The Neurobiological Bases of Human Moralities: Industrialized Civilization's Misguided Moral Development

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How does conscience develop? Does moral virtue emerge from lived experience or does it require explicit teaching, even coercion? The idea of the superego-as-conscience typically assumes an otherwise ungovernable id. But ideas of the superego and id appear to emerge from civilization, a place where humans grow outside their typical nest and away from their species-typical nature. This chapter examines two approaches to conscience development. Converging science suggests that industrialized nations have got things the wrong way round and created the problems they deplore. In my view, the enlarged ego and domineering superego apparent in industrialized nations come about from under- or mis-care in early life, which civilization does especially well. Under-care occurs when communities, families, and mothers forget or are pressed to deny the evolved needs of the child and fail to provide the developmental system or nest children need to grow as human beings. This results in toxic stress for the child, leading to the need for extra defences to survive a cruel social environment that undermines species-typical psychosocial-neurobiological development.

In contrast with pre-civilized societies, it is often assumed in industrialised societies that punishment and coercion are needed to instil conscience and shape children into good members of the society (those with hierarchies, inequality, and anticipated rewards in the future). Civilized peoples often fear that humans will act like animals (id dominance) if not coerced and punished (to develop the superego). The fear of animality bears the markings of a misunderstanding of the nature of human nature and how it develops. This fear is no doubt rooted in the many dysregulated humans that civilized nations foster by misguided child raising, perpetuating a cycle of misdevelopment and subsequent harsh reaction. Western civilization has a long history of fearing Nature (Plumwood, 2002) and of mistreating children (de Mause, 1995) that contrasts with pre-industrialized societies who partner with nature (Martin, 1999) and "indulge" young children (Hewlett & Lamb, 2005), creating cooperative and self-controlled individuals (and in first nation societies, losing one's animal nature is considered dangerous). As we will describe, neuroscientific studies show us how neurobiological and moral development are related.

What do children need to develop properly as members of the human species? Parents in industrialized nations are often very confused by this question, until they find an expert to guide them—e.g., government official, religious adviser or parenting entrepreneur. Unfortunately, many of these authorities display confusion and ignorance themselves. For example, John Watson, former president of the American Psychological Association, wrote a parenting book, *Psychological Care of the Infant and Child* (1928) where he suggested that babies be treated like young adults—with little affection or attention—so they get used to such treatment from the start. Religious authorities from Augustine onward have argued that children need to be punished, their wills broken, in order for them to be obedient. Alice Miller (1983/1990) reviewed child raising manuals from recent centuries, including those of Nazi Germany, finding that similar advice was given for creating obedient children—punish them extensively before age three, because they won't remember but will be completely controllable later through threats. Expectations for child, then adult, compliance support coercive treatment of children, which may be useful for supporting hierarchical, industrial structures that demand docility and submission to the machines of civilization. Such expectations are accompanied by ignorance about how to optimize human potential and result from the demands of industrialised social organisation which undermine social processes of more naturally self-

organised communities. It turns out that civilization represents only 1% of human genus history. Human nature and morality in the 99% of human history, pre-civilization, is a different story. All over the world, as documented by scholars, those living like our 99% behave quite differently from those in civilized nations. One might think that the id runs wild. Certainly, for a prudish viewer, sexual freedom might seem like the rampant id at work. But societies of the 99% show great cooperation, self-control and minimal aggression, not the aggressive selfishness assumed to characterise the id. In fact, there is little evidence of the many psychopathologies apparent in civilized nations, perhaps because there is little cause for them, not just because of sexual freedom but because of the nurturing care provided in critical periods—the nurturing humans evolved to need. Humanity's 99% represents the time period of species-typical child raising and social living. The divided self (id, ego, superego) is less apparent in these societies, and yet there is high cooperation and minimal conflict—without coercion. Instead, it appears that the obedience-demanding superego and the wild id are a result of species atypical childhoods. But that is getting ahead of the story.

Species-Typical Childhoods

Human beings are biosocial becomings (Ingold, 2013). Most importantly, humans are biosocial *constructions*. This means our biology is shaped by social experience, especially in early life when the brain is highly immature and growing rapidly, dependent on experience for the setting of parameters and thresholds for multiple systems. It also means that our sociality is highly influenced by our biology—i.e., how well our neurobiological systems function influences how well we get along with others. In fact, humans are much more epigenetically shaped after birth than our primate cousins (Gomez-Robles, Hopkins, Schapiro & Sherwood, 2015). The nature of self and personality begins in early life with the layered biological systems that are shaped by early experience through epigenetic and plasticity effects (e.g., number and functionality of neurotransmitters, thresholds and parameters for such things as the stress response and vagal tone). These systems are co-constructed by the dynamic interactionism between maturational schedule and life experience. The dynamism of development, with the child's brain systems developing rapidly (thousands of synapses a minute), means that experience is shaping the layers of foundational capacities for personality and intelligence. (For reviews, see Lanius, Vermetten & Pain, 2010; Narvaez, Braungart-Rieker, Miller, Gettler & Hastings, 2016; Narvaez, Panksepp, Schore & Gleason, 2013; Narvaez, Valentino, McKenna, Fuentes & Gray, 2014). Humans have a set of evolved basic needs that when met optimize their development in a species-typical direction.

How do we know what needs to be provided to a helpless infant? Every animal has a nest for its young that optimizes normal development. Humans also have a nest. Humans evolved with a developmental system that matches up with the maturational schedule of the child. Humanity's nest is particularly intense because of the young child's immaturity and it lasts a good while because of the time it takes a human to reach adulthood (the longest of any animal—till age 20 for physical growth and nearly age 30 for brain development). A species-*typical* "nest" for humans is rooted in ancient social mammalian parenting practices that match up with the maturational schedule of the child. The evolved developmental nest or niche includes extensive, on-request breastfeeding; extensive affectionate touch; responsiveness to needs to avoid distress in babyhood (before age 3) and synchronized social experience; free play in nature with multiply-aged mates; soothing birth experiences; multiple responsive adult caregivers; positive social support for mother and child. All these components are related to neurobiological development and a body/brain system that works optimally (Narvaez, Panksepp et al., 2013). They also bear on the development of the self and morality.

Observers have noted that small-band hunter-gatherers (SBHG; the type of society that represents 99% of human genus history) provide the species-typical nest and at the same time display calm,

generous, cooperative, open, compassionate personalities in adulthood. We can see that the evolved nest provides the type of care that fosters the self-regulation, empathy and social fittedness that underlie these personality dispositions. Through lived experience, those in SBHG societies develop a self fitted for social and moral life.

Development of the self

The self is formed first in experiences with caregivers, through somatosensory experience internal and external to the body. The evolved nest provides full sensory experience for a baby as physical contact is nearly constant and involves smelling, tasting, hearing, sharing touch and communications with mother. Then gradually, sensitively, the "good-enough" mother introduces the infant to others "in small doses… because of the devotion she feels for her own baby" (Winnicott, 1957:58). The caregiver must be present in her own body to "hold" the baby well. Skin-to-skin contact with an emotionally and psychically present caregiver promotes optimal development (e.g., stress response systems). The infant is kept content and in the middle of community activities, with every need met (caregivers grant 'infant omnipotence,' Winnicott, 1957). Enjoyment of being with the child and meeting the child's needs gladly convey the love and attention a baby needs to proceed on a pathway towards flourishing. Of course, with maturation, the child will need to learn to deal with unexpected stress, but any extensive distress should be avoided until basic systems are established after early childhood.

The child's early experiences bring about capacities for non-verbal social communication, including intersubjectivity and synchronicity. The interpersonal dynamics of synchronizing motives, intentional states and behaviours with another—the forming of a duet of "being with" the other person by participating in the dynamic flow – can be described as a *communicative musicality* (Trevarthen, 1999) or "vitality contours" (Stern, 2010) learned in early life. Stern describes the many months of learning non-verbal communication (before language interferes) which includes mutual eye gaze practices (how, how long, with whom), how to read postures, how to solicit others for needs like food or play, "rules" of games, turn taking, greetings, joking, expressing affection, making friends and much more. Through these close care experiences babies experience and practice empathy, perspective taking and resonance. Jessica Benjamin (1988) notes that intersubjectivity is the way children learn mutual recognition: "To affirm, validate, acknowledge, know, accept, understand, empathize, take in, tolerate, appreciate, see, identify with, find familiar…love…What I call *mutual recognition* includes a number of experiences commonly described in the research on mother-infant interaction: emotional attunement, mutual influence, affective mutuality, sharing state of mind" (1988 :15-16). For Loewald (1979; quoted in Shaw:387), caregivers hold and mediate for the child a hopeful vision of the child's potential, "a vision based in the empathic, loving, and respectful recognition of the child's emerging identity," evoking, nourishing and protecting the child through the sacred bonds of parent and child.

In care-giving that provides the evolved nest, the child develops holistically, with an embodied unity of thinking and feeling (heart-mind), guided by mother and allo-mothers. The proto-self is largely unconscious and emerges from birth, when infants are ready for communication with others, even showing playful deception in the early months of life (Reddy, 2008). The proto-self manifests creativity and imagination in social relations. In the first five months of life, face-to-face affective communication and shared signalling play a primary role in the development and exercise of emotion (Beebe, Lachmann, & Jaffe, 1997; Tronick, 1989). Life is social and it is pleasurable. "Keeping faith in a developing child's potential to grow; encouraging he potential to develop meaningful ways of expressing her subjectivity; supporting the expansion of meaning and pleasure in intersubjective relatedness; and steadfastly committing to honouring the developing child's need for safety, especially from exploitation—these are the conditions that we know support healthy growth and development" (Shaw, 2014:144). However, it is not enough to only receive care: the

child's gift of love must also be received in return. "Frustration of his desire to be loved as a person and to have his love accepted is the greatest trauma that a child can experience" (Fairbairn, 1952:39). Reciprocal relations of intersubjective sharing and social gifting is fundamental to building a confident and trusting core self.

As noted, small-band hunter-gatherers (the type of society that represents 99% of human genus history) provide the species-typical nest (see Narvaez, 2013, for reviews). These societies would be places where no transitional object is expected or required as the mother or others are always present and available. Co-sleeping occurs for all community members. Adults display calm, generous, cooperative, open, compassionate personalities in adulthood. This is not surprising if one understands the interrelation of the nest to neurobiological development and the growth of personality. When babies and young children receive what they need, their goodness or virtue develops naturally, from the ground up (Narvaez, 2015, 2016). Their many biological systems are well self-regulated and coordinated, tuned up to normal-optimal development. Moral capacities build on basic physiological functioning (e.g., stress response) which shapes the moral personality signature a person carries into adulthood. Moral capacities are built on social experience. The experiences of recognition, resonance and respect develop a propensity for relational attunement (what I call the Engagement Ethic; Narvaez, 2014). Relational attunement gives space to the other and to the self to make joint decisions, to be spontaneous with one another. The evolved nest nourishes the roots of empathy and the self-efficacy to express it (empathic effectivity roots). Relational attunement and empathic effectivity roots might be called moral subcomponents (Kupperman, 2005), specifically, of an engagement ethic, a moral orientation guiding behaviour later in life. Both are fostered in the evolved nest.

Superego as practical wisdom

Early dynamic experiences undergird our expectations and sensibilities for social life. "Dynamic forms of vitality are part of episodic memories and give life to the narratives we create about our lives" (Stern, 2010:11). Episodic memories are rooted in our neurobiologically-grounded "narratives" or schemas for the self: "I am good and competent and the world is to be trusted" vs. "My urges are bad and the world is to be distrusted" (Narvaez, 2011). These then shape the superego that guides life. Let's examine these ideas more closely.

Early experience (and subsequent significant experience) shapes social and moral affordances (what we perceive as action possibilities) and the rationales we provide for our actions. That is, our neurobiological narrative (how our body reacts to events) and social capacities that are built initially in early life lead to personal life narratives of justification, which are flavoured by our culture. Early life sets up the narratives—neurobiological and personal—that guide actions, dispositional patterns of Being (person by situation consistency). The companionship care of the evolved nest fosters open heart-mindedness—it is nurtured by an empathic lifestyle and expected of the child as she[1] matures. Under natural conditions the newborn begins life with a feeling of being real and alive and a "*sense* of being an entity" (Laing, 1959/1990:41). When a young child's evolved needs are met through companionship care, including experiences of ongoing intersubjectivity with familiar, loving others, cooperation with self and others becomes an intuitive baseline for life (Narvaez, 2014; Trevarthen, 2005). A healthy person has "a sense of his presence in the world as a real, alive, whole," allowing the child to experience others "as equally real, alive, whole, and continuous" so that when this "basically *ontologically* secure person" encounters "the hazards of life, social, ethical, spiritual, biological," she does so with a "centrally firm sense of his own and other people's reality and identity" (Laing, 1959/1990:39). Indeed, longitudinal studies show that a "mutually-responsive orientation" with the caregiver leads to the child's development of empathy, conscience,

[1] The feminine gender pronoun will be used throughout instead of masculine or gender-neutral forms.

and cooperation—the development of a prosocial moral self (e.g., Kochanska, 2002; Kochanska, Aksan & Koenig, 1995). A person raised in a nest-providing, supportive community that provides extensive mentoring for living well in the landscape will have good self-regulation and centre life actions on co-coordinated relations with others (Narvaez, 2013).

Researchers find little sense of ego in small-band hunter-gatherer societies. Aggressive behaviour might emerge during the autonomy surges in toddlerhood or adolescence, but is redirected in a prosocial manner. Skilled companionship care by members of the community provides the appropriate levels of stimulation to maintain adaptive levels of arousal, as in responsive mother-child dyads (Schore, 1991). In this way, species-typical developmental systems foster individuals who largely stay "on course" as human beings with minor corrections from the community along the way. The slight corrections of teasing rather than coercion keep the individual from becoming arrogant. In this way, barring occasional failings, the mature individual behaves in a mostly virtuous manner—inner neurobiological impulses are coordinated with intuitions which are coordinated with explicit understandings. In a species-typical environment the superego is embodied practical wisdom, sets of associative learnings guided by the mentoring one has received, undergirded by well-functioning self-regulatory neurobiological structures. Practical wisdom allows for living well within the world one perceives with the capacities one has.

Next, we contrast species-typical with species-atypical experience. When the developmental niche or evolved nest is degraded, the species-typical development of the self and of moral virtue is thrown off kilter.

Species-Atypical Childhoods

What happens when babies do not receive species-typical nurturing? Unfortunately, this is a common occurrence in civilized nations today, where parents often go back to work shortly after birth and send the baby to a child-care centre, or practice "baby independence" techniques like isolated sleeping and sleep training. At least two things happen physiologically. First, babies experience toxic stress when they are not given what they evolved to need. Not developing within the evolved developmental system leads to physiological distress that for example, increases cortisol levels that melt synapses and creates lifelong stress reactivity (Lupien, McEwan, Gunnar & Heim, 2009; Thomas, Hotsenpiller, & Peterson, 2007), even bringing about depressive reactions that alter gene expression (Kang et al., 2012). And prevents the self-regulatory systems and networks for prosocial orientations (Schore, 2001, 2003a, 2003b), from growing because the energies toward survival are misdirected under toxic stress. In other words, babies do not receive the appropriate stimulation to grow what is neurobiologically scheduled to grow at that time, much of which is governed by the developing right brain hemisphere that advances more rapidly in the early months and years of life. Human brains are "plastic," but not that plastic: children can be left with gaps in various systems undergirding emotional intelligence, physical health, mental health, social and moral capacities, which may not show up immediately but will emerge after further maturation dependent on the earlier, missing, foundations. In a way, development becomes pseudo-development where the mother not only fails to provide a "protective shield" for ego development (Kahn, 1964), the mother is misshaping the child's fundamental biological structures. Some gaps are difficult if not impossible to repair later. When needs are thwarted, neurobiological systems will be under- or mis-developed, from vagus nerve, to immune system and stress response. Dysregulation can easily be stimulated by the unfamiliar, as the neurobiological underpinnings of flexible allostasis are impaired, leading to cacostatic response (too much—aggression, or too little—withdrawal) and to long periods of imbalance.

The second general physiological outcome is that foundations for the child's psychology are poorly structured. Inadequate early experience undermines the psychosocial development that is species

typical for human beings. If the child is left to "cry-it-out" (ignored when distressed and needy), for example, then the child learns that both her body and the world are untrustworthy. She learns to withdraw from living life very fully. She learns procedurally not to rely on such a worrisome world. Anxiety is built into her physiology and becomes part of her personhood. Without companionship care, the infant's trajectory is shifted away from developing full social capacities (Trevarthen, 2005). Unless intensive experience occurs during another sensitive period, the child may remain socially "naive" or awkward, lacking full capabilities for the social 'dancing' of his culture. These misdevelopments deeply influence self formation.

Psychological impacts are long-lasting. Attachment theory describes the types of attachment a baby builds with the caregiver based on the capacities of the caregiver for responsiveness and social relations (Schore, 2013). When the caregiver is warmly and contingently responsive to the child's needs, the child builds a secure attachment, which represents the development of neurobiological flexibility for social contexts. Both avoidant and anxious attachment styles emerge from experience with an inconsistently responsive caregiver, establishing poor neurobiological structures which are vital for social relations and prevent flexible, egalitarian relational attunement with others in the present moment. Undercare in early life misdirects development into dysregulation, self-centeredness, and social awkwardness, accompanied by aggression and/or depression (Sroufe, Egeland, Carlson & Collins, 2005).

Some caregivers are incapable of mutual, intersubjective recognition and thereby thwart the development of the many-layered micro skills of relational attunement scheduled to develop in the first year (Stern, 2010). "Rejection of the child's 'gifts', like any failure to make adequate response, leads to a sense of badness, unlovableness in the self, with melancholia as its culminating expression" (Fairbairn, 1952: 50). Without recognition as a separate subject, the child will feel negated and move into premature cortical processing, cooperating with the undermining of social and emotional intelligence. Winnicott identified the false self that can occur with a highly intelligent child. Instead of providing for the child's needs immediately, she is able to delay their provision because the child learns to dissociate from bodily and psychological needs. The mother colludes with the child's capacity to think apart from the body. This act of stepping out of the soma, splits the psyche from the soma to build a false self, an intellectualizer. It might lead to higher achievement later, but at what cost? Intellectualizers are deeply anxious and compensate with achievements in the external world—not always positive ones. The early protoself is highly insecure. The core self has little confidence or trust. Energy goes into a false self with the life of a mechanized self operating in a perceived mechanized world.

Without intervention, a basic sense of unlovableness follows the individual throughout the life course (Balint, 1968). Illusions become an integral part of the self and the self hardens around self-preservation in order to avoid the pain of retraumatization (Narvaez, 2014, 2016). Self protectionism is apparent in internalizing and externalizing modes which are based on a faulty sense of self. The first is apparent in the persecutor voice that is internalized, which Daniel Shaw mimics in reaction to a narcissist caregiver: 'No. Do not believe in yourself, do not hope, do not dare. You will only be hurt again.' As the voice becomes more fearful of retraumatization, it becomes more laden with rejection and hostility, dissociatively identified with and mimicking the traumatizing narcissist caregiver: 'You nothing, you loser' No one could or would ever love you, you're disgusting! Give up!'" (Shaw, 2014, :8). When this mindset trumps other values, it becomes an ethic, an ethic of compliance—abandonment of self and submission to the other (Narvaez, 2014).

The second form of self-preservation is apparent in externalizing, a domination orientation in which the individual aims for and fears the loss of superior power and must insist on the priority of their own subjectivity: "giving and taking is now based not on good will and gratitude, but on strategic calculations aimed at maintaining dominance, and, at the deepest level, aimed at being destroyed by

the other—being the destroyer, not the destroyed" (Shaw, 2014, p. 6). This mindset can become a combative ethic—forceful control of others. In both types of early self-protectionism—compliant or combative—intersubjectivity never gets off the ground, collapsing from the failure of mutual recognition as a starting point, and thwarting the otherwise subsequent building of social skills and schemas for living that would follow from experiences of recognition and resonance with others.

Externalizing can also take more intellectual forms, such as dissociated contempt for the needs and vulnerability of self and others, and a reliance on intellect (detached imagination) or an obsessive-fueled activism (vicious imagination) (Narvaez, 2014, 2016). Shaw (2014) describes these more intellectual ethics: The person maintains a "manic grandiosity and contempt for others, with a sense of entitlement and self-justification rather than succumbing to a sense of helplessness and despairing of being able to feel recognized, instead develops as an adult into someone who arranges to wield the power to bestow, or not bestow, recognition upon others. (Shaw, 2014: 8). This defensive mode maintains a sense of superiority by attending to the inferiority in others.

The morality of a misdeveloped self resides in self-protectionism-- forms of self-preservation that are compulsively externalizing, internalizing or dissociative. Objectively speaking, these orientations typically are not considered ethical because they are self-focused. Yet, subjectively speaking, the individual justifies them as ethical (J. Gilligan, 1997). Nevertheless, over the course of the 20th century (when the evolved nest deteriorated extensively and social stress skyrocketed), philosophers and others developed rationales for egoism (Shaver, 2015; Weiss, 2012).

Superego as scripted persecutor

When emotion systems and intuitions for the social life have been impaired by undercare (lack of the evolved nest), there is limited self-regulation, a tendency towards impulsivity, where hedonistic or self-oriented "passions" take over, or else emotions are severely curtailed and the individual prefers a scripted life. In any case, the insecure self harbours a sense of abandonment and badness, which subconsciously flavours interpretation of life experience and propels behaviours to avoid those feelings, demonstrated in neurobiological and social inflexibility ("stiffness" of the mind or "heart"; Goldberg, 1999). A bracing self results from lack of supportive care (e.g., lack of intersubjectivity, patterns of being left alone in distress, physical isolation) or from later trauma. A bracing, vigilant orientation to social life predominates, though it may be displayed subtly as a lack of openness to unfamiliar ideas or people: self vs. other, human vs. nature, us vs. them—such dualisms emerge from the move to self-protection and a brittle superego develops to go with it.

A brittle superego requires scripts to get along and cannot adequately respond to newness. It is guided by efforts to avoid overwhelming panic. The individual braces the self against the world. The ontologically insecure person is preoccupied with ensuring his survival but it becomes survival as a robopath (Yablonsky, 1972). Already feeling unreal, the insecure person "may feel more unreal than real; in a literal sense, more dead than alive; precariously differentiated from the rest of the world, so that his identity and autonomy are always in question.…He may not possess an over-riding sense of personal consistency or cohesiveness. He may feel more insubstantial than substantial, and unable to assume that the stuff he is made of is genuine, good, valuable. And he may feel his self as partially divorced from his body….the ordinary circumstances of living threaten his *low threshold* of security" (Laing 1959/1990: 42). At least machines are predictable. Scripts work with machines. What a relief. "If the individual cannot take the realness, aliveness, autonomy, and identity of himself and others for granted, then he has to become absorbed in contriving ways of trying to be real, of keeping himself or others alive, of preserving his identity…to prevent himself losing his self" (Laing,1959/1990: 42-43). A mechanized, industrialized world of machines seems much safer to one so damaged.

In my view, psychoanalysis has documented the many ways that the biosocial co-construction of a self can go wrong, based on how and when the miscare occurred. The child whose continuum of relational connection is broken necessarily splits the self for self-protection (which becomes a lifelong compulsion). Though variably formed, the split self is a bracing self. A split self makes virtue untenable and inflates a domineering superego. The domineering superego begins its work in the pre-verbal years when foundations for world-view are established. It comes about from the non-verbal mistreatment of caregivers, later embellished by verbal commands and the emotional and physical distress felt from social communications from adults. The social self is impaired and the individual compensates with a false or pretend self—one that, in terms of morality, follows rules when watched but doesn't feel them "all the way down" ("know how"). Instead, the child is forced to learn an obedience morality, a set of memorizable rules for social life ("knowing that"). Worse, the individual constantly needs external rules or a script to follow because the sense of broken internal reality does not provide reliable guidance. Intellect is separated from and dyscoordinated with dysregulated emotions and neurobiology. Morality has no regulated sense of self on which to ground itself. As a result, rules to follow are required to keep the dysregulated individual in line. Generally, rules are for novices in a domain (Dreyfus & Dreyfus, 1990); the individual with a truncated self remains a social novice throughout life (barring intervention). Rules are needed when intuitive virtue is lacking (or, in the case of a generally well-developed individual, when distress leads to temporary self-protectionism). Individuals with minimal self-regulating capacities require constant effortful control to keep themselves in line to follow rules; not surprisingly, when energy runs out they misbehave, a common occurrence in those from toxically-stressful homes (Niehoff, 1999).

We have described what happens when undercare predominates. The early miscare breaks the continuum of relationship, leaving gaps between personal desires and social life, trust of self, trust of others and being in the world. These gaps propel one into a false self, divorced from emotional presence, from being embodied. The dysregulated body is uncomfortable to occupy, since its functions were not established properly with good care. The body-soma split is part of civilization's undermining of child development and the nurturing that humans require for normal-optimal development. As a result, species-atypical development systems set up lifelong and society-wide problems that must be dealt with through coercion because many individuals have selves that are fragmented, robopathic (Yablonsky, 1976) or empty (Cushman, 1995).

Conclusion

Early experience sets up the moral universe a child will carry with her throughout life, barring later transformation. Species-typical early experience brings about a different moral universe than the species-atypical upbringing. Most children in the last centuries have experienced a species-atypical nest. The shifted baselines for childrearing, away from the evolved nest contributes to a shift in understanding what is considered to be normal human behaviour and human nature. Superego function has shifted from one of practical wisdom to that of domineering persecutor. Instead of developing with and supporting wise behaviour of an open-hearted relational self, the persecuting superego develops with, and encourages, a self that is braced and self-protective against the world. Behaviours that emerge from a "protectionist" orientation are win-lose, all or nothing, or zero tolerance, making it difficult to cooperate across perceived divisions (which are everywhere when you are socio-emotionally impaired).

What happens in a society characterized by misdeveloped selves? They continue to misdevelop the next generations through under-care and abuse because the adult caregivers are themselves splintered, robopathic or empty. Denial of needs and punishment continue these patterns and make explicit rules increasingly necessary for governance, as trust, self-control, and social know-how decrease. Sociopathy becomes widespread and integrated into institutional structures and pathways

to success, as has apparently occurred in the USA (Derber, 2013). Everyone forgets how to raise a human being to be virtuous from the ground up. They forget what virtue development requires of adults and communities. Adults instead get caught up in relative trivialities—rules for this or that to show loyalty. They lose a connection to the Whole.

The story of civilized superegos contrasts with precivilized societies in multiple ways. Our human heritage is one of cooperation and social engagement, which emerge from providing the evolved nest, the species typical way to raise a child. In SBHG, the self is primarily communal not individual. The self is a river of shifting between non-reflective self activities and communal levels of being—which include the biocommunity (animals, plants and other earth entities), guided by mostly implicit practical wisdom. Moral virtue notably emerges without coercion in an affectionate community. Moreover, if a person in the SBHG communities moves toward id or ego, the community is there to bring them back to a communally-centered self.

Strikingly, a vital part of our species-typical humanity is earth-centered, as well, formed in and with a relational embeddedness in the earth community. Other-than-human entities (animals, plants, rivers, mountains) are sensed to be part of one's community. With this in mind, we can reenvision the communal superego's role. In a species-typical environment, caring and responsibility would extend to the biocommunity. Practical wisdom would be sustainable and aimed at biocommunity flourishing. In the atypical environments that civilization presents, a communal superego is typically lacking, typically, even under the best conditions, keeping a focus of moral concern and responsibility only on human welfare and treating the rest of nature as objects or resources for human well-being. There is little sense of safety in living with Nature, but instead a fear of one's humanity (considered animality) and Nature generally. Thus, un-nestedness (growing up with a degraded nest) fosters also the lack of rootedness in a particular locale on the planet, which can lead easily to the type of ecologically-destructive behaviour we see widespread in civilized nations today (Narvaez et al., 2017).

Some say that readopting the wise ways of humanity's sustainable past are wishful thinking, or even romantic delusions. I agree with Edmundsen (2015) that people today have become cynical and lowered their standards, their ideals. Our baselines have shifted downward across the lifespan, from expectations for child raising, to expectations for adult behaviour, leading to minimal cultural supports for human flourishing. We are surrounded with media and discourse that tells us "there is no other way," that the price of progress is discontented people and a ravaged planet. This view truly is delusional and romantic as it is often accompanied by a belief that humanity will win in the end with its technological creativity. But the long promised "wonder-world" of technology has brought about a waste world (T. Berry, 1988).

How do we heal? When things have not gone optimally in childhood, we can take charge of our own healing in adulthood, by revamping our habitual moral orientations and learning to resonate with compassion instead of fear. The persecutory superego can be mitigated through therapy and other more informal means. Transformational ethical therapy occurs when therapists encourage the *re-formation* of life and relationships, rebuilding brain capacities with "spiritual" practices that foster calming chemicals (e.g., serotonin, oxytocin) and pull the ego away from the single-self to a larger sense of Common Self. Not only do we need to calm down self-protectionist tendencies and regrow our social capacities, we need to expand our imaginations to a heartmindedness that is ecologically attached (Narvaez, 2014). Interpretations include the learning from adverse experiences. The individual is encouraged to include the old relationships in their world-view, fostering compassion towards victimizers, gratitude for growth and learning opportunities, and forgiveness for transgressions against the self. One signal for these capacities in adults is the ability to free-play reciprocally with others, experiences that also regrow our self-regulation and social

capacities (Siegel, 1999). Although we may always harbour woundedness, we can at least ensure proper nurturance of the next generation.

Cultures too can heal. Norway, once violent, is a leading peacemaker in the world (Fry, 2006). Humans have successfully dismantled several moral travesties, such as the Atlantic slave trade. Our societies can shift back to species-typical child raising and to raising human beings who use their potential for caring for the earth instead of destroying it.

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