This landmark reference covers all aspects of pediatric neuropsychology from a research-based perspective, while presenting an applied focus with practical suggestions and guidelines for clinical practice. Useful both as a training manual for graduate students and as a comprehensive reference for experienced practitioners, it is an essential resource for those dealing with a pediatric population.

This handbook provides an extensive overview of the most common medical conditions that neuropsychologists encounter while dealing with pediatric populations. It also discusses school-based issues such as special education law, consulting with school staff, and reintegrating children back into mainstream schools. It contains contributions from over 100 well-respected authors who are leading researchers in their respective fields. Additionally, each of the 95 chapters includes an up-to-date review of available research, resulting in the most comprehensive text on pediatric neuropsychology available in a single volume.

Key features:
- Provides thorough information on understanding functional neuroanatomy and development, and on using functional neuroimaging
- Highlights clinical practice issues, such as legal and ethical decision making, dealing with child abuse and neglect, and working with school staff
- Describes a variety of professional issues that neuropsychologists confront during their daily practice, such as ethics, multiculturalism, child abuse, forensics, and psychopharmacology

The breadth and depth of this body of work is impressive. Chapters written by some of the best researchers and authors in the field of pediatric neuropsychology address every possible perspective on brain-behavior relationships culminating in an encyclopedic text.... This [book] reflects how far and wide pediatric neuropsychology has come in the past 20 years and the promise of how far it will go in the next.

—Elaine Fletcher-Janzen, EdD, NCSP, ABPdN
The Chicago School of Professional Psychology

Andrew S. Davis, PhD, Editor
Handbook of Pediatric Neuropsychology
Moral Development

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INTRODUCTION

Moral development reflects a primary component of an individual’s life course and involves a host of social and moral skills and commitments, including, for example, social skills, empathy, perspective taking, moral identity, and a commitment to moral ends. Historically, views of moral development have been dominated either by an emphasis on the socialization of good habits or by a philosophically derived emphasis on reason and right action. Only recently have more integrative views emerged that are rooted in cognitive and neurobiological sciences and evolved capacities for morality such as the limbic system and prefrontal cortex. Caregiving experiences, additionally, influence multiple physiological systems such as the vagal nerve and the hypothalamus-pituitary-adrenal axis, which are related to social and moral functioning. This chapter reviews predominant theories, identifies capacities necessary for complete moral functioning, and describes an integrative intervention approach.

THEORIES OF MORAL DEVELOPMENT

The field of moral development emerged, proliferated and subsequently floundered during the twentieth century. Prior to that, the views of behaviorism (which states that, you are what you have been reinforced or conditioned to do) and psychoanalysis (according to which, your morality depends on the resolution of the Oedipus/Electra complex and the development of a superego, to counter the id, through identification with same-sex parent) dominated society. During the mid-century, Lawrence Kohlberg (1984) captivated the world with a new theory of moral development. On observing the fact that the extant moral psychologies of psychoanalysis and behaviorism proved incapable of condemning Nazi soldiers who followed orders to exterminate Jews and that these same theories were forcibly used to condemn the civil disobedience of Martin Luther King Jr. as criminal behavior for breaking the unjust laws of his society, Kohlberg sought to replace such impotent theories with a theory that could defeat moral relativism (Lapsley, 2006). Kohlberg’s enterprise was to philosophize moral psychology by emphasizing the central importance of moral reasoning (according to a Kantian perspective) for moral behavior.

The research programs that Kohlberg spawned successfully showed that individuals change in their reasoning about moral dilemmas based on social experience and education (e.g., Rest, Narvaez, Bebeau & Thoma, 1999). Grounded in Jean Piaget’s (1932) cognitive developmental theory, Kohlberg postulated the individual construction of moral understanding based on Piagetian growth mechanisms (assimilation, accommodation, disequilibration, and decenteration). He identified six stages for reasoning about moral choices that individuals obtain with age and education (for a review, see Kohlberg, 1984). The first two stages are preconventional: Stage 1 emphasizes the avoidance of punishment, and Stage 2 employs instrumental hedonism (do it if it feels good). The next two stages reflect conventional concerns: Stage 3 focuses on maintaining close relationships (be nice, be good), and Stage 4 emphasizes following the letter of the law (interweaving convention with morality). The last two stages are postconventional: Stage 5 emphasizes reciprocity through negotiated social agreements, and Stage 6 draws on internally held principles. Empirically, Stages 1–4 are consistently found around the world, regardless of culture, whereas Stages 5 and 6 are primarily found among Western-educated populations (Gibbs, Basinger, Grime, & Snarey, 2007; Snarey, 1985).

CRITIQUES

Kohlberg was criticized for emphasizing only one moral ideal (justice) and only one philosophical perspective (deontology or rule utilitarianism). These are longstanding Western approaches that do not reflect the multiplicity of moral ideals (e.g., benevolence, beauty) or philosophical perspectives (e.g., virtue theory). Gilligan (1982), the most widely known critic, proposed an alternative course of judgment development called the “ethic of care.” Although her ideas became widely popular in
humanities, the empirical data supporting its development and for its greater use among women are virtually nonexistent (Walker, 2006). Nevertheless, those who exhibit exemplary moral behavior typically emphasize compassion as the motivating force for their actions (e.g., Oliner, 2002). As described further in the following text, moral motivation and personality are fundamental to taking moral action (for reviews, see Narvaez & Lapsley, 2009).

A second set of critiques came from advocates of traditional character education (see Lapsley & Narvaez, 2006), what Kohlberg referred to as “bag of virtues” approaches (Kohlberg, 1984). According to traditionalists, the transmission of cultural values and habits from teacher to student is a central feature of character education. Adult-directed education was assumed to ensure the inculcation of virtuous traits (particularly obedience and responsibility) and the formation of a moral character. Although certain aspects of this approach are problematic and unsuccessful (see Leming, 2008), research has demonstrated the importance of three aspects (Narvaez, 2006): the effect of the environment on the formation of character, the importance of content knowledge for moral functioning, and the crucial role of mentoring. These aspects are included in the integrative model described in the following text.

Kohlberg’s emphasis on reasoning and articulation of reasoning faced severe criticism as psychology changed its paradigm from the primacy of conscious reasoning in human information processing to the primacy of intuition and implicit processes. Humans are no longer viewed as rational decision makers, who make choices based on deliberative reasoning. On the contrary, most information processing and decision-making are governed by automatic processes (Barth & Chartrand, 1999). Newer integrative psychological theories emphasize the deliberative as well as implicit or intuitive functions of the human mind (Kahneman, 2003). Often called “system 1” (intuition, tacit, implicit, heuristic) and “system 2” (deliberative, conscious, rule-based, effortful), these dual-process theories also better account for moral functioning (Lapsley & Hill, 2008). Moral development does not occur in one system or the other, but simultaneously in both. The integrative model to be described integrates both systems in the development of ethical expertise.

EARLY DEVELOPMENT

Moral development in early childhood was traditionally characterized as an externally driven process through which children were morally shaped in response to a fear of punishment or loss of caregiver affection (Thompson, 2009). Psychoanalytic, behaviorist, and cognitive developmental theories all asserted a discontinuity between early childhood (no capacity) and later childhood and adolescence (socialized capacities); moral maturity was assumed to develop as children overcame their egocentric and cognitive deficiencies (Freud, 1935; Kohlberg, 1969).

In contrast to this longstanding view, more recent research has found that young children demonstrate the cognitive and affective foundations of moral functioning. For example, children as young as 12 months were found to identify and understand the emotions of others (Moses, Baldwin, Rosicky, & Tidball, 2001), develop expectations for what should occur in a situation (Tomasello & Rakoczy, 2003), spontaneously offer help to adults in need (Warneken & Tomasello, 2006), develop concern on whether or not these expectations are fulfilled (Harris & Nunez, 1996), and demonstrate differential judgment for violations that are intentional or moral (Nunez & Harris, 1998; Smetana, 1985). These findings, combined with the emergent understandings of affective components such as guilt and shame, empathy, and the ability to describe personal internal states, all indicate that cognitive, behavioral, and affective capacities in early childhood provide a foundation for moral development in later childhood and beyond (MacWhinney, 2000).

Social environments shape the development of certain brain structures that influence affective, cognitive, and moral functioning (e.g., Davidson, Fox, & Kalin, 2007). Early in life, the brain’s systems are co-constructed in the relationship between the caregiver and infant (Eisenberg, 1995; Lewis Amini, & Lannon, 2000; Schore, 1994). For example, interactions between parent and child shape the development of the prefrontal cortex and right hemisphere, which play a role in shaping a child’s self-regulation and coping strategies (Schore, 2001). Parent–child interactions influence amygdala sensitivity; affection-deprived infants may display a low threshold for amygdala activation during potential threats (Ochsner & Gross, 2007). In general, poor caregiving alters the brain’s neuroendocrine response to stress (Henry & Wang, 1998; Liu et al., 1997; Rosenblum et al., 1994). In stressful environments, this can cause brain damage because of elevated levels of stress hormones (e.g., cortisol, which is toxic to developing brains; Teicher, 2002). Antisocial individuals exhibit significantly lower basal (McBurnett et al., 1991; McBurnett, Lahey, Rathouz, & Loeb, 2000) and reactive (Flinn & England, 1997; Vanyukov, Moss, Plail, Blackson, Mezzich, & Tarter, 1993) cortisol levels (Pajer, Gardner, Rubin, Perel, & Neal, 2001). Low cortisol levels are related to early onset aggression (McBurnett et al., 2000).

Environmental factors aggravate aggressive tendencies. For example, early child abuse has been shown to inhibit the development of the corpus callosum and restrict brain development (De Bellis et al., 1999a, 1999b). Lesions acquired early in life, particularly in the prefrontal region, often have persistent negative effects on adaptive behavior and adjustment throughout the lifespan (Eslinger, Grattan, Damasio, & Damasio, 1992; Taylor & Alden, 1997). Such individuals often demonstrate maladaptive social behavior, personality disorders, and impaired decision-making (Tranel & Eslinger, 2000).
Nevertheless, with the exception of severe cases of abuse and lesions to certain areas of the brain, neural development demonstrates considerable plasticity, with brain development continuing into adulthood. Because regions of the brain develop at different rates with peak periods established at different times, areas such as the prefrontal cortex are not completely developed until nearly 30 years of age, whereas myelination continues through midlife (Giedd et al., 1999; Luna et al., 2001). Animal studies demonstrate plasticity in certain regions of the brain throughout adulthood (Gould, Tanapat, McEwen, Flugge, & Fuchs, 1998; Kempermann, Kuhn, & Gage, 1997; Nilsson, Perfilieva, Johansson, Orwar, & Eriksson, 1999). Adult interventions can influence neural wiring and foster neurogenesis (Davidson et al., 2007; Schwartz & Begley, 2003), thereby suggesting long-term plasticity.

Brain wiring and structure is greatly influenced by early experience and affect moral functioning and development. Triune Ethics Theory (TET) attempts to integrate empirical findings to propose a neurobiologically based moral psychology theory.

**TET: MORAL PERSONALITY DEVELOPMENT**

Converging evidence from animal research, developmental psychology, and neurosciences generally shows that the most important element in a child’s social life responsible for building moral character is warm, responsive parenting that results in secure attachment (Thompson, 2009). Children with secure attachments develop conscience at a younger age (Kochanska, 1995, 2002a, 2002b) and are more empathic (Eisenberg, Fabes, & Spinrad, 2006) and compliant with adult demands (Kochanska, Aksan, & Koenig, 1995; Kochanska, Aksan, Knack, & Rhines, 2004). TET provides a description of how caregiving can influence the neurobiology of moral functioning.

TET (Narvaez, 2008a, 2008b, 2009) is a bottom-up theory that focuses on motivational orientations rooted in evolved unconscious emotional systems shaped by experience that predispose one to react to and act on events in particular ways. The theory describes how moral functioning relies on the emotional circuitry established early in life. TET proposes three foundational ethical motivations—security, engagement, and imagination—formed from evolved strata of the brain and manifest in the moral lives of individuals and groups.

The security ethic resides primarily in the oldest parts of the brain, and involves the R-complex (MacLean, 1990) or the extrapyramidal action nervous system (Panksepp, 1998), which is concerned with securing personal and favored group survival through, for example, meeting basic needs and maintaining status. The engagement ethic emerges from emotional circuitry in the limbic system and related structures (MacLean, 1990), also known as the visceral–emotional nervous system on the hypothalamic–limbic axis (Panksepp, 1998). These systems reflect mammalian capacities for caring relationships, compelling intimacy, and general sociality. The imagination ethic is rooted primarily in the cortical areas of the brain, which evolved more recently, including the neocortex and related thalamic structures (MacLean, 1990), also known as the somatic–cognitive nervous system on the thalamic–neocortical axis (Panksepp, 1998). This ethic allows the individual to step back from the immediate and reflect on and countervail the instincts and intuitions of the other ethics (security and engagement). The higher levels of moral functioning, namely engagement and imagination, depend on early nurturing for their optimal development.

TET emphasizes the importance of initial conditions and early development, and how these may influence brain structures and circuitry, affecting moral functioning in sometimes subtle ways. Human brains evolved for reward, primarily from social relationships (Nelson & Panksepp, 1998). With adequate care, the systems underlying the engagement ethic develop fully and foster capacities for compassion, openness, and tolerance (Eisler & Levine, 2002). However, extensive distress in early childhood can foster a foundational sense of insecurity in the face of uncertainty (what is different or unfamiliar) based on malfunctioning systems such as the HPA axis (e.g., Beatson & Taryan, 2003) and vagal nerve (e.g., Calkins, Smith, Gill & Johnson, 1998; Porter, 2003). When a brain is stressed from neglect, trauma (Newman, Holden, & Delville, 2005) or inadequate emotional nurturance (Schore, 2001), TET postulates that the personality becomes dominated by the default systems underlying the ethic of security—self-concern. In fact, neglected and abused children react to others (and to change) with mistrust, aggression, and violence (Karr-Morse & Wiley, 1997). They find it difficult to behave prosocially, and require extra effortful control that consumes energy resources (Galliot, 2008). Poor care leads to decrements in the hormonal regulation, brain wiring, and system integration that contribute to sociality (Perry, 2002; Weaver, Szyf, & Meaney, 2002).

To act with situation-appropriate compassion and imagination, the heart and mind of morality, individuals must have capabilities for self-regulation (e.g., self-soothing) and for connecting to others (e.g., social limbic resonance), based on well-developed limbic and cortical structures established early in life or in subsequent sensitive periods of development (which could include psychotherapy).

**THE COMPLEXITIES OF MORAL FUNCTIONING**

As moral development research has moved beyond justice reasoning as a mark of moral maturation and development, a host of capacities have been identified. Rest’s Four Component Model of moral behavior (Narvaez & Rest,
1995; Narvaez & Vaydich, 2008; Rest, 1983) offers a useful framework for organizing these capacities. According to the model, moral behavior takes place only when four components (at least) have co-occurred: moral sensitivity, moral judgment, moral focus or motivation, and moral action or implementation.

MORAL SENSITIVITY

Moral sensitivity, the first component of Rest’s model comprises moral perception (noticing a need or problem), moral imagination (interpreting events), and empathic response. Persons who make moral constructs central to their identities and everyday action (moral exemplars; see Walker & Frimer, 2009, for a review) are more likely to report warm childhood relationships with caregivers (Oliner, 2002; Oliner & Oliner, 1988) and more likely to act from compassion or empathy.

Empathy has been linked to moral action in multiple studies (Eisenberg et al., 1999; Oliner & Oliner, 1988). According to Hoffman (2000), empathy is “the cognitive awareness of another person’s internal states, that is, his thoughts, feelings, perceptions and intentions [and includes] the vicarious affective response to another person” (p. 29). Hoffman’s definition pairs the cognitive awareness components of perspective taking with an affective response. Consequently, for any action to be considered empathic, Hoffman asserts that certain psychological processes must “make a person have feelings that are more congruent with another’s situation than with his own situation” (2000, p. 30). Empathy allows an individual to orient cognitive and affective awareness toward another. In a longitudinal study beginning from age 4, Eisenberg et al. (1999, 2002) reported that early childhood prosocial skills such as empathy and perspective taking predicted prosocial behavior in early adulthood (Eisenberg et al., 1999, 2002). Confirming Kocsanska’s work on early conscience development from warm caregiving experiences, Eisenberg’s work suggests that prosocial behavior maintains its stability from early childhood through early adulthood.

Apart from good parenting and prosocial personality, how do individuals develop the moral sensitivity skills necessary for moral behavior? The Collaborative for Academic, Social, and Emotional Learning (CASEL) is an organization formed in the early 1990s with the singular mission to “establish social and emotional learning (SEL) as an essential part of education” (Elias, Parker, Kash, Weissberg, & O’Brien, 2008). Social and emotional competencies are considered integral to moral development as well as general academic achievement and life success. For example, children who identify their emotions better (i.e., self-aware) and interact more effectively with peers (i.e., demonstrate respect toward others) are more effective moral agents (Lemerise & Arsenio, 2000). When SEL skills are incorporated into traditional academic instruction, students are more engaged in school and demonstrate increased academic success (Elias, Kress, & Hunter, 2006; Patti & Tobin, 2003).

Social and emotional skills include perspective taking, defined as follows: “the ability to view the world (including the self) from another’s perspective [which] is explicitly social-interpersonal in requiring the ability to infer another’s capabilities, attributes, expectations, feelings, and potential reactions” (Selman, 1971, p. 1722). Perspective taking requires the ability to simultaneously identify, consider, and coordinate multiple perspectives (LeMare & Rubin, 1987, p. 306). It is a developmental skill that requires awareness and coordination of multiple views. Selman (1971) hypothesized that the acquisition and development of role-taking or perspective-taking abilities could be expressed in a developmental stage-like sequence similar to Piaget’s theory of cognitive development. Selman identified four developmental levels of role-taking ability. In the first stage, Level A, the child posses a sense of the other but fails to distinguish between the perceptions of the self and other. Level D is the final and most advanced stage where children possess a sophisticated sense of other and recognize that the other has unique perspectives that may be similar to or different from their own perceptions (Selman, 1971). Selman contends that reciprocal role-taking—the ability to understand that others have different perspectives than the self, and that both the other and self are aware of this reality—continues to develop throughout adolescence and into adulthood.

MORAL JUDGMENT

The second component necessary for moral behavior is moral judgment, the capacity to consider the merit of alternative reasons and options for action. As described previously, Kohlberg’s work was long dominant in this arena. Kohlberg focused on explicit reasoning, avoiding engaging personal emotions in his moral dilemma measures. However, more recent work is demonstrating that reasoning without emotion is defective (Anderson, Bechara, Damasio, Tranel, & Damasio, 1999). In adulthood, damage to the ventromedial prefrontal cortex, important for emotional processing, leads to an inability to make good decisions, especially social decisions. Damage in infancy disables the brain’s capacity to integrate emotion into learning and action, seemingly arresting moral development (Eslinger et al., 1992). Children with such damage can be normal in intelligence but are unable to acquire moral rules or conventions throughout life, a syndrome that resembles antisocial personality disorder (e.g., shoplifting, sexual aggression).

Reason and emotion generally operate together in complex ways, such as through motivated cognition (Jost, Glaser, Kruglanski, & Sulloway, 2003). In fact, in political information processing, emotions and reasoning may operate together but separately. For example, when
Westen, Blagov, Harenski, Kilts, and Hamann (2006) scanned committed political party members in a functional magnetic resonance imaging as they were given the same information, their brains processed the information differently based on whether the information was about their candidate and whether it undermined or supported the viability of the candidate. Participants did not employ the area most associated with reasoning (dorsolateral prefrontal cortex) but instead employed areas of the brain associated with emotion (ventromedial prefrontal cortex, anterior cingulate cortex, posterior cingulate cortex, insular cortex, and lateral orbital cortex) until they either condoned their candidate or condemned the other party’s candidate. Then the ventral striatum, associated with a sense of reward, became activated. Thus, while emotion can be vital to reasoning, it can bias the reasoner in predictable ways.

MORAL FOCUS OR MOTIVATION

The third component necessary for moral behavior to take place is moral focus or motivation. Once a person has noticed a problem and imagined possibilities (moral sensitivity) and judged which action to take, the person must prioritize the action over other interests and goals in order to move toward carrying it out. Countering Kohlberg’s emphasis on judgment, Blasi (1980) noted the weak relation between moral reasoning and moral action. Individuals may be able to articulate the good and right choice to be made in any given situation but fail to act according to their judgment. In his review of the empirical evidence, Blasi proposed that factors other than reason and logic have an influence and account for the rarity of correspondence between moral reasoning and action, suggesting that “self and related constructs, such as self-definition, self-organization, self-awareness” and integrity are central to the individual who takes moral action (1980, p. 41). Individuals with an active moral identity are those who utilize moral constructs to interpret events and guide their action.

The degree of harmony between moral reasoning and action can be partially attributed to the degree to which one has and activates a moral identity or personality. Indeed, subsequent research has demonstrated the plausibility of Blasi’s suggestion. Not only do adult moral exemplars exhibit a unification of their personal and moral goals (Colby & Damon, 1992), those with chronic moral identities are more likely to process social events with moral frames (Narvaez, Lapsley, Hagele, & Lasky, 2006). In addition, one’s moral identity or sense of moral self may be primed or oppressed by social and environmental factors (Aquino, Reed, Stewart, & Shapiro, 2005; Weaver, 2006). In fact, salient and staunch moral identities may be affirmed or overridden by financial incentives, behavioral norms, and role models or exemplars in both personal and professional settings (Aquino & Freeman, 2009).

MORAL ACTION

The fourth component vital to moral behavior is moral action or implementation. Of course the aim of moral development entails the completion of moral action. After an action has been prioritized, the individual must have the wherewithal and ego strength to carry it out. Each domain of life has its own set of ethics and practices to be learned. For example, moral practice in dentistry differs from that in journalism or accounting (Rest & Narvaez, 1994).

Erikson (1968) suggested that identity develops under ideological guides that transcend place and history. Yates and Youniss (1996) described programs for adolescents that use community service to develop moral identity, arguing that “service is a concrete vehicle for connecting adolescents to institutions that symbolize and promote visions of society and ideological interpretations of right and wrong” (1996, p. 272). Through an emphasis on connecting to something larger than themselves—an ideological guide—student participants were able to articulate more transcendent awareness (i.e., recognizing that homeless people are people just the same) than mentioning only concrete actions (i.e., preparing meals). Moreover, children who experienced a guided community service project were more likely to participate in volunteer activities as adults (Youniss & Yates, 1997).

The four components describe the processes that lead to moral behavior. All four processes must take place for moral behavior completion. Moral behavior may fail at any one of these points. A person may fail to notice a problem, may judge poorly, may be focused on other goals, may lose confidence, or may not know what steps to take to complete the action. Expertise can be developed in each area (Narvaez & Lapsley, 2005).

EXPERTISE DEVELOPMENT IN THE FOUR COMPONENTS

Expertise has become an important area of study in the cognitive and learning sciences (Ericsson, Charness, Feltovich, & Hoffman, 2006). One can map novice to expert development in every field (Bransford, Brown, & Cocking, 1999). Experts differ from novices in several ways including having more and better organized knowledge (explicit and implicit), sharpened perceptual skills in the domain, and multiple action skills that allow for more effective problem solving. Implicit tacit knowledge and sharpened perception develop from extensive immersion in expertise-building environments. Complex explicit knowledge, including understanding of domain-specific theory, practices, and goals, develops from guided mentoring in the domain.

Those with moral expertise have greater capacities in one or more of the four components mentioned earlier, including moral perception and sensitivity, moral
judgment and reasoning, and moral focus (Narvaez, 2006; Narvaez & Lapsley, 2005). For example, experts in moral sensitivity easily notice and identify moral needs and gauge what role they might play. Experts in moral judgment are able to lay out the issues in a dilemma and judge which is the best course of action to take. Experts in moral focus are able to prioritize and keep the moral goal in mind. Experts in moral action know what steps to take in a particular situation and how to persevere. Skills can be fostered in all four areas (see Table 8.1 for examples of skills in each component). For example, moral sensitivity skills include connecting to others, using appropriate emotional expression, taking the perspectives of others, and controlling social bias. Moral judgment skills include understanding moral problems, predicting and responding to consequences, choosing good environments, and developing resilient thinking. Moral focus skills include valuing community traditions, cultivating conscience, respecting others, and developing moral integrity. Moral action skills include resolving conflicts, taking initiative as a leader, asserting respectfully, planning and implementing decisions.

A moral development theory that formulates moral character development as expertise development is Integrative Ethical Education (IEE, Narvaez, 2006, 2007, 2008a; Narvaez, Bock, Endicott, & Lies, 2004) which describes an approach designed for any age or any domain. (Note: “Moral” and “ethical” are used interchangeably.)

### INTEGRATIVE ETHICAL EDUCATION (IEE)

IEE is rooted in a psychological description of human flourishing or optimal human development (see Narvaez, 2006). IEE enfolds what is known about SEL (including social climates and motivation) and applies these to ethical character development. IEE suggests the implementation of five practices or steps for those who work with children and youth. The five research-based practices foster the type of learning situation that meets the needs of humans as mammals, reflect best practice for learning, and foster resiliency or positive development.

1. **Establish a caring relationship with the learner.** This is one of the most critical factors in life (Bowlby, 1988) and school engagement (Battistich, Solomon, Watson, & Schaps, 1997). As noted earlier, secure relationships modify brain functioning in ways important for moral functioning. In the early years, the brain structures itself in response to the type of caregiving received (Narvaez & Panksepp, 2009). Generally, brains are primed for different types of morality (e.g., security, engagement, imagination; Narvaez, 2008b, 2009) within relational and social contexts.

2. **Establish a social climate supportive of ethical character.** Social climates influence the behavior of their members through priming and through implicit and explicit cultural practices. High support and high expectations for achievement and behavior produce the best results for at-risk children (Zins, Bloodworth, Weissberg, & Walberg, 2004). Sustaining climates (Narvaez, 2010) provide as much as possible the type of environment under which human mammals thrive. Such climates focus on learning, caring, and fostering a sense of positive purpose, as individuals and as a group.

3. **Teach ethical skills using a novice-to-expert pedagogy or apprenticeship model** (Rogoff, 1990). If a person is lacking a particular skill, it can be fostered through a novice-
to-expert instruction. That is, the mentor immerses the person in examples and exemplars so that it is clear what is the trajectory for learning. Then attention is focused on particular subskills, followed by practicing procedures (sets of skills and subskills) solving real problems. Finally, skills and procedures are applied in multiple contexts to build breadth and depth of effective action.

(4) Foster student self-authorship or self-actualization. Initially with guidance but ultimately alone, the child explores and answers the question, “Who should I become?” Mentors can coach the child in the domain-specific skills of self-regulation and metacognitive (Zimmerman, Bonner, & Kovach, 2002) that are necessary for domain success (Anderson et al., 1989).

(5) Restore the ecological network of relationships and communities that support each child’s development. This done by forming asset-building communities and coordinated developmental systems (Bronfenbrenner, 1979). When the multiple facets of life experience are coordinated (i.e., family, school, neighborhood, religion), children are better able to build resiliency skills and increase the number of assets they have to accompany them through times of stress (Benson, Leffert, Scales, & Blyth, 1998).

Research and interventions in the moral domains have historically focused on the individual factors (action, judgment, etc.) that affect development. Yet social and environmental factors, such as caring relationships and climates, are equally important in advancing or diminishing mature moral development (Hart, Atkins, & Ford, 1998). Hart and Matsuba (2009) have demonstrated that environmental stress factors (violence, pollution, noise), a dearth of positive institutional opportunities (few volunteer or community organizations), and a disproportionately high percentages of youth in a neighborhood, detract from reaching mature moral functioning successfully.

CONCLUSION

Moral development is a complex aspect of human development. For optimal growth, it requires good environments, mentoring, extensive practice, and ongoing commitment from the individual and his/her community. Moral character involves far more than reasoning and includes embodied knowledge reflected in sensitivity, motivation, and action skills. Although deprivation may limit the range of capacities, it is never too late to develop ethical skills.

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