOB-590A/marshcourse/V.5/V.5a%20What%20Is%20Education%20For.htm

- Panksepp, J. 1998. Affective Neuroscience: The Foundations of Human and Animal Emotions. New York: Oxford University Press.
- Paracer, S., and V. Ahmadjian. 2000. Symbiosis. 2nd ed. New York: Oxford University Press.
- Perkins, J. 2016. The New Confessions of an Economic Hitman. 2nd ed. San Francisco, CA: Berrett-Koehler.
- Pinker, S. 2018. Enlightenment Now: The Case for Reason, Science, Humanism, and Progress. New York: Viking.

Plumwood, V. 2002. Environmental Culture: The Ecological Crisis of Reason. London: Routledge.

- Redfield, R. 1953. The Primitive World and Its Transformations. Ithaca, NY: Cornell University Press.
- Redfield, R. 1956. Peasant Society and Culture: An Anthropological Approach to Civilization. Chicago: University of Chicago Press.
- Sale, K. 2006. After Eden: The Evolution of Human Domination. Durham, NC: Duke University Press.
- Schore, A. N. 2003a. Affect Dysregulation and Disorders of the Self. New York: Norton.
- Schore, A. N. 2003b. Affect Regulation and the Repair of the Self. New York: Norton.
- Schore, A. N. 2013. "Bowlby's 'Environment of evolutionary adaptedness': Recent studies on the interpersonal neurobiology of attachment and emotional development." In Evolution, Early Experience and Human Development: From Research to Practice and Policy, edited by D. Narvaez, J. Panksepp, A. Schore, and T. Gleason, 31–67. New York: Oxford University Press.
- Scott, J. C. 2017. Against the Grain: A Deep History of the Earliest States. New Haven, CT: Yale University Press.
- Spezio, M., G. Peterson, and R. C. Roberts. 2019. "Humility as openness to others: Interactive humility in the context of l'Arche." Journal of Moral Education, 48:1, 27-46, DOI: <u>10.1080/03057240.2018.1444982</u>

- 2 "Nature" here refers to how natural systems operate within themselves and with other systems—in concert and with a delicate balance of energy flow and exchange.
- 3 L'Arche communities are formed by those with and without intellectual disabilities who live together in faith and friendship.

4 Proxemics refers to distance people expect in social relations of various kinds; kinesics entail the body gestures that form part of nonverbal communication; prosody refers to the patterns of sound, such as tenor and tone, in vocal communication (see Hall, 1966).

5 Note that although there are similarities to what is deemed "attachment parenting," the evolved nest is broader and community-based child raising that also meets everyone's basic needs.

6 Though see this source for what to do in adulthood to self-heal when early life did not provide for basic needs.

7 Though there may be ways an individual to self-develop humility top-down later.

⁸ Can parents be humble to advice but unhumble to their child's needs? Cultures corrupted by arrogance—human superiority to and separation from nature—show unhumbleness toward natural systems generally. The lack of humility is so pervasive in the system that it seeps into parenting as well. If the cultural worldview assumes humans should control nature rather than learn it and respect its ways, this will include babies, who appear, to ignorant adults, to be ungovernable without coercion. Without personal knowledge or knowhow about how to properly meet the needs of a baby, parents turn for advice to the system's "experts," who may or may not know what they are talking about. Humbling oneself to experts is a way the culture lets parents off the hook for truly knowing and reverencing their child. Thus, parents are driven by ignorance and fear of failure into the hands of unhumble practices. In short, lack of cultural humility, along with ignorance, supports a lack of humility in parenting.

9 Limbic resonance entails social interactional synchrony of sound, movement, and physiological patterns.

10 Resonance refers to the coordination of brain systems (limbic) and body enactment (communicative musicality). Babies coordinate with their caregivers, whether healthy or depressed, leading to established personality patterns. Stern, D. N. 1985. The Interpersonal World of the Infant. New York: Basic Books.

Tomkins, S. 1965. Affect and the psychology of knowledge. In Affect, Cognition, and Personality, edited by S.S. Tomkins & C.E. Izard. New York: Springer.

Trevathan, W. R. 2011. Human Birth: An Evolutionary Perspective. 2nd ed. New York: Aldine de Gruyter.

Turner, F. 1994. Beyond Geography: The Western Spirit against the Wilderness. New Brunswick, NJ: Rutgers University Press.

Varela, F. 1999. Ethical Know-How: Action, Wisdom, and Cognition. Stanford, CA: Stanford University Press.

Varney, T. R., and P. Weintraub. 2002. Pre-Parenting: Nurturing Your Child from Conception. New York: Simon and Schuster.

Watson, J. B. 1928. Psychological Care of Infant and Child. New York: W. W. Norton.

WindEagle and RainbowHawk. 2003. Heart Seeds: A Message from the Ancestors. Edina, MN: Beaver's Pond Press. Winnicott, D. W. 1957. Mother and Child. A Primer of First Relationships. New York: Basic Books.

- Wohlleben, P. 2016. The Hidden Life of Trees: What They Feel, How They Communicate. Translated by J. Billinghurst. Vancouver: Greystone Books.
- Worster, D. 1994. Nature's Economy: A History of Ecological Ideas. 2nd ed.. Cambridge: Cambridge University Press.

Notes

For example, see Bigelow, A. & Rochat, P. (2006). Two-month-old infants' sensitivity to social contingency in motherinfant and stanger-infant interaction. Infancy, 9(3), 313-325.

11 Nussbaum identifies 10 central capabilities: life; bodily health; bodily integrity; senses, imaginations, and thought; emotions; practical reason; affiliation; other species; play; control over one's environment in political and material ways.

12 Though some native American teachings lost their guiding power after the European invasion, widespread disease, and the appearance of invincibility of the invaders (Martin, 1978), and the centuries of genocide against native Americans took its toll on the resilience of community traditions (Dunbar-Ortiz, 2014).

13 Lest the reader think that the indigenous worldview is naive and romantic, scientific studies are increasingly supporting it. For example, mutualism and symbiosis govern ecological systems (Bronstein, 2015; Paracer and Ahmadjian, 2000); forests are communities of elders helping youngsters of other species (Wohlleben, 2016); and even the human body relies on a host of microorganisms (whose genes represent 90–99% of genes a person carries).

14 Before the Enlightenment, nature was understood as a benevolent, sometimes wild, mother of all things. With the Enlightenment, seemingly starting with Francis Bacon (who proposed making nature a slave to human interests to regain the dominion over nature that was lost in humanity's Fall in the Garden of Eden), a domination model became increasingly predominant, rationalizing the control and dissection of nature as a resource (Merchant, [1980] 1990).

15 See Merchant, 2003; Worster, 1994; Pinker, 2018.

16 As a gross measure of economic growth, it fails to take into account inequality within the populace. A number of replacement measures have been proposed, but they threaten the status quo and those who hold the reins of power, the oligarchs (see MacLean, 2017).

17 As an example, the Diné (aka, Navajo) do not have a word for any unit smaller than the extended family. Thanks to the editor for pointing this out.

18 Although it is preferable to build one's capacities from the bottom-up as a natural part of development, one can self-heal to at least some degree using top-down methods in adulthood, as Western wisdom traditions assumed was necessary (Bourgeault, 2003; Narvaez, 2014).

¹ The source of these ideas emerged from my reading of long-lasting sustainable societies from humanity's 99% small-band hunter-gatherer societies (e.g., Bushmen), which greatly contrast with the settled societies that emerged in the last 10,000 years or so (e.g., Narvaez, 2013).