Attachment, Mastery, and Interdependence: A Model of Parenting Processes*

MARTHA E. EDWARDS, Ph.D.†

A democratic nation needs an interdependent citizenry who are not only competent but who also can live together cooperatively with an eye toward what will benefit the whole as well as the self. In this article, the concept of interdependence is adopted as the central goal of parenting. The Parenting Processes Model is then presented, specifying how caregivers help children develop this interdependence. This work draws upon and integrates the work of a number of theoreticians, researchers, and clinicians, with the central focus on the work of John Bowlby, Alfred Adler, and Lev Vygotsky.

Fam Proc 41:389–404, 2002

BOWLBY (1969/1982) conceptualized attachment as a way of understanding the profound influence of the relationship between children and their parents. He acknowledged that although attachment has a significant influence on a child's subsequent development, it is only one of several important domains of parenting. The purpose of this article is twofold. First, it focuses on how parents help expand their child's relatedness to ever-widening circles of family, friends, and community, and to share with others the responsibility for developing and maintaining these relationships and to live cooperatively with others. In other words, the article focuses on the parenting processes that enable children to form meaningful *interdependent* relationships. Second, the article presents a parenting model—the Parenting Processes Model—that situates attachment in the context of other critical parenting domains, and that spells out the processes by which children develop interdependence.

The concept of interdependence is rooted in Adler's theory of personality and philosophy. Fearing for the future of mankind, he cautioned that if we didn't learn to cooperate with one another, we risked annihilating one another (Adler, 1933). His remedy for this was the development of what he called, in German, *Gemeinschaftsgefuehl.* While having been translated *community feeling, social feeling,* and *social interest,* (Ansbacher & Ansbacher, 1956), none of these terms adequately conveys the spirit of what he intended. I believe the term *interdependence* most accurately captures Adler's intent.

In the interdependent system of the world in which we live, what affects one part will affect the rest. People break the world up into bits—nations, races, reli-

* I thank the following for their generous and insightful feedback: Fran Schwartz, Ph.D., Esther Cohen, Ph.D., Lawrence White, Ph.D., and Adele Davidson, Ed.D.

† Send correspondence to the Ackerman Institute for the Family, Director, Early Prevention and Enrichment Project, 149 East 78th Street, New York 10021-0405; e-mail: Edwardsme@worldnet.att.net

Family Process, Vol. 41, No. 3, 2002 © FPI, Inc.

gions—in an effort to deny that we are part of this systemic whole. If, however, one truly recognizes this interconnectedness, then one accepts that what is in another's interests also serves one's self-interests (Stein & Edwards, 1998). Thus, this concept of interdependence also speaks to the longstanding debate over the relationship between self and society. Unlike others, Adler saw no fundamental conflict between self and society, individuality and relatedness, self-interest and social interest. These are ultimately false dichotomies.

Interdependence does not entail simply "being nice to others" or being interested in their welfare. It requires an individual's full development of his or her capacities, a process that is both personally fulfilling and also results in something worthwhile to contribute to others. It also requires the development of a deep connection to others, resulting in both a sense of empathy with these others and a feeling of belonging to an entity greater than one's self. These feelings enable individuals to feel at home on the earth and to accept both the comforts and discomforts of life. They are then translated into actions aimed at cooperative and helpful movements directed toward others.

The development of self and connectedness are recursive processes that influence one another in positive ways. The greater one's personal development, the more one is able to connect positively and live cooperatively with others in a state of relatively low tension. The greater one's ability to connect to others, the more one is able to learn from them and develop oneself. Adler conceived of interdependence as an index of, as well as the road to, individual psychological and community health.

The Parenting Processes Model specifies three domains of parenting necessary for the development of interdependence: (1) developing the attachment relationship, (2) promoting striving and mastery; and (3) guiding the child toward interdependence. The balance of this article is devoted to a description of these three core parenting processes, their interrelationships, and their contribution to the development of a child's interdependence.

DEVELOPING THE ATTACHMENT RELATIONSHIP

The foundation of a child's capacity for interdependence is the attachment relationship established during the child's first year of life. Bowlby (1979) and Ainsworth (1989) defined attachment as a special type of affectional bond between individuals. An affectional bond: (1) is persistent; (2) involves a specific person who is not interchangeable with anyone else; (3) is emotionally significant; (4) produces a desire to maintain proximity; and (5) results in distress from involuntary separation. An attachment bond involves all five of these criteria, and also involves seeking security and comfort in the relationship with that person (Ainsworth, 1989; Bowlby, 1969/1982).

The attachment relationship is considered "secure" if one achieves security, and "insecure" if one does not (Cassidy, 1999). A secure attachment provides children with sense of basic trust in their caregivers and safety in their environment. These are conditions that Erickson (1950) and Maslow (1987) postulated as core requirements for a child's development.

How does this secure attachment relationship develop? One consistent finding points to the importance of sensitive and responsive caregiving on the part of the attachment figure (Belsky, 1999). Consider the following vignette of the interaction between 2-month-old Andrew and his mother:

> Andrew catches mother's eye, appearing to want to make contact with her. She leans over him as he lies on a blanket, and they

gaze deeply into each other's eyes. The child's excitement, seen in the almost constant movement of his arms and legs, is contained by this mutual gaze. As he makes motions with his mouth, she asks: "Are you going to talk to me? I didn't know you could do that." She pauses, and he verbalizes in response. She continues, "Are you going to say a, e, i, o, and u? That's what words are made out of. A, E, I, O, U," increasing the intensity of her positive affect. His whole face brightens and his mouth widens and then breaks out in a broad grin. She mirrors the movements in his facial expression in her vocalization, "Yeaaaaah," continuing with a quieter, "It's so much fun talking with you." Andrew looks away, and his mother leans back, remaining quietly with him.

This vignette illustrates the many and varied ways that parents are sensitive and responsive to their infants. First, they are emotionally available, i.e., they "hold the child in mind" (Pawl, 1995) and anticipate the need the child might have for them. In the vignette, Andrew's mother notices his bid for contact and allows it to influence her. Second, parents are able to "read" their child's communications and understand their meaning. Andrew's eye contact and overall "brightening" signaled to his mother that he was ready for a stimulating exchange. He didn't need to be picked up; he didn't need a pacifier to be thrust into his mouth. He did need to be recognized and engaged in interaction. One of the challenges in being sensitive to children is managing one's own arousal to the infant's signals (Emde & Robinson, 2000). Some parents, for example, react so strongly and instantaneously to their children's cries that they don't give themselves the opportunity to stop and assess just what the cries mean.

Third, sensitive and responsive parents contingently adjust their responses to their children, based on their moment-by-moment intuiting of their children's states. Andrew's mother paused throughout their interchange, giving him an opportunity to respond. She also tuned into his feeling state, intuitively mirroring the delight on his face with a delighted vocalization, a process Stern (1985) calls "attunement." And at the end of the episode, she also noticed his turning away from her—signaling that he had had enough for the moment and needed to stop—and she stopped interacting and sat quietly with him. In this way, she helped to regulate Andrew's increasingly intense—albeit positive—affect before it became overwhelming. Children depend on their caregivers to regulate their level of arousal (Emde & Robinson, 2000) because they have neither the neurological nor motoric capacities to do this for themselves. In fact, the attachment relationship has been conceptualized as a dyadic system for affect regulation (Sroufe, 1996).

In this intricate dance between caregiver and child, there are plenty of opportunities for missteps. In microanalyses of parent-infant interaction, Tronick (1989) found that parent-child interaction was coordinated only 30% of the time. Sensitive and responsive parenting involves the recognition of these miscoordinated interactions and a prompt repair. This enables the infant to move quickly from negative to positive emotional states, minimizing distress. Infants whose parents quickly repair miscommunications will experience interactions as pleasurable, interactive problems as solvable, themselves as effective, and caregivers as responsible and reliable. In contrast, infants who experience a chronic failure of communication tend to establish a self-directed style of affect regulation, which involves behaviors such as looking, turning, or pushing away, and/or "tuning out" perceptually (Tronick, 1989). While these regulatory strategies help a child to control the negative affect associated with chronic miscommunications, they have a

devastating effect on the relationship between the infant and caregiver.

In empirical studies, while parental sensitivity and responsiveness were consistently related to secure attachment, they also explained only a modest amount of the variance in attachment (Belsky, 1999; Fonagy, Steele, Steele, et al., 1995). Fonagy and his colleagues hypothesize that a parent's *reflective function* also contributes to secure attachment. Reflective function is the ability to conceptualize one's self and others as intentional beings who think, imagine, desire, and intend (Fonagy et al., 1995, p. 255). The experience of being perceived as "having a mind of one's own" is internalized by the child who then learns to accept, reflect upon, and be guided by his own inner states. The reflective function enables a parent not only to be sensitive to a child's distress but to stop and reflect on what might be causing it, and what the child needs at the moment—all of which help contain the distress and help the child learn to cope with it. In this way, the child gradually begins to take over a function that the attachment relationship served—i.e., the dyadic regulation of affect—in order to become more self-regulated.

In the course of a parent and child's reciprocal responsiveness, there is often a great deal of pleasure, joy, even excitement, which may not necessarily be required for the development of a secure attachment, yet is important for other aspects of development. In the interaction, a parent mirrors the infant's positive affect and "electrifies" him in such a way that it can "blast the infant into the next orbit of positive excitation." (Stern, 1985, p. 42). Over the course of a child's first year of life, these interactions facilitate a child's capacity for positive affect and, indeed, observational studies show that there is a steady increase in the expression of positive affect across the first year of life (Emde, 1989; Mayes & Zigler, 1992; Rothbart, Taylor, & Tucker, 1989). On a physiological level, this positive affect stimulates the sympathetic branch of the central nervous system, responsible for general excitation and energy-consuming body states (Siegel, 1999). At the same time, these highly pleasurable interactions stimulate dopaminergic circuits in the limbic system in a positive feedback loop that further increases the pleasure and elation of interactions with these significant others in a child's life. Through these increasingly positive social experiences, children learn that relationships are associated with a positive feeling, that joy is multiplied when shared with a loving adult. Thus, relationships are perceived not only as providing a secure base and protection from negative experiences, but also as sources of great pleasure. Furthermore, being attended to in this way must also give the child an inchoate feeling of being worthy of such attention, thus providing a building block to a feeling of self-worth and self-esteem.

Bowlby postulated that this sense of trust and safety afforded by a secure attachment enables children to turn their attention to exploring the environment, setting the stage for developing self-striving and a sense of mastery.

PROMOTING STRIVING AND MASTERY

The attachment relationship supports the development of mastery in at least three significant ways. First, in the context of the attachment relationship, children learn that their needs can be met and that they can have a reasonable effect on their caretakers in this process. These experiences help the child begin to develop a feeling of agency in the world. Second, acting as a homeostatic mechanism, felt security in the attachment relationship regulates the relative proximity of parent and child, with the goal being the availability of the adult should help be required (Belsky, Garduque, & Hrncir,

1984). The child will also monitor the parent's reactions, using them to gauge the safety of the current environment, a process called social referencing (Bretherton, 1992). Third, the trust and security the child feels in the relationship with the attachment figures sets the stage for the child to use these figures as teachers, mentors, and for support while learning about and mastering the environment. Thus, the attachment relationship provides the support for the child's burgeoning skills.

But one might ask why the child would venture forth from such pleasurable contact with the caregiver. The answer is that humans appear to possess an innate motivation for development and growth (Adler, 1930; Brazelton & Cramer, 1990; Stern, 1985). While some refer to this as motivation for mastery (Harter, 1978), I also use Adler's term "striving" to denote the continuous process of forward movement that often has no real endpoint of "mastery." Parents have a significant influence on the children's striving and mastery, first, by accepting where their children are in their development and meeting them there, and, second, by facilitating their development in specific ways.

Vygotsky (1978) maintained that development is shaped by relationships. Children's learning about their environment is mediated by the responsiveness of the adults who, for example, retrieve and label reached-for-objects, and describe their function. As children grow and engage more and more with their environments, they also engage in more sophisticated social interactions with their parents. They begin to internalize the essential features of these dialogues, using them to shape thinking, guide actions, and acquire new skills (Wertsch & Tulviste, 1992).

In their interactions with children, more mature and knowledgeable older persons (e.g., parent, sibling, teacher) meet the child where she is and guide her through her "zone of proximal development," i.e., the range of tasks that the child cannot yet handle on her own but can accomplish with the help of these mentors (Vygotsky, 1978). Consider how the efforts of young Amanda are facilitated by her father:

> Four-month-old Amanda is lying stomach-down on a quilt on the floor, her fingers coiled through the open plastic mesh of a small ball. As she shakes her hand, the bell inside the ball jingles pleasantly. But soon she loses her grasp and the ball rolls a tantalizing few inches from her outstretched hand. She reaches with one hand, just touching the ball, which makes it rolls even further away. Reaching with the other hand doesn't yield success either. She grabs the quilt, pulling it and the ball toward her, but at the same time she goes backwards. Sensing her possible frustration, her father pushes the ball a little closer. She lifts up slightly, as if to crawl forward, but she's not strong enough to support herself on her hands and knees yet. She reaches and reaches, and with a little help from her father, she finally grasps the ball once again.

Amanda is certainly doing her part in striving to master the motoric skills necessary to reach and grasp an object. Her father does his part as well. First, he provides a safe and stimulating physical environment in which she is free to explore (within the limits of safety) and he supplies enough interesting and rich activities with which she can become engaged (Bradley & Caldwell, 1981). Second, he is contingently responsive to her needs, monitoring her level of frustration and providing assistance when required, a process Bruner (1983) and Wood (1989) refer to as "scaffolding." This requires both careful observation as well as verification with the child (if possible) to assess the level of help that the child actually

needs. Parents' unsolicited assistance is sometimes experienced as both intrusive as well as discouraging to children, and can inhibit striving and mastery (Gottman, Katz & Hooven, 1997).

It is important to note that the concept of scaffolding comes from the work on cognitive development but, in fact, it is quite similar to the sensitivity and responsiveness that contribute to secure attachment. Indeed, parents with securely attached children intrude less when the children are successfully exploring the environment, and provide appropriate assistance when required, as compared with parents whose children are anxiously attached (Cassidy & Berlin, 1994; Grossmann, Grossmann & Zimmerman, 1999).

For parents, supporting this aspect of their child's development requires them to tolerate the tension often generated by observing their child struggle. Struggling is a process inherent in worthwhile endeavors. If parents cannot tolerate watching their children struggle, they may lend their assistance prematurely, thus potentially robbing their children of the opportunity to develop their capacities to tolerate frustration, to persist in the face of uncertainty or difficulty, and to delay gratification. Parents' capacity for reflective functioning, described earlier in the discussion of secure attachment, may also equip them to understand their children's particular desire to master something as well as to contain and help them cope with the concomitant arousal and possible feelings of frustration or anxiety.

Parents also more directly promote their children's striving and mastery by engaging them in meaningful conversations (Hart & Risley, 1995), and teaching them specific behaviors or skills by modeling, instruction, interpretation, (Bornstein, 1989).

Finally, as the child enters the preschool years, parents can promote striving and mastery by encouraging make-believe play, a process Vygotsky (1978) maintained provided an opportunity for the child to become immersed in his or her zone of proximal development and to experiment with new behaviors and skills. While parental engagement of their children in this play helps move it to a more advanced level (Fiese, 1990; O'Reilly & Bornstein, 1993), it is not necessary for parents to play with their children in this way. They may participate by creating the conditions under which it is likely to happen (e.g., access to materials and partners, time and space, encouragement and acceptance).

Children whose parents promote their striving and mastery not only learn specific sensory-motor, cognitive, linguistic, and social-emotional skills, but also develop a confidence in their ability to learn additional skills—called *self-efficacy* (Bandura, 1992). They expand their capacities to tolerate both frustration and uncertainty, to delay gratification, and to develop their courage to continue to try in the face of potential or actual failure. If children learn to do this, they also are learning to function at their maximum capabilities. They simply cannot reasonably ask more of themselves. The resultant sense of self-respect and equality with others contribute to their ability to live in cooperation with them. This stands in stark contrast to children who feel that they either must out-perform everyone around them or are so afraid of failing that they do not try, and make excuses (to themselves and to others) for their lack of activity and accomplishments. Thus, the developed capacity for striving and mastery enables children to accept themselves and others, and prepares them to live interdependently with them.

GUIDING TOWARD INTERDEPENDENCE

Guiding a child toward interdependence entails helping children overcome their natural egocentricity and begin to

see themselves as part of a community—not any better nor any worse than anyone else—and to live cooperatively with others. A critical foundation for this is the attachment relationship. Research over the past 20 years has established that infants are far from passive participants in the parent-child relationship—indeed, they are active and reciprocal partners, and this capacity increases over the first year of life (Emde, 1989; Sroufe, 1996). Nevertheless, the primary shaper of a secure attachment relationship is the adult's reflective, sensitive, and responsive behavior, i.e., the adult does most of the giving.

At some point—and this varies from culture to culture—a child is called upon to begin giving back and to join his or her fellow humans as a contributing member of the community. At a young age, certainly, the child's contributions will not be equal to his more mature and experienced fellow community members. But if a child's striving and mastery have been promoted, then he has enough self-efficacy and sufficient specific skills to make a useful contribution. Encouraging, indeed even expecting, these contributions is important since the child learns that he is neither more nor less important than the others in his world. He learns that his, as well as everyone else's contribution is valuable.

The full development of interdependence requires that a child develop four critical capacities: affect regulation, empathy, moral code, and prosocial behavior. This builds on the process begun in the development of secure attachment as well as the promoting of striving and mastery. First, each of these capacities is discussed, and then parenting processes associated with the development of these capacities are described.

Affect Regulation

Affect regulation is a critical capacity in the development of interdependence because labile affect makes it difficult for an individual to move beyond the self and pay attention to the feelings, ideas, and needs of others. Affect regulation is defined as: "the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals" (Thompson, 1994, pp. 27–28). Thus, affect regulation is not the dampening down or evening out of affect; it is the ability to *use* one's affect well. In a healthy relationship, for example, positive affect could be used to invite, encourage, or enjoy the other person, while negative affect could be used to signal the need for problem solving.

This definition of affect regulation is predicated on the notion that emotions are adaptive responses that have motivating and organizing functions that help individuals in the pursuit of their goals (Adler, 1927/1992; Campos, Campos, & Barrett, 1989; Emde, 1989). This is quite different from some popular notions of emotions as irrational and inhibiting of an individual's ability to reach certain goals. Individuals may, however, have goals that are advantageous to them, but not to others, e.g., goals of dominance, exploitation, indulgence. The purpose of some children's tantrums, for example, is to dominate or manipulate the parent. The feelings are real—the child is not putting on an act—but the feelings are also in line with the child's goal, which is to get his own way. This is not the case, however, with all tantrums. There are children who are temperamentally labile and whose affect does obstruct their goals. In reality, it may be quite difficult to tell the difference between these two types of situations.

The relationship between parent and child is central to the development of cooperative goals. A child's goals emerge from prior interactions and the meanings

attributed to them. If children's social experiences have been positive ones, and they are clear that the way to continue these positive experiences is to behave positively themselves, then there is some incentive for the adoption of prosocial goals. If relationship experiences have been negative—neglect, abuse, abandonment—there is little incentive for cooperative goals or behavior. Moreover, if children's relationship experiences have been positive, but they have been indulged—nothing has been required of them, and/or their negative behavior is tolerated without comment or consequences—then there is also little incentive for cooperative goals or behavior.

Too, a child's level of self-efficacy and skill will also shape his or her goals, which, in turn, will influence affect regulation. Children who feel inferior to others often focus their efforts (and goals) in either of two compensatory directions (Adler, 1927/1992). In over-compensation, they relieve their feelings of inferiority by attempting to be superior to others in some way. For example, a child who feels basically unloved may, instead, decide that fame is a worthwhile substitute. Dramatic, labile, affect may serve this goal well. In under-compensation, a child may totally give up and become quite dependent on the good will of those around him. A perpetually sad affect or withdrawn demeanor might serve this goal well.

Empathy

A second key ingredient in interdependence is the capacity for empathy. Empathy draws a person out of the self and into the sphere of others, allowing them to influence his feelings, thoughts, and behaviors. It involves a complex interplay of affective and cognitive skills. An empathic response requires the perception and identification of specific emotions in others, the capacity to take another person's perspective in order to comprehend that person's emotional state, and the openness to feel similar feelings (Zahn-Waxler & Radke-Yarrow, 1990). This affect and cognitive processing will then provide the rationale for acting in a way that is beneficial for the person with whom one is empathizing. In other words, empathy provides the emotional fuel for prosocial actions.

Empathy and affect regulation go hand in hand. If a child has not developed the ability to regulate affect, another's distress is likely to trigger feelings of personal discomfort rather than feelings of empathy (Larsen, Diener, & Cropanzano, 1987). Consequently, the child is then likely to respond by rejecting and distancing from the distressed other rather than empathizing and helping. This is another similarity to the concept of reflective function discussed earlier: the empathic person can not only enter into the consciousness of the other to imagine and feel what he is going through; the empathic person can also contain these feelings.

Moral Code

A third aspect of interdependence is the capacity for morality that guides both one's goals as well as the behaviors chosen for enactment. A child may "do the right thing" because of a desire to avoid punishment, because of a desire to please others, or because it is part of the social contract of living with others in the world. These examples represent steps along the way in one's moral development (Kohlberg, 1976), but it is the latter step that represents an internalized sense of interdependence, involving conceptions of justice and fairness and what benefits the whole, rather than just the self.

A young child is not yet capable of such a moral code, but the steps along the way depend on a number of developmental and interactional processes involving, for example: the capacity for emotions such as anxiety, guilt, shame, and pride; cogni-

tive development that facilitates an understanding of, sensitivity to, and memory for standards; and the motivational processes that influence a child's internalization of others' values, which are, in turn, influenced by the child's relationship to these others, e.g., the attachment relationship, as well as the child's temperament (Kochanska & Thompson, 1997; Sroufe, 1996).

Prosocial Behaviors

A fourth capacity for interdependence is the child's willingness and ability to enact prosocial behaviors such as helping, sharing, comforting, acting altruistically, cooperating, (Adler, 1930; Eisenberg, 1982). While Eisenberg defines prosocial behavior specifically as voluntary behaviors that are enacted without any expectation of benefit to self, this definition is slightly modified to include cooperation in this group of behaviors. Cooperation entails working with others in order to achieve a common goal of mutual benefit. Thus, the revised definition of prosocial behaviors refers to voluntary behaviors enacted for mutual benefit or benefit to others. These behaviors are motivated by empathy for others as well as a developed sense of morality and social justice.

Prosocial behavior is highly dependent on how highly it is valued by individuals within a social group. Cross-cultural research has found wildly varying patterns of social relationships. Some are highly cooperative and others are ruthlessly competitive. The nature of social behavior does not depend on the availability of resources since both patterns have been found in societies plagued by chronic scarcity of resources (Staub, 1992).

The foundation of prosocial behavior is the attachment relationship and, indeed, many empirical relationships have been demonstrated between parent-infant attachment and children's social competence and cooperation in preschool and elementary school (Shulman, Elicker, & Sroufe, 1994; Sroufe, 1983; Sroufe, Carlson, & Shulman, 1993), in adolescence (Sroufe et al., 1993), and young adulthood (Egeland & Erickson, 1999).

Parenting Processes Associated with Interdependence

What parenting processes are important for the development of affect regulation, empathy, morality, and prosocial behavior? Certainly the reflective, sensitive, and responsive caregiving behaviors that underlie the development of the attachment relationship are fundamental (Kochanska & Thompson, 1997). They provide an internal working model of relationships that the child can use to guide interdependent interactions (Bowlby, 1969/1982). But merely treating a child well and developing a secure attachment is not enough to stimulate the development of interdependent feelings, thoughts, and behaviors. It is absolutely necessary, but not sufficient. Five other parenting strategies are associated with children's development of their capacities for affect regulation, empathy, morality, and prosocial behavior.

Through *setting limits and providing consequences* for inappropriate behavior, a child learns how his behavior affects others and what is acceptable. If the parent-child relationship is a good one, the child has an incentive for maintaining it by learning to channel his affect and behavior in more prosocial directions.

In addition, Schore (1994) argues that the physiological effects of limits are central to the development of affect regulation and prosocial behavior. Limits often create painful, but necessary, triggering of shame states in the child, which propel the child into an intensified low arousal state. This stressful state is associated with the elevation of corticosteroid levels and parasympathetic vagal activity, both of which facilitate maturation of the

orbitofrontal cortex, an area of the brain directly involved in affect regulation and behavioral inhibition capacities.

Setting limits and providing consequences tend to focus the child on the standards for unacceptable behavior, but *encouragement* emphasizes the acceptable alternatives. It builds on and strengthens the positive parent-child relationship, as the child feels a sense of accomplishment in doing what is required by a situation.

Modeling of interdependent behaviors is also an important parenting process. Parents who, for example, display an ability to regulate their own affect—in particular to inhibit strong negative emotions—tend to have children who display higher levels of prosocial behavior and sympathy (Denham & Grout, 1993; Eisenberg, Fabes, Carlo, et al., 1992b), who negotiate during conflict, and who perform better on emotion-understanding tasks (Dunn & Brown, 1994). Prosocial models have especially powerful effects early in a child's life. By the end of the preschool years, children have internalized prosocial rules from repeated experiences of observing others help and give and of being encouraged to behave in similar ways themselves (Mussen & Eisenberg-Berg, 1977).

The *acceptance and encouragement of emotional expression* is also important in the development of affect regulation and empathy. Parents who accept their children's feelings and encourage them to express emotion in socially appropriate ways are likely to have empathic, emotionally expressive children (Eisenberg, Fabes, Carlo, & Karbon, 1992a; Eisenberg, Fabes, Schaller, et al., 1991; Eisenberg, Schaller, Fabes, et al., 1988; Fabes, Eisenberg, & Eisenbud, 1993; Roberts & Strayer, 1987).

The fifth strategy for guiding children toward interdependence is employing *reflective dialogues* with children about their own and others' feelings, thoughts, and behaviors. These dialogues are especially helpful when they validate the child's emotions, encourage him to examine the impact of his behavior on others—a process called induction (Hoffman, 1983), and engage the child in problem solving. The first step in validating a child's emotions is to identify and label the emotion. Children may be surprised to learn that other people not only understand these feelings but have them as well. Naming them provides one way of containing and/or using them productively.

The inductive process of examining the child's behavior and its impact on others is helpful not only because it calls attention to the problematic effects of the behavior, but also because it clarifies the impact of the child's actions on others, which encourages the child to empathize with others. It may be helpful for parents to guide their children to think not only about the effect of their actions but their goal. Questions such as, "How do you want your friend to feel?" are useful for this purpose. Parents' consistent use of inductive reasoning promotes their children's prosocial behavior, e.g., making up for misdeeds, and spontaneously giving hugs, toys, and verbal sympathy to others in distress (Zahn-Waxler, Radke-Yarrow, & King, 1979). A form of parent-child reflective dialogue called "emotion coaching" has been shown to have positive benefits on children's peer relationships and academic achievement (Gottman et al., 1997).

SYSTEMIC INFLUENCES ON PARENTING PROCESSES

The parenting processes associated with attachment, mastery, and interdependence occur in the context of both individual and larger systems that have an impact on them and on child development. While it is beyond the scope of this article to review these influences in de-

tail, factors from four components of family life—child, parent, marital, and extrafamilial context—appear to have a significant influence on parenting processes and their outcomes.

Child characteristics include heritable attributes such as temperament, cognitive skills, gender. These attributes not only influence a child's behavior but also evoke responses from the important others in his or her life (Reiss, Pedersen, Cederblad, et al., 2001). This nature-nurture interaction can influence a child's development in both positive and negative ways. A child's temperament, for example, may make it more or less difficult for the parent to interpret and respond to the child's needs (Thomas, Chess, & Birch, 1968; Chess & Thomas, 1984). Further, if there is a "goodness of fit" (Thomas & Chess, 1977) between the child and parent, i.e., the child fulfills the parents' expectations in some positive way, then the likelihood of a positive outcome is higher than if the fit is poor.

Parents bring a number of attributes to their relationships with their children that influence their ability to engage in the parenting processes outlined above. These include their own attachment histories and the degree to which they have, or have not, come to terms with them, referred to as *adult attachment* (Main, Kaplan, & Cassidy, 1985). Other aspects of parents' developmental histories (experience with positive affect, the degree to which their own striving and mastery were promoted, the guidance they received from their own parents) will also influence parenting processes. Also important are parents' individual characteristics including, for example, their own temperament as well their degree of psychological health. Mental illness, e.g., depression, schizophrenia, has been shown to interfere with the development of secure attachment relationships with children (Seifer & Dickstein, 1993; Teti, Gelfand, Messinger, & Isabella, 1995), and is associated with poor child development outcomes (Bernstein, Jeremy, & Marcus, 1986; Cummings & Davies, 1994). It is important to note that these parental characteristics are a cumulative product of both genetic and environmental influences (Reiss, Cederblad, Pedersen, et al., 2001).

Social support, coming from the nuclear or extended family or from friends and community, has been found to influence parenting processes. Marital conflict is associated with insecure attachment relationships (Belsky, 1999). Social support is a protective factor for both depression (Brown & Harris, 1978) and child abuse (Simons, Whitbeck, Conger, & Chyi-In, 1991).

Extrafamilial influences such as work, socioeconomic status, culture, religion, community characteristics, may have either positive or negative impacts on the child directly or indirectly as they are mediated by other family members. These factors may support parents' efforts to be reflective and responsive, i.e., a sense of pride in one's culture and heritage, or may represent stresses that interfere with parenting processes, i.e., poverty (Halpern, 1993).

SUMMARY

Parenting in Western societies requires more than a preparation for the "rugged individualism" so often portrayed as the American ideal. It requires that children learn a certain kind of independence, involving competence, confidence, and courage to risk failure. But it also requires that children learn how to live cooperatively and productively with one another. This is what is meant by the term *interdependence.*

The Parenting Processes Model lays out the parenting processes that help children develop their capacities for interdependence. It encompasses three parent-

TABLE
Summary of Parenting Domains in the Parenting Processes Model

Parenting Domain 1: Developing a Secure Attachment	
Parenting Processes	**Developmental Outcomes**
Sensitivity	Attachment relationship
Responsiveness	Capacity for pleasure and joy in relationships
Reflective function	Capacity for a wide range of affective experience
Facilitation of child's emotional capacities	
Parenting Domain 2: Promoting Striving and Mastery	
Parenting Processes	**Developmental Outcomes**
Accepting child where he or she is	Sensory-motor, cognitive, linguistic, social-emotional skills
Providing a safe and stimulating environment	Self-efficacy
Scaffolding	Capacity to tolerate frustration and uncertainty and to delay gratification
Tolerating the tension in the struggle	Self-worth
Implementing teaching strategies	
Encouraging dramatic play	
Parenting Domain 3: Guiding the Child Toward Interdependence	
Parenting Processes	**Developmental Outcomes**
Limit-setting and provision of consequences	Affect regulation
Encouragement	Empathy
Modeling	Moral code
Facilitating emotional expression	Prosocial behavior
Engaging child in reflective dialogues	

ing domains (1) developing a secure attachment, (2) promoting striving and mastery, and (3) guiding the child to interdependence. The Table summarizes the parenting processes and child development outcomes involved in each of these parenting domains.

Across all three domains of parenting, there are several common threads. The first is a deep acceptance of the child, and a willingness to meet the child wherever he or she is. Second is a contingent responsiveness that requires a careful observation of the needs of the child and the ability to provide what is needed at the moment. Third is guiding the child through the zone of proximal development, overshooting by just a little his current capabilities with the aim of encouraging development a little farther along the way. This can be accomplished as simply as waiting a little bit longer to respond to his cries, or as sophisticated as engaging the child in a reflective dialogue to stretch his problem-solving capacities. Finally, there is the ability and willingness for parents to enjoy the pleasures and to tolerate the discomforts of childrearing.

One could argue that the concept of interdependence is too utopian and, while it may be theoretically possible to attain, we are far from realizing it. Certainly we are far from it, but it is an optimistic and inspiring ideal toward which to move.

REFERENCES

Adler, A. 1927/1992. *Understanding human nature.* Oxford: Oneworld Publications.

Adler, A. (1930). *The education of children.* London: George Allen & Unwin Ltd.

Adler, A. (1933). *Social interest: A challenge to mankind* (Trans. by J. Linton & R. Vaughan). London: Faber & Faber.

Ainsworth, M.D.S. (1989). Attachments beyond infancy. *American Psychologist 44:* 709–716.

Ansbacher, H.L., & Ansbacher, R. (eds.). (1956). *The individual psychology of Alfred Adler.* New York: Basic Books.

Bandura, A. (1992). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist 28:* 117–148.

Belsky, J. (1999). Interactional and contextual determinants of attachment security (pp. 249–264). In J. Cassidy & P.R. Shaver (eds.), *Handbook of attachment: Theory, research, and clinical applications.* New York: Guilford Press.

Belsky, J., Garduque, L., & Hrncir, E. (1984). Assessing performance, competence, and executive capacity in infant play: Relations to home environment and security of attachment. *Developmental Psychology 20:* 406–417.

Bernstein, V.J., Jeremy, R.J., & Marcus, J. (1986). Mother-infant interaction in multiproblem families: Finding those at risk. *Journal of the American Academy of Child Psychiatry 5:* 631–640.

Bornstein, M.H. (1989). Between caretakers and their young: Two modes of interaction and their consequences for cognitive growth (pp. 197–216). In M.H. Bornstein & J.S. Bruner (eds.), *Interaction in human development.* Hillsdale NJ: Lawrence Erlbaum Associates.

Bowlby, J. (1969/1982). *Attachment and loss: Vol. 1. Attachment.* New York: Basic Books.

Bowlby, J. (1979). *The making and breaking of affectional bonds.* London: Tavistock.

Bradley, R.H., & Caldwell, B.M. (1981). The HOME inventory: A validation of the preschool scale for black children. *Child Development 52:* 708–710.

Brazelton, T.B., & Cramer, B.G. (1990). *The earliest relationship.* Reading MA: Addison-Wesley.

Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental Psychology 28:* 759–775.

Brown, G.W., & Harris, T.O. (1978). *Social origins of depression: A study of psychiatric disorder in women.* New York: Free Press.

Bruner, J.S. (1983). *Child's talk: Learning to use language.* Oxford: Oxford University Press.

Campos, J.J., Campos, R., & Barrett, K.C. (1989). Emergent themes in the study of emotional development and emotion regulation. *Developmental Psychology 25:* 394–402.

Cassidy, J. (1999). The nature of the child's ties (pp. 3–20). In J. Cassidy & P.R. Shaver (eds.), *Handbook of attachment: Theory, research, and clinical applications.* New York: Guilford Press.

Cassidy, J., & Berlin, L.J. (1994). The insecure/ambivalent pattern of attachment: Theory and research. *Child Development 65:* 971–991.

Chess, S., & Thomas, A. (1984). *Origins and evolution of behavior disorders.* New York: Brunner/Mazel.

Cummings, E.M., & Davies, P.T. (1994). Maternal depression and child development. *Journal of Child Psychology and Psychiatry 35:* 73–112.

Denham, S.A., & Grout, L. (1993). Socialization of emotion: Pathway to preschoolers' emotional and social competence. *Journal of Nonverbal Behavior 17:* 205–227.

Dunn, J., & Brown, J. (1994). Affect expression in the family, children's understanding of emotions, and their interactions with others. *Merrill-Palmer Quarterly 40:* 120–137.

Egeland, B., & Erickson, M.F. (1999). Findings from the Parent Child Project and implications for early intervention. *Zero to Three 20:* 3–10.

Eisenberg, N. (1982). The development of reasoning regarding prosocial behavior (pp. 219–249). In N. Eisenberg (ed.), *The development of prosocial behavior.* New York: Academic Press.

Eisenberg, N., Fabes, R.A., Carlo, G., & Karbon, M. (1992). Emotional responsivity to others: Behavioral correlates and socialization antecedents. In N. Eisenberg & R.A. Fabes (eds.), *New directions for child development 55:* 57–73.

Eisenberg, N., Fabes, R.A., Carlo, G., Troyer, D., Speer, A.L., Karbon, M., & Switzer, G. (1992). The relations of maternal practices and characteristics to children's vicarious emotional responsiveness. *Child Development 63:* 583–602.

Eisenberg, N., Fabes, R.A., Schaller, M., Carlo, G., & Miller, P.A. (1991). The relations of parental characteristics and practices to

children's vicarious emotional responding. *Child Development 62:* 1393–1408.

Eisenberg, N., Schaller, M., Fabes, R.A., Bustamante, D., Mathy, R.M., Shell, R., & Rhodes, K. (1988). Differentiation of personal distress and sympathy in children and adults. *Developmental Psychology 24:* 766–775.

Emde, R.N. (1989). The infant's relationship experience: Developmental and affective aspects (pp. 33–51). In A.J. Sameroff & R.N. Emde (eds.), *Relationship disturbances in early childhood.* New York: Basic Books.

Emde, R.N., & Robinson, J. (2000). Guiding principles for a theory of early intervention: A developmental-psychoanalytic perspective (pp. 160–178). In J.P. Shonkoff & S.J. Meisels (eds.), *Handbook of early childhood intervention* (2nd ed.). New York: Cambridge University Press.

Erickson, E.H. (1950). *Childhood and society.* New York: W.W. Norton.

Fabes, R.A., Eisenberg, N., & Eisenbud, L. (1993). Behavioral and physiological correlates of children's reactions to others in distress. *Developmental Psychology 4:* 655–663.

Fiese, B. (1990). Playful relationships: A contextual analysis of mother-toddler interaction and symbolic play. *Child Development 61:* 1648–1656.

Fonagy, P., Steele, M., Steele, H., Leigh, T., Kennedy, R., Mattoon, G., & Target, M. (1995). Attachment, the reflective self, and borderline states (pp. 233–278). In S. Goldberg, R. Muir, & J. Kerr (eds.), *Attachment theory: Social, developmental, and clinical perspectives.* Hillsdale NJ: The Analytic Press.

Gottman, J.M., Katz, L.F., & Hooven, C. (1997). *Meta-emotion: How families communicate emotionally.* Mahwah NJ: Lawrence Erlbaum Associates.

Grossmann, K., Grossmann, K., & Zimmermann, P. (1999). A wider view of attachment and exploration: Stability and change during the years of immaturity (pp. 760–786). In J. Cassidy & P.R. Shaver (eds.), *Handbook of attachment: Theory, research, and clinical applications.* New York: Guilford Press.

Halpern, R. (1993). Poverty and infant development (pp. 73–86). In C.H. Zeanah (ed.), *Handbook of infant mental health.* New York: Guilford Press.

Hart, B., & Risley, T.R. (1995). *Meaningful differences in the everyday experience of young American children.* Baltimore: P.H. Brookes Publishing Co.

Harter, S. (1978). Effectance motivation reconsidered. *Human Development 21:* 34–64.

Hoffman, M.L. (1983). Affective and cognitive processes in moral internalization (pp. 236–274). In E.T. Higgins, D.N. Ruble, & W.W. Hartup (eds.), *Social cognition and social development: A sociocultural perspective.* Cambridge: Cambridge University Press.

Kochanska, G., & Thompson, R. (1997). The emergence and development of conscience in toddlerhood and early childhood (pp. 53–77). In J.E. Grusec & L. Kuczynski (eds.), *Parenting and children's internalization of values: A handbook of contemporary theory.* New York: John Wiley & Sons.

Kohlberg, L. (1976). Moral stages and moralization: The cognitive-developmental approach (pp. 31–53). In T. Lickona (ed.), *Moral development and behavior: Theory, research, and social issues.* New York: Henry Holt.

Larsen, R.J., Diener, E., & Cropanzano, R.A. (1987). Cognitive operations associated with individual differences in affect intensity. *Journal of Personality and Social Psychology 53:* 767–774.

Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation (pp. 66–104). In J. Bretherton & E. Waters (eds.), Growing points of attachment theory and research. *Monographs of the Society for Research in Child Development 50*[2–3, Serial No. 209].

Maslow, Abraham. (1987). *Motivation and personality* (3rd ed.). New York: Harper & Row.

Mayes, L., & Zigler, E. (1992). An observational study of the affective concomitants of mastery in infants. *Journal of Child Psychology & Psychiatry & Allied Disciplines 33:* 659–667.

Mussen, P., & Eisenberg-Berg, N. (1977). *Roots of caring, sharing, and helping.* San Francisco: W.H. Freeman & Co.

O'Reilly, A.W., & Bornstein, M.H. (1993).

Caregiver-child interaction in play (pp. 55–66). In M.H. Bornstein & A.W. O'Reilly (eds.), *New directions for child development* (No. 59). San Francisco: Jossey-Bass.

Pawl, J.H. (1995). The therapeutic relationship as human connectedness: Being held in another's mind. *Zero to Three 15:* 1–7.

Reiss, D., Cederblad, M., Pedersen, N.L., Lichtenstein, P., Elthammar, O., Neiderhiser, J.M., & Hansson, K. (2001). Genetic probes of three theories of maternal adjustment: II. Genetic and environmental influences. *Family Process 40:* 261–272.

Reiss, D., Pedersen, N.L., Cederblad, M., Lichtenstein, P., Hansson, K., Neiderhiser, J.M., & Elthammar, O. (2001). Genetic probes of three theories of maternal adjustment: I. Recent evidence and a model. *Family Process 40:* 247–259.

Roberts, W., & Strayer, J. (1987). Parents' responses to the emotional distress of their children: Relations with children's competence. *Developmental Psychology 23:* 415–422.

Rothbart, M.K., Taylor, S.B., & Tucker, D.M. (1989). Right-sided facial asymmetry in infant emotional expression. *Neuropsychologia 27:* 675–687.

Schore, A.N. (1994). *Affect regulation and the origin of the self: The neurobiology of emotional development.* Hillsdale NJ: Lawrence Erlbaum Associates.

Seifer, R., & Dickstein, S. (1993). Parental mental illness and infant development (pp. 120–142). In C.H. Zeanah (ed.), *Handbook of infant mental health.* New York: Guilford Press.

Shulman, S., Elicker, J., & Sroufe, L.A. (1994). Stages of friendship and growth in preadolescence as related to attachment history. *Journal of Social and Personal Relationships 11:* 341–361.

Siegel, D. (1999). *The developing mind: Toward a neurobiology of interpersonal experience.* New York: Guilford Press.

Simons, R.L., Whitbeck, L.B., Conger, R.D., and Chyi-In, W. (1991). Intergenerational transmission of harsh parenting. *Developmental Psychology 27:* 159–171.

Sroufe, L.A. (1983). Infant-caregiver attachment and patterns of adaptation in preschool: The roots of maladaptation and competence (pp. 41–83). In M. Perlmutter (ed.), *The Minnesota Symposia on Child Psychology, Volume 16: Development and policy concerning children with special needs.* Hillsdale NJ: Lawrence Erlbaum Associates.

Sroufe, L.A. (1996). *Emotional development: The organization of emotional life in the early years.* New York: Cambridge University Press.

Sroufe, L.A., Carlson, E., & Shulman, S. (1993). Individuals in relationships: Development from infancy through adolescence (pp. 315–342). In D.C. Funder, R.D. Parke, C. Tomilson-Keasey, & K. Wideman (eds.), *Studying lives through time: Personality and development.* Washington DC: American Psychological Association.

Staub, E. (1992). The origins of aggression and the creation of positive relations among groups (pp. 89–120). In S. Staub & P. Green (eds.), *Psychology and social responsibility: Facing global challenges.* New York: New York University Press.

Stein, H.T., & Edwards, M.E. (1998). Adlerian philosophy, theory, and practice (pp. 110–141). In P. Marcus & A. Rosenberg (eds.), *Psychoanalytic versions of the human condition and clinical practice.* New York: New York University Press.

Stern, D.N. (1985). *The interpersonal world of the infant.* New York: Basic Books.

Teti, D.M., Gelfand, D.M., Messinger, D.S., & Isabella, R. (1995). Maternal depression and the quality of early attachment: An examination of infants, preschoolers, and their mothers. *Developmental Psychology 31:* 364–376.

Thomas, A., Chess, S., & Birch, H.G. (1970). The origins of personality. *Scientific American 223:* 102–109.

Thomas, A., & Chess, S. (1977). *Temperament and development.* New York: Brunner/Mazel.

Thompson, R.A. (1994). Emotion regulation: A theme in search of definition. *Monographs of the Society for Research in Child Development 59:* 25–52, 250–283.

Tronick, E. (1989). Emotions and emotional communication in infants. *American Psychologist 44:* 112–119.

Vygotsky, L.S. (1978). *Mind in society: The*

development of higher mental processes. Cambridge: Harvard University Press.

Wertsch, J.V., & Tulviste, P. (1992). L.S. Vygotsky and contemporary developmental psychology. *Developmental Psychology 28:* 548–557.

Wood, D.J. (1989). Social interaction as tutoring (pp. 59–82). In M.H. Bornstein & J.S. Bruner (eds.), *Interaction in human development.* Hillsdale NJ: Lawrence Erlbaum Associates.

Zahn-Waxler, C., & Radke-Yarrow, M. (1990). The origins of empathic concern. *Motivation and Emotion 14:* 107–130.

Zahn-Waxler, C., Radke-Yarrow, M., & King, R.M. (1979). Childrearing and children's prosocial initiations toward victims of distress. *Child Development 50:* 319–330.

Copyright © 2002 EBSCO Publishing