

Chapter 38

A Lifespan Perspective on Attachment and Care for Others

Empathy, Altruism, and Prosocial Behavior

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Attachment theory (Bowlby, 1969/1982, 1973, 1980) is, at its core, a theory of prosocial behavior. It explains how, in early childhood, interactions with mindful, caring, and supportive parental figures (“attachment figures”) create and solidify children’s positive mental representations of others (as competent, dependable, and well intentioned), their pervasive sense of safety and security, and their ability to recognize, acknowledge, and regulate emotions. The theory has been supported by decades of developmental research, summarized in this volume, which implies the existence of an intergenerational transmission of security (or insecurity) that potentially creates a continuing cross-generational stream of prosocial behavior—or its absence. The extension of the theory to some of the topics encountered in the broader psychological literature on prosocial behavior—empathy, compassion, generosity, forgiveness, and altruism (Mikulincer & Shaver, 2010, 2012)—is quite natural, and in recent years it has been accomplished in studies of the prosocial behavior of children, adolescents, and adults.

Our purpose in this chapter is to highlight attachment-related research on prosocial behavior in different phases of the lifespan. We begin with a brief explanation of how the theory’s basic concepts relate to prosocial attitudes, motives, emotions, and behavior. This explanation is summarized in a conceptual model of the association between parental sensitive responsiveness on one hand, and a child’s empathy and prosocial behavior on the other, mediated by the child’s attachment security, internal working models (IWMs), and effective emotion regulation. We follow the theoretical introduction with two major sections on prosocial emotions and behavior in childhood and in adulthood. We conclude the chapter with suggestions for future research involving children and adults.

Basic Concepts of Attachment Theory in Relation to Prosociality

As explained more fully in other chapters of this volume, attachment theory is organized in terms of

several basic concepts: the attachment behavioral system, the caregiving behavioral system, the felt sense of security, working models of self and others, and emotion regulation (see, in this volume, Cassidy, Chapter 1; Bretherton & Munholland, Chapter 4; B. C. Feeney & Woodhouse, Chapter 36; and Mikulincer & Shaver, Chapter 24). The attachment behavioral system was postulated by Bowlby (1969/1982) to explain the observable tendency of primate infants to maintain proximity to their mother, especially in novel or unpredictable environments, and to cling to her when threats arise (often, in the natural environment, as she moves into and through trees to avoid predators). In the human case, although we are born with a grasping reflex that allowed our primate ancestors to cling to a mother's fur, the attachment system emerges slowly during the first months of life, but it gradually matures sufficiently to orient a baby to its familiar caregivers, to move the baby closer to them in response to threats and fears, and to regulate the baby's sense of safety in response to a caregiver's protection, support, and soothing.

Bowlby (1969/1982) also postulated the existence of a caregiving behavioral system to explain humans' seemingly natural capacity for empathy, compassion, and care—features evident in the behavior of parents who respond sensitively to their children's signs of vulnerability and need. These features are not limited to parental behavior but also are evident in the observable tendency of children and adults to become concerned when they encounter other people who are suffering or in need and, often, to be motivated to relieve this suffering or respond to others' needs. Within a person's developmental history, parameters of the universally present attachment behavioral system are modified in response to caregivers' behavior, and the same experiences affect the caregiving behavioral system, causing a complex web of connections between the person's attachment and caregiving cognitions, emotions, and behavior.

According to Bowlby (1969/1982), the caregiving system is designed to provide protection and support to others who are either chronically dependent or temporarily in need. It is inherently altruistic in nature, being aimed at the alleviation of others' distress, although the system itself presumably evolved because it increased inclusive fitness by making it more likely that children and tribe members with whom the individual shared genes would survive and reproduce (Batson, 2010; de Waal, 2008; Hamilton, 1964; MacLean, 1985). Within attachment theory, the caregiving system

provides an entrée to the study of compassion and altruism; moreover, understanding this system provides a foundation for devising ways to increase people's compassion and effective altruism.

The caregiving system is focused on the welfare of others and therefore directs attention to others' distress rather than to one's own needs. In its prototypical form—that is, in the parent-child relationship—the goal of the child's attachment system (proximity that fosters protection, reduces distress, increases safety, and establishes a secure base) is also the goal of the parent's caregiving system. Extending this conceptualization to the broader realm of compassion and altruism, we view the caregiving system as activated by the presence of a distressed person, even a stranger in need, its aim being to alter the needy person's condition until signs of increased safety, well-being, and security appear. This system's functioning can be undermined by anxiety and self-concern on the part of the potential care provider, which is why attachment insecurity often undermines or interferes with effective care. In contrast, a sense of attachment security allows a person to attend less to his or her own concerns and shift attention to providing care.

Theoretically, being secure implies that one has witnessed, experienced, and benefited from generous attachment figures' sensitive and effective care, which provides a model to follow when one encounters a vulnerable or needy other. Secure individuals also feel more comfortable than insecure ones with intimacy and interdependence, so they can more readily accept other people's needs for closeness, sympathy, and support. The positive mental representations (working models) of others that are associated with attachment security (see Bretherton & Munholland, Chapter 4, this volume) make it easier to construe others as deserving of sympathy and support, hence compelling one to care for them. Moreover, secure individuals' positive model of self (Bartholomew & Horowitz, 1991; Bowlby, 1969/1982) allows them to feel more confident about their ability to handle another person's needs while effectively regulating their own emotions (e.g., Batson, 2010).

In contrast, an insecure person is likely to have vulnerable, defended self-esteem, if not an outright negative model of self. He or she is likely to be wary of others' potential for neglect, harsh criticism, rejection, or abuse. Stated this baldly, it is clear why security might be conducive to empathy and prosocial behavior, whereas insecurity might be conducive to self-concern, self-protect-

tion, defensive rejection of others' needs, and mistimed or misguided efforts to understand and help others.

As explained in other chapters in this volume (e.g., Solomon & George, Chapter 18), Ainsworth, Blehar, Waters, and Wall (1978) established methods for identifying and categorizing different patterns of attachment (secure, anxious/ambivalent or resistant, and avoidant) that emerge during the first two years of life as a result of caregivers' behavior. In their book, Ainsworth and colleagues (1978) also demonstrated that two main dimensions, anxiety and avoidance, underlie the three patterns of attachment. Subsequent research on adult attachment established similar categorization schemes for adults, using either interviews (e.g., the Adult Attachment Interview [AAI]; Hesse, Chapter 26, this volume) or adult self-report measures of attachment anxiety and avoidance (e.g., the Experiences in Close Relationships scale [ECR]; Brennan, Clark, & Shaver, 1998; see Crowell, Fraley, & Roisman, Chapter 27, this volume). In the following section, we explore attachment-related childhood roots of care for others.

Childhood Roots of Care for Others

The capacity to care for others' well-being is rooted in early development. Children as young as 8 months of age display concern for others' suffering and in some contexts will act to relieve their pain (Roth-Hanania, Davidov, & Zahn-Waxler, 2011; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). Among the multiple factors that comprise care for others, two of the most important are empathy and prosocial behavior. *Empathy* is an experience of affective resonance with another's emotions, along with a sense of concern for his or her welfare; it may also include cognitive apprehension of another's condition or needs (Decety & Meyer, 2008; Eisenberg, 2000; Hoffman, 1984, 2001). *Prosocial behavior* is voluntary behavior intended to benefit others (Grusec, Hastings, & Almas, 2011); like empathy, prosocial behavior may occur in response to distress, but it may also arise in response to other cues such as instrumental or material need (Dunfield & Kuhlmeier, 2013). In addition to these dimensions, *compassion* refers to the feeling of care for others' suffering, as well as the intention to relieve their suffering (Dalai

Lama, 2001; Gillath, Shaver, & Mikulincer, 2005; Halifax, 2012; Siegel & Germer, 2012). Compassion is similar in many respects to empathy, but it involves a sense of acceptance, tenderness, and motivation to act to relieve suffering, and it tends to result in more positive affect than does empathy (Klimecki, Leiberg, Richard, & Singer, 2014). Despite its clear connection to concern for others, virtually no research has specifically examined the development of compassion in children, although some classroom interventions cite compassion as a desired outcome (Greenberg & Harris, 2012).

Together, empathy and prosocial behavior have been the foci of most of the empirical and theoretical work on children's capacity to care. Because this chapter is concerned with care for others, we focus on empathy and prosocial behavior in this section, emphasizing children's comforting of others in response to distress and/or global measures of prosociality, and omit discussion of specific noncaring social capacities such as compliance, cooperation, social competence, affection, and moral reasoning (but see Thompson, Chapter 16, this volume).

Although concern for others' welfare is part of normative development, clear individual differences in empathy and prosocial behavior are evident across childhood, with some children responding to a peer's distress with immediate and overt concern and helpful overtures, and others responding with wariness, hostility, indifference, or distress of their own. These differences are linked to important developmental outcomes, such as peer acceptance, friendship quality, school performance, loneliness, and aggression (Asher & McDonald, 2009; Cassidy & Asher, 1992; Clark & Ladd, 2000; Findlay, Girardi, & Coplan, 2006; Ladd, Birch, & Buhs, 1999; Wentzel, 2003). Given the theoretical basis for expecting a link between attachment and care for others described in the previous section, a key question becomes: Are individual differences in children's empathy and prosocial behavior related to attachment?

We begin by exploring theoretical considerations regarding the link between attachment security and children's emerging capacity to care for others, first by exploring potential mediators of this link, then by discussing the role of parental sensitivity in supporting the development of both security and care for others. We then discuss definitions and operationalizations of empathy and prosocial behavior. Next, we review empirical investigations of the attachment-care link from infancy through adolescence.

Theoretical Considerations

Mediators

As mentioned earlier, Bowlby (1973) proposed that security provides a foundation for the development of children's emotional functioning, particularly the capacity to regulate emotions. Ainsworth's (1969) observations suggested that individual differences in children's attachment representations guide specific patterns of behavior, and that a secure IWM provides the blueprint for mutually responsive social interaction. Both of these concepts—emotion regulation and the secure IWM—are relevant to empathy and prosocial behavior, and provide potential mediating mechanisms in the link between attachment and care for others.

With regard to children's emotional functioning, researchers studying empathy and prosocial behavior in children have long recognized that multiple emotional competencies underlie the capacity to care for others, including emotion recognition and understanding, intersubjectivity, affective resonance, distinction between self and other, perspective taking, and effortful control (Batson, 1991; Davis, 1996; Decety & Jackson, 2004; Ickes, 2003; Kochanska, 1993; Laible, 2004). Attachment has been empirically linked to many of these, with securely attached children consistently showing, for example, better emotion understanding (Denham, Blair, Schmidt, & DeMulder, 2002; Laible & Thompson, 1998; Raikes & Thompson, 2006; see also Thompson, Chapter 16, this volume) and better effortful control compared to their insecure peers (Viddal et al., 2015).

One of the most important and well researched of these competencies is *emotion regulation* (e.g., Eisenberg & Fabes, 1992; Trommsdorff, Friedlmeier, & Mayer, 2007), which allows children to perceive and respond to others' distress without becoming overly distressed themselves. Research has shown that behavioral and physiological indicators of self-regulation are related to children's empathy and prosocial behavior, whereas personal distress (i.e., self-focused, dysregulated negative emotion) is inversely related to or unassociated with empathy and prosocial behavior (Eisenberg, 2000; Eisenberg & Fabes, 1990, 1991, 1995; Fabes, Eisenberg, & Eisenbud, 1993).

The extent to which emotion regulation capacities are linked to individual differences in attachment is striking. Attachment theory holds that emotion regulation arises from repeated experiences of caregivers' sensitive coregulation

of children's distress, and views this capacity as a major mediating mechanism explaining how early experience affects later functioning (Bowlby, 1973, 1980, 1988; Calkins & Leerkes, 2011; Cassidy, 1994; Hofer, 1994; Mikulincer, Shaver, & Pereg, 2003; Schore, 2000; Sroufe, 1996, 2000; Thompson, 1994; see Mikulincer & Shaver, Chapter 24, this volume). Considerable research has demonstrated that securely attached infants, children, and adolescents are better able to regulate emotional arousal (Contreras, Kerns, Weimer, Gentzler, & Tomich, 2000; Kerns, Abraham, Schlegelmilch, & Morgan, 2007; Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993; Kopp, 1989; Leerkes & Wong, 2012; Nachmias, Gunnar, Mangelsdorf, Parritz, & Buss, 1996; Sroufe, 1983, 2005; see Thompson, Chapter 16, this volume). Thus, based on theory and empirical evidence, we join others who have proposed a model in which emotion regulation mediates the link between attachment security and care for others (e.g., Panfile & Laible, 2012).

With regard to cognition, a second pathway by which attachment may be linked to care for others is via the IWM. Through repeated experiences with a responsive caregiver, secure attachment provides children with a mental representation of the self as worthy of and effective in eliciting care, of others as available and responsive to distress, and of the world as a generally safe and caring place. One line of evidence for this part of the model comes from visual habituation studies of infants' responses to geometric representations of a caregiver and child: a large oval and a small oval (Johnson, Dweck, & Chen, 2007; Johnson et al., 2010). In these studies, securely attached infants looked longer at visual displays in which the "caregiver" oval was unresponsive to the "child" oval's distress upon separation, whereas insecure infants looked longer at displays in which the "caregiver" oval was responsive. In each case, infants attended longer to visual displays that were presumed to violate their expectations—that is, their mental representations—that distress would be met with responsive care (in the case of secure infants) or unresponsive care (in the case of insecure infants) (Johnson et al., 2007, 2010). These findings provide evidence for the existence of attachment-based expectations about how social actors respond to others' distress. Specifically, the secure child develops a representation of others as caring, attuned, and responsive (in addition to a representation of the self as likely to receive empathic care from others; Bowlby, 1973; Bretherton, Ridgeway,

& Cassidy, 1990). (For discussions of topics related to the concept of the IWM, see Lyons-Ruth et al., 1998, for the idea of *implicit relational knowing*, and Waters & Waters, 2006, for the idea of *secure-base scripts*.)

The precise mechanism by which the secure model of others as caring becomes integrated into a model of the self as caring for others remains unclear; however, Sroufe and Fleeson (1986) proposed that care leading to secure attachment shows children both sides of a responsive relationship, and that children can draw upon both representations when responding to the needs of others. Empirically, securely attached children tend to have more positive, reciprocal friendships in childhood (Elicker, Englund, & Sroufe, 1992; Shulman, Elicker, & Sroufe, 1994) and more secure IWMs of romantic relationships in adolescence (Furman & Wehner, 1997), suggesting that implicit knowledge of what it means both to give and to receive responsive care is conserved as children enter into close relationships with peers. It is also possible that children incorporate behavioral routines for care in the same way they model other kinds of behavior, such as eating with a spoon, brushing teeth, dancing, or throwing a ball.

Parental Sensitivity

Beyond the roles of emotion regulation and a secure IWM as mediators of the link between attachment and care for others (see solid lines in Figure 38.1), there are other conceptual models that may further illuminate this link. One model

to consider is one in which security and care for others share common developmental antecedents (see dashed lines in Figure 38.1). A wealth of research demonstrates that caregivers' emotionally attuned, consistent responsiveness predicts attachment security in young children (Ainsworth, 1969; Ainsworth et al., 1978; Egeland & Farber, 1984; Isabella, 1993; van den Boom, 1994), and theories of empathic development posit that sensitive parental behavior also contributes to the development of children's care for others (Hoffman, 1977; for evidence, see Eisenberg, Fabes, & Murphy, 1996; Eisenberg et al., 1992, 1993; Garner, 2006; Hastings, Utendale, & Sullivan, 2007; Taylor, Eisenberg, Spinrad, Eggum, & Sulik, 2013).

In addition to being influenced by parental sensitivity, children's care for others appears to be guided by *rules* for responding to distress. According to recent empirical work, even young children (age 3 years) appear to decide which emotional displays are "appropriate" or "inappropriate" and show greater empathy and willingness to help an adult experimenter whose distress is perceived as appropriate to the harm that caused it (Hepach, Vaish, & Tomasello, 2013b). Thus, children assess the appropriateness of emotions and use this assessment to guide their empathy and prosocial responses. It is reasonable to suspect that children learn these decision rules for what constitutes "appropriate" distress through experiences of how their own distress was responded to, which is a key contributor to secure child attachment (e.g., Beckes & Coan, 2015; Leerkes, 2011).

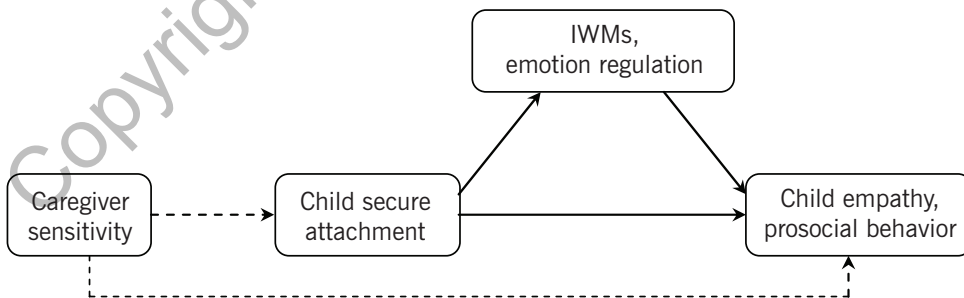


FIGURE 38.1. Model of the link between secure attachment and care for others (i.e., empathy and prosocial behavior) in childhood. Solid lines represent the principal model presented in this chapter, in which the link between secure attachment and care for others are mediated by (1) secure internal working models (IWMs) of self and other, and (2) emotion regulation. Dashed lines represent an additional model, in which caregiver sensitivity provides a common developmental antecedent for both security and care for others.

The perspective of attachment theory on the role of parenting in the development of concern for others differs from that of other conceptual models. Traditional theories of socialization, social learning, and conditioning tend to rest on a top-down, behaviorally oriented approach in which parents' instruction, modeling, reinforcement, and punishment shape children's desired social behavior and the internalization of parental values (Maccoby, 1992). In fact, historically, much of the research on parents' role in the development of concern for others has focused on socialization practices such as discipline and modeling of prosocial action (Hoffman, 1970). In support of these theories, considerable evidence indicates that adults' gentle discipline, inductive reasoning, emotion-focused dialogue, prosocial modeling, and authoritative, noncontrolling parenting style promote children's empathy and prosocial behavior (e.g., Grusec, 1972; Krevans & Gibbs, 1996; Perry, Bussey, & Frieberg, 1981; Rushton, 1975; also see Hastings, Utendale, & Sullivan, 2007). More recently, these models have included the child's role in socialization, with a focus on how children's temperament and view of their parents influence their receptivity to the socialization efforts (e.g., Grusec & Goodnow, 1994; Kochanska, 1997; Maccoby, 1992).

According to Ainsworth, Bell, and Stayton (1974), attachment theory offers a different view. Rather than requiring parents' active socialization efforts, children are thought to be inherently social, biologically predisposed to respond to the social signals of members of their species, and intrinsically motivated to comply with maternal requests, especially within the context of a sensitive, trusting relationship. For instance, Ainsworth and colleagues proposed that the greater compliance with maternal requests that is characteristic of securely attached infants reflects the mutual responsiveness inherent to their IWMs of relationships. (In other words, secure children represent relationships as contexts within which recognition of and responsiveness to the needs of other people are the norm.) The central thesis of this argument is that "socialization results from reciprocal mother-infant responsiveness. When the mother is less sensitive and less responsive to her infant than is expected in the social environment of evolutionary adaptedness, the infant more than likely will be less responsive and hence less compliant to the signals of his mother and other social companions" (pp. 118–119). Extending this view to care for others, we can speculate that empathy and prosocial behavior need not be explicitly taught, but

instead develop naturally in the context of a mutually responsive relationship. Such a relationship provides the repeated firsthand, felt experience of having a secure base and safe haven in times of distress, which may then allow secure individuals to extend such care to distressed others. For recent similar viewpoints about a biologically based predisposition toward caring for others, see Bartal, Decety, and Mason (2011), de Waal (2008), and Warneken and Tomasello (2006).

To point out these distinctions between the attachment and socialization perspectives is not to discount the unique contributions of each to the development of care for others in children. Kochanska (2002) suggested that attachment and socialization work in concert in fostering children's conscience, with security representing a "mutually responsive orientation" that renders children more willing to accept and integrate parents' socialization influence. In support of this view, she observed that the effects of positive parenting on children's conscience held only for securely attached children (Kochanska, Aksan, Knaack, & Rhines, 2004). Similarly, Zahn-Waxler, Radke-Yarrow, and King (1979) posited that children must not only witness parents' prosocial modeling and be exposed to prosocial values but must also *experience parents' empathy and prosocial actions themselves* in order to develop these capacities. Thus, socialization may be important, but it does not provide a full picture of parents' role in the development of children's care for others; crucially, the lived experience of having a secure base and safe haven in times of distress provides the foundation for children's ability to regulate emotion and care for others, upon which socialization influences can build.

In summary, multiple theoretical pathways link attachment security to a child's capacity to care for others. Here we focus on how security may contribute to the development of empathy and prosocial behavior, particularly in response to others' distress.

Definitions and Operationalization

In childhood, the definition and operationalization of care for others is particularly complex. As described earlier, *empathy* is the felt, emotional dimension of concern for others' welfare, whereas *prosocial behavior* is the active, behavioral manifestation of that emotion, which encompasses actions intended to benefit others. A critical distinction is that the former refers to an internal state,

the latter to expressed behavior. Thus, a key issue for researchers is how to measure each construct with sensitivity and specificity in young children, before self-reports of internal experience are possible.

Relatedly, some prosocial behavior may be motivated by empathy, but not in every case (Hastings et al., 2007). For example, a child may share a toy with a sad peer out of compliance with a teacher's expectations, or out of deference to the peer's social dominance, rather than out of genuine concern for the peer's well-being (see Hepach, Vaish, & Tomasello, 2013a, for consideration of empirical methods for examining children's underlying motivations for prosocial behavior). Furthermore, children's internal experiences of empathy may not always manifest in prosocial behavior, particularly when the situation is complex or when prosocial intervention would be especially difficult. Therefore, one can neither measure children's prosocial behavior and infer that it reflects empathy, nor measure empathy and assume that prosocial behavior will follow.

Researchers mindful of this distinction have developed separate criteria to measure each dimension (e.g., Zahn-Waxler, Radke-Yarrow, et al., 1992): Empathy is reflected in young children's looks of concern ("concerned attention") or expressions of sadness in response to a sad peer, adult, or parent; prosocial behavior takes the form of helping, sharing, or comforting (among other behaviors), but may or may not be a response to others' distress (Dunfield & Kuhlmeier, 2013). Understanding the link between attachment and children's capacity to care for others requires specificity in measurement and attention to the unique contributions of both empathy and prosocial behavior. With this in mind, we review empirical work on the links between attachment and both empathy and prosocial behavior in childhood.

Empirical Work

Several studies have examined attachment-related differences in care for others from infancy through adolescence. In this section, we divide these studies by developmental period (based on the age of the children when care for others was assessed), and further by the measurement of care (i.e., empathy, prosocial behavior, or a composite). For each developmental period, we begin with a brief summary of age-related changes in attachment relationships, care for others, or both. Then, after reviewing studies of the link between attachment

and care for others within each age group, we discuss evidence for the purported mediational role of child emotion regulation.

Infancy and Toddlerhood

Children's initial attachment relationships develop during their first year of life (Bowlby, 1969/1982; see Marvin, Britner, & Russell, Chapter 13, this volume). Early precursors of empathy are evident during this time as well, such as affect mirroring and "empathic distress" (Hoffman, 2001), as are early indications of empathy (e.g., Roth-Hanania et al., 2011, who noted modest levels of affective and cognitive empathy as early as 8 months). Prosocial behaviors are rare in the first year of life (Roth-Hanania et al., 2011) but become increasingly common between ages 1 and 2 (Zahn-Waxler, Radke-Yarrow, et al., 1992). By their second birthday, almost all infants readily provide instrumental help (Warneken & Tomasello, 2006, reported that 92% of 18-month-old infants provided help in at least one simple situation), and some show concerned attention or provide comfort in response to the distress of peers, siblings, strangers, or their mother (Eisenberg, Fabes, & Spinrad, 2006). In addition, even young infants are able to make social evaluations of others based on their prosocial and antisocial behaviors. For example, 6- and 10-month-old infants show a preference for actors (represented by colored shapes) who helped compared to those who hindered another actor's attempt to attain a goal, an evaluation that may serve as the foundation for later moral action (Hamlin, Wynn, & Bloom, 2007).

Surprisingly, only a handful of studies have investigated attachment-related differences in empathy and/or prosocial behavior among infants and toddlers. In one study, 36-month-olds' attachment security (assessed with mothers' ratings using the Attachment Q-Set [AQS; Waters & Deane, 1985]) was linked to mother-rated empathy, yet was linked only indirectly to observed prosocial behavior through empathy (Panfile & Laible, 2012). In another study, mothers' reports of neither their 1-year-old infants' empathy nor prosocial behavior were associated with infant behavior in the Strange Situation (Carter, Little, Briggs-Gowan, & Kogan, 1999).

Two additional studies used composite measures containing elements of both empathy and prosocial behavior. One longitudinal study of 22- to 23-month-olds recorded empathic responses toward an experimenter who was simulating distress

(Bischof-Köhler, 2000). Toddlers who had been classified as securely attached in the Strange Situation as infants were more likely to show concern and provide help than those who had been classified as insecurely attached. Additional longitudinal evidence came from a study measuring infants' attachment and observed care for others at both 16 and 22 months, toward both the mother and an experimenter simulating distress. Only one of the eight potential associations (two behaviors, two care recipients, two time points) was significant: Infants' security in the Strange Situation at 22 months was positively related to their concurrent empathic concern for the experimenter (van der Mark, Van IJzendoorn, & Bakermans-Kranenburg, 2002). We also mention a third study that, although it lacks a measure of attachment security, seems relevant to the links considered here. Main and George (1985) observed children in a day care setting and reported that abused toddlers (who typically are insecurely attached; Cyr, Euser, Bakermans-Kranenburg, & Van IJzendoorn, 2010) never reacted to a peer's distress with concern, but instead often reacted with physical attacks, fear, or anger.

In contrast to the mixed evidence concerning infants' and toddlers' *behaviors* and *emotions*, studies of their *expectations* about the concern that will be shown in response to the distress of others reveal more consistent attachment-based differences. In a series of studies using a visual habituation paradigm (briefly described earlier), Johnson and colleagues (2007, 2010) demonstrated that securely attached infants expected others (i.e., a large oval) to help someone in distress (i.e., a small oval simulating distress), whereas insecure-avoidant and insecure-resistant infants expected others to withhold comfort. These studies suggest that infants' attachment patterns influence their representations of the ways in which people treat each other, including whether caring and comforting are typical responses to distress.

Earlier, we described a mediation model (Figure 38.1) in which attachment security supports the development of effective emotion regulation, which in turn underlies children's ability to show concern for others without becoming overly aroused with personal distress. The evidence for each of these pathways in infancy and toddlerhood (from attachment to emotion regulation, and from emotion regulation to empathy and prosocial behavior) supports the possibility that such a mediating pathway exists during this developmental period. As noted earlier, several investigators have

argued that the quality of infants' developing attachments contributes to individual differences in emotion regulation (e.g., Cassidy, 1994), and several studies provide empirical evidence (e.g., Hill-Soderlund et al., 2008; Kim, Stifter, Philbrook, & Teti, 2014; Sherman, Stupica, Dykas, Ramos-Marques, & Cassidy, 2013). Infants' greater regulatory skills, in turn, have been associated with prosocial behaviors and empathy (e.g., Carter et al., 1999), as well as the ability to maintain an optimal level of arousal in the face of others' distress (Geangu, Benga, Stahl, & Striano, 2011), a crucial part of empathic concern (Davidov, Zahn-Waxler, Roth-Hanania, & Knafo, 2013). A recent test of this mediation model revealed that toddlers' emotion regulation mediated the association between attachment security and empathy (all mother-reported variables), such that more secure toddlers were better able to regulate their emotions, which then predicted greater empathy (Panfile & Laible, 2012). Furthermore, greater empathy in this study predicted more prosocial behavior toward an experimenter seeking a pacifier to soothe the (recorded) cries of a nearby baby.

In summary, few studies have examined the link between attachment and caring for others during the infancy/toddler period. The mixed evidence that emerges from these studies suggests that other factors may relate to empathy and prosocial behavior more than attachment during this period. Such factors may include genetics (Zahn-Waxler, Robinson, & Emde, 1992, reported modest evidence for heritability of empathy and prosocial behavior at 14 and 20 months) and temperament (van der Mark et al., 2002, found that temperamental fearfulness in 16-month-old girls predicted less empathic concern for a distressed stranger at 22 months). The possibility that infants and toddlers are too young to experience complex social feelings such as empathy in the ways that become more evident by the preschool years may also influence the consistency of the link between attachment and caring for others during this period.

Preschool

The preschool period ushers in developmental changes that affect both children's attachment relationships, such as the emergence of a goal-corrected partnership (see Marvin et al., Chapter 13, this volume), and factors underlying care for others, such as maturing emotion regulation and enhanced executive functioning (Eisenberg & Sulik, 2012; Rothbart, Sheese, Rueda, & Posner,

2011). Opportunities to care for peers in the classroom or for younger siblings in the home increase as preschoolers spend more time in the company of other children.

Evidence for attachment-related differences in care for others during this developmental period emerges from some studies and not from others. Two longitudinal studies of attachment found links with later empathy. In one of these, 1-year-old infants who were classified as secure in the Strange Situation were later rated by their mothers as more sympathetic to their peers' distress at age 3 compared to children who were insecure as infants (Waters, Wippman, & Sroufe, 1979). In the other study, secure attachment (mother-reported with the AQS) and care for others were measured at both 42 and 48 months. Although neither concurrent link was significant, attachment security at 42 months predicted concerned facial expressions during a baby-cry procedure at 48 months, even after researchers controlled for earlier empathy (Murphy & Laible, 2013). In contrast, in a third longitudinal study, attachment quality in the Strange Situation at age 2 did not predict children's reports of their affective responses to emotional photographs at age 5 (Iannotti, Cummings, Pierrehumbert, Milano, & Zahn-Waxler, 1992).

Studies of prosocial behavior are also somewhat mixed. For example, when children (ages 2–7) were left alone in an unfamiliar room with their younger (toddler) sibling, children rated as more secure by their mothers on the AQS were more likely to respond to the sibling's distress with comfort (Teti & Ablard, 1989); however, Volling (2001) found no differences in sibling comforting between 4-year-olds previously classified as secure or insecure in the Strange Situation (with both mother and father) at 12 months. Additionally, in two studies of preschool children, child attachment (mother-reported AQS) was related to concurrent mother-reported prosocial behavior directly (Laible, 2006) and, in a separate sample, indirectly via child effortful control (Laible, 2004).

When peers are the targets of children's prosocial behavior, evidence is similarly mixed, although the inconsistencies may be due to differences in the measurement of attachment. For example, security in the Strange Situation at age 2 predicted observed prosocial behavior toward a peer 3 years later (Iannotti et al., 1992). In contrast, security assessed with an observer-rated AQS did not relate to naturalistic observations of preschoolers' prosociality in the classroom (Mitchell-Copeland, Denham, & DeMulder, 1997), nor did

mother- and father-reported AQS relate to teacher-reported prosociality (Lafrenière, Provost, & Dubeau, 1992). There is also some evidence that secure children are more prosocial with peers than are avoidant, but not resistant, children, a finding that is only possible using a measure of attachment that differentiates the two insecure subtypes (e.g., the Strange Situation). Children who had been secure in the Strange Situation at 12 and 18 months were observed to be more prosocial and empathic in the classroom as preschoolers than those who had been avoidant, but not more than those who had been resistant (Kestenbaum, Farber, & Sroufe, 1989). In the same sample, Sroufe (1983) found that teacher reports of empathic responding were "characteristic" of children who had been secure infants and "uncharacteristic" of children who had been avoidant. The children who had been classified as resistant were between these other two groups.

Turning again to the model wherein the link between attachment and children's care for others is mediated by emotion regulation, we note that emotion regulation continues to develop throughout preschool and remains an important contributor to social interactions. Preschoolers vary widely in their ability to self-regulate, with individual differences in this ability relating to differences in empathy (e.g., Eisenberg & Fabes, 1995). Well-regulated preschoolers can focus on the distress of others in need and respond with empathy because they are better able to control their own emotional arousal (Eisenberg et al., 1990). A recent longitudinal study provides some additional evidence for preschoolers' emotion regulatory capacities predicting concern for others using physiological measures of respiratory sinus arrhythmia (RSA), an indicator of heart rate variability thought to underlie individual differences in emotion regulation and arousal (Taylor, Eisenberg, & Spinrad, 2015). In this study, baseline RSA (for girls and boys) and RSA suppression (for boys only) at 42 months were positively correlated with concurrent mother-reported sympathy. Moreover, a marginally significant indirect path was evident from baseline RSA, at 42 months, to greater mother- and teacher-reported sympathy, at 72 and 84 months, through effortful control at 52 months.

In summary, the majority of studies support a link between secure attachment and care for others among preschoolers, although some inconsistent findings highlight the need for further research. It is worth noting that longitudinal studies provide more consistent evidence than concurrent

studies when care for others is measured during the preschool period and attachment is measured during infancy/toddlerhood, particularly when peers are the targets of care. This pattern could be due to chance, methodological constraints (e.g., perhaps prosocial behavior and empathy are more easily measured in preschoolers), or developmental realities (e.g., early attachment may play a larger role than current attachment in preschoolers' care for others, particularly their peers in the classroom); future research could help tease apart these possibilities. We also note that some studies using the Strange Situation as the measure of attachment quality provide evidence for differential relations between the insecure subtypes, with secure children showing more care for others than avoidant, but not resistant, children.

Early and Middle Childhood

By early and middle childhood, peers begin to play a greater role in children's social development, and demonstration of empathy and prosocial behavior toward peers contributes to friendship formation and popularity (Eisenberg et al., 2006). Developmental advances in theory of mind (i.e., understanding that other people have minds), emotion regulation, and cognitive flexibility allow for enhanced understanding of others' needs (e.g., Devine & Hughes, 2013; Murphy, Eisenberg, Fabes, Shepard, & Guthrie, 1999; Piekny & Maehler, 2013). The attachment behavioral system makes significant developmental advances as well: Its goal shifts from caregiver *proximity* to caregiver *accessibility*, as children are able to handle longer separations with the knowledge that attachment figures will be available if needed (see Kerns & Brumariu, Chapter 17, this volume).

Studies examining attachment-related differences in care for others during early and middle childhood generally assess only behavior (e.g., volunteering to help others, kindness to younger children), rather than empathic internal states. In fact, all but one study assessed care for others using parent or teacher reports of prosocial behavior. The single exception contained observations of 6-year-olds' unsolicited prosocial interactions with their younger siblings in the home and found no behavioral differences between children with secure and insecure attachment histories (assessed at 12 months with the Strange Situation; Volling & Belsky, 1992).

Among the studies using parent and teacher reports of prosocial behavior, the evidence favors

a positive link between security of attachment and prosocial behavior. Two longitudinal studies provide evidence that children who were securely attached earlier in life are more prosocial than children who had been avoidant, but not more than children who had been resistant. In one of these studies, 8- and 9-year-old children who had been secure in the Strange Situation at 15 months were rated as more prosocial (based on a composite of parent and teacher reports) than those who had been avoidant, but not those who had been resistant (Bohlin, Hagekull, & Rydell, 2000). A concurrent link between attachment and prosocial behavior was absent in this study, however, when childhood attachment was assessed with the Separation Anxiety Test (SAT; Slough & Greenberg, 1990; adapted from Klagsbrun & Bowlby, 1976), a measure that does not differentiate insecure subgroups. In the other study, 5-year-olds responding to a modified version of the Attachment Story Completion Task (ASCT; Bretherton & Ridgeway, 1990), with themes indicative of secure attachment representations to parents were rated as more prosocial by their teachers 1 year later than children who had responded with avoidant (but not resistant) themes (Rydell, Bohlin, & Thorell, 2005). An additional longitudinal study suggests that children with secure attachment histories are more prosocial than those with disorganized, but not avoidant or resistant, attachment histories (Seibert & Kerns, 2015). In this study, third- and fifth-grade children who had been classified disorganized at 36 months in the Strange Situation were rated as less prosocial by their mothers than children who had been secure; ratings of previously avoidant and resistant children did not differ from those of any other group. Teacher ratings in this study followed a similar trend, with secure children given the highest ratings and disorganized children given the lowest; however, although omnibus analyses revealed significant differences in prosocial behavior among the four classifications, post hoc tests to clarify the nature of these differences were not significant. In contrast to these three studies, a fourth longitudinal study reported no concurrent or longitudinal associations between attachment (measured at 6 years with observed separation and reunion behavior; Main & Cassidy, 1988, and at 8 years with a modified version of the ASCT) and teacher reports of prosocial behavior at 6 and 8 years (Bureau & Moss, 2010).

Two studies with concurrent measures of attachment and care for others offer mixed findings. First, in a sample of low-income, ethnically diverse

families, 5-year-olds' attachment-related narratives in a story stem task were related to teacher reports—but not mother reports—of the children's prosocial behavior controlling for verbal IQ and sociodemographic risk (Futh, O'Connor, Matias, Green, & Scott, 2008). Second, late elementary school children's perceived attachments to both mother and father (assessed with the self-report Security Scale; Kerns, Klepac, & Cole, 1996) were associated with prosocial behavior (a composite of mother, father, and teacher reports), but only in an overall model that also included "positive parental affection," and only for girls (Michiels, Grietens, Onghena, & Kuppens, 2010). When child-reported attachment was tested as a unique predictor, the association disappeared.

In considering which factors may explain these attachment-based differences in care for others, we once again turn to the example of the emotion regulation mediation model (Figure 1). The evidence supporting this model in early and middle childhood comes from several studies showing that children's ability to regulate emotional arousal predicts greater empathy and prosocial behavior, whereas their dysregulated emotions in response to others' distress (i.e., personal distress) relate negatively to their concern for others (e.g., Eisenberg, Fabes, et al., 1996; Eisenberg et al., 1995, 1998; Fabes, Eisenberg, Karbon, Troyer, & Switzer, 1994; Rothbart, Ahadi, & Hershey, 1994). Additionally, a few studies can be viewed as providing evidence relevant to the full mediational model because they indicate that sensitive parenting (which is consistently linked to attachment security) predicts emotion regulation during early and middle childhood, which in turn predicts child prosocial behavior during this developmental period (see, e.g., Chan, 2011; Davidov & Grusec, 2006).

In conclusion, studies of attachment and care for others in early and middle childhood, as is the case in other developmental periods, are few. In fact, studies of attachment-related differences in empathy during early and middle childhood do not, to our knowledge, exist. The research on prosocial behavior, however, supports a modest association. As with the preschool period, some evidence points to diminished care for others among insecure-avoidant but not insecure-resistant children. We also note another pattern similar to that evident in the preschool period: Longitudinal associations between early-life attachment security and care for others in early and middle childhood are more likely to be present than links between attachment and prosocial behavior when mea-

sured concurrently. Once again, more research is needed, particularly studies using more diverse measures of children's care for others, beyond parent or teacher reports of behavior.

Adolescence

As children enter adolescence, close, intimate friendships and romantic relationships begin to form, opening the possibility of attachment to peers, as well as the potential for practicing the provision of care within these new relational contexts. Significant advances in cognitive and brain development (Paus, 2009; Piaget, 1972), provide adolescents with a more complex understanding of others' emotions and needs, and sophisticated meta-awareness allows adolescents to report more accurately on their own empathy and prosocial behavior. Moreover, adolescents' representations of specific previous and current attachment relationships are gradually joined to form a more global, integrated attachment organization (see Allen & Tan, Chapter 19, this volume). Adolescent attachment is typically examined through self-report measures of attachment to parents (e.g., the Inventory of Parent and Peer Attachment [IPPA]; Armsden & Greenberg, 1987), self-report measures of attachment style more broadly (e.g., the ECR (Brennan et al., 1998), or an interview-based measure of "state of mind with respect to attachment" (the AAI; George, Kaplan, & Main, 1985).

Given the similar methods used for assessing attachment and care for others in adults and adolescents, and the multitude of studies on attachment-based differences in care for others in adulthood (reviewed in the next section), it is surprising that few studies have examined this link during adolescence. The existing studies, however, consistently find that secure adolescents are more empathic and prosocial than insecure adolescents, which provides a point of continuity with the adult literature. Using the IPPA (Armsden & Greenberg, 1987) and the Interpersonal Reactivity Index (IRI; Davis, 1980), Laible, Carlo, and Raffaelli (2000) found that 16-year-olds reporting higher secure attachment to peers (but not to parents) also reported being more empathic, and a combination of high attachment security scores in relation to both peers and parents predicted the highest levels of empathy (although see Andretta et al., 2015, for evidence with African American adolescents involved in the juvenile criminal justice system indicating that, using the same mea-

tures, secure adolescents were not more empathic than their insecure peers; they were, however, substantially more prosocial on the self-reported Adolescent Prosocial Behavior Scale [APBS; Andretta, Woodland, & Worrell, 2014]). In a similar study, Thompson and Gullone (2008) found that 12- to 18-year-old adolescents reporting higher scores on a measure of secure attachment to parents (the parent scale of the revised IPPA; Gullone & Robinson, 2005) also reported being more empathic (using the Index of Empathy for Children and Adolescents; Bryant, 1982) and prosocial (using the Strengths and Difficulties Questionnaire; SDQ; Goodman, 2001). In that study (Thompson & Gullone, 2008), empathy partially mediated the link between attachment and prosocial behavior. In a study with 11- to 16-year-old British students using the same measures of attachment (revised IPPA) and prosocial behavior (SDQ), higher attachment security scores were associated with more prosocial behavior (Oldfield, Humphrey, & Hebron, 2015; see also Chan et al., 2013, for similar results in an ethnically and racially diverse sample using a different self-report measure of prosocial behavior). Another study using the IPPA found evidence for a model wherein attachment to mother and/or peers affects bullying behavior in seventh, eighth, and ninth graders indirectly via their self-reported empathy on the Basic Empathy Scale (BES; Jolliffe & Farrington, 2006). For boys, *cognitive* empathy mediated the indirect effects of attachment to both mother and peers on bullying behavior, whereas for girls, *affective* empathy mediated the effect of attachment to peers on bullying (You, Lee, Lee, & Kim, 2015). Consistent with these studies using the IPPA, studies with other measures of attachment demonstrate positive links as well. One such study found that the level of self-reported secure attachment to the mother and to a friend (using the Relationship Questionnaire; Bartholomew & Horowitz, 1991), but not to father, related to self-reported prosocial behavior among youth in middle and early high school (Markiewicz, Doyle, & Brendgen, 2001; see also Keskin & Çam, 2010, for similar evidence among Turkish youth).

Notably, the two studies from this developmental period with measures of attachment that differentiate the insecure subtypes—the observer-rated Attachment Behavior Classification Procedure (ABCP; Cobb, 1996; Hilburn-Cobb, 1998) and the interview-based AAI—found that only dismissing, and not preoccupied, adolescents re-

ported lower empathy/prosocial behavior, mirroring some of the findings from studies of preschoolers and grade school children demonstrating lower empathy/prosocial behavior among avoidant, but not resistant, children. In one of these studies, using the ABCP, both secure and preoccupied adolescents (ages 11–18) reported greater empathy on the IRI than avoidant adolescents (Hilburn-Cobb, 2004). In the other study, using the AAI, 11th-grade students with a secure/autonomous state of mind were more likely than students with an insecure/dismissing state of mind to be nominated by their peers as being prosocial (Dykas, Ziv, & Cassidy, 2008).

We again consider the emotion regulation mediation model described in relation to previous developmental periods. Adolescence is an important period for the development of brain regions involved in emotion regulation and executive functioning, such as the prefrontal cortex and anterior cingulate cortex; it is not until late adolescence that these regions reach full maturity (Decety & Meyer, 2008). In support of our mediation model, evidence suggests that teens who are more effective at regulating their emotions are also more prosocial (Cui et al., 2015; Kanacri, Pastorelli, Eisenberg, Zuffianò, & Caprara, 2013) and empathic (MacDermott, Gullone, Allen, King, & Tonge, 2010), whereas teens who struggle with self-regulation, such as those with conduct disorder, are less empathic than their peers (Cohen & Strayer, 1996). Moreover, considerable research indicates that secure adolescents are more effective at regulating their emotions than insecure adolescents, and use more adaptive forms of emotion regulation (e.g., Cooper, Shaver, & Collins, 1998; Kobak & Sceery, 1988; Zimmermann, Maier, Winter, & Grossmann, 2001).

In summary, the evidence suggests that securely attached adolescents are more empathic and prosocial than their insecurely attached counterparts, mirroring evidence from the adult literature (reviewed in the next section). More studies of this developmental period are needed, especially ones using non-self-report measures, to provide a more fully developed understanding of the role of secure attachment in adolescents' care for others.

Empirical Studies of Children and Adolescents: Discussion

Research to date provides moderate evidence for a link between attachment security and care for others in childhood. The majority of the empiri-

cal work has focused on preschool-age children, utilizing both adult report and observational measures in naturalistic and laboratory settings, with the weight of the evidence in favor of the hypothesized link. In early and middle childhood, studies have employed a wider variety of methods for assessing attachment and care for others and have yielded less conclusive findings. By the time children enter adolescence, however, the use of self-report measures provides a more direct, standardized methodology for tapping children's empathic and prosocial capacities. Accordingly, although studies with adolescents are few, they provide the most consistent support for an association between attachment security and concern for others before adulthood, and these studies offer a point of continuity with findings from the adult literature (Mikulincer & Shaver, 2005).

The inconsistent findings in the research on children merit exploration. Methodological differences across studies, sometimes as a result of child age, may account for some of the inconsistencies. Before the use of self-report measures becomes possible in adolescence, questionnaire measures of care for others alternately tap parents' and teachers' perceptions of children's apparent concern for peer distress, tendency to share with others spontaneously, helpfulness toward adults, or a combination of these. These reports are likely shaped in part by normative levels of care for others in the child's culture or social group, as well as reporter biases, such as teachers' esteem for more compliant children or parents' social desirability tendencies and the degree to which the parents hold prosocial values themselves. When observational measures are used, children's care for others may be influenced by contextual factors such as a child's relationship to the person in distress (e.g., sibling, peer, mother, teacher, experimenter), the presence of other individuals, the salience of emotional cues, and the setting in which observation occurs (e.g., classroom, playground, home, laboratory), which also may influence the degree of *felt* security the child experiences in the moment he or she witnesses others' distress. Both the variety of measures employed and the multiplicity of factors influencing children's emotions and behavior at any one moment are likely to give rise to variability in the data.

Beyond the diversity of measures used, a more fundamental distinction can be made between measures of care for others in the presence-absence of an emotional display (i.e., whether children are responding to distress or to a non-

emotional need, such as a bid for instrumental help). This is an important distinction to make when considering the role played by secure attachment in emotional development. Specifically, security fosters the development of cognitive and regulatory skills that support children's ability to respond to others' distress, such as emotion regulation and emotion understanding (e.g., Panfile & Laible, 2012), which may not play as large a role in children's prosocial response to nondistressed others. Whereas measures of empathy almost always exclusively involve response to emotion, several of the studies of prosocial behavior reviewed here, particularly studies using mother- and teacher-reports, simultaneously assessed children's ability to comfort or demonstrate compassion in response to distress, along with children's responses to instrumental or material needs (e.g., "helps clean up," "shares toys") in the absence of emotional stimuli. Given recent evidence that prosocial behavior is a multifaceted construct, and that comforting, sharing, and instrumental helping behaviors show unique developmental trajectories (Dunfield & Kuhlmeier, 2013), unique neural and parenting correlates (Brownell, Svetlova, Anderson, Nichols, & Drummond, 2013; Paulus, Kühn-Popp, Licata, Sodian, & Meinhardt, 2013), and few intercorrelations among types of prosocial behavior (e.g., Richman, Berry, Bittle, & Himan, 1988), these disparate forms of behavior may have differential relations with attachment. Perhaps, for example, comforting, which typically occurs within an emotional context, relates to secure attachment, whereas other forms of prosocial behavior do not.

An additional explanation for the inconsistent findings in studies of children concerns the possible nonlinear relation between attachment and care for others. Investigators of this topic have observed that children with secure attachment histories score neither extremely high nor extremely low on measures of care for others, and propose that middle scores may be optimal for young children (van der Mark et al., 2002). This may help to account for findings from some studies that the highest frequencies of empathic behavior were from children of severely depressed mothers or from single mothers who depended on their children as a source of comfort (Radke-Yarrow & Zahn-Waxler, 1984; Rehberg & Richman, 1989; Richman et al., 1988). Indeed, young children of depressed mothers are more likely to develop disorganized attachments, characterized by caregiving toward the mother and parent-child

role reversal (Teti, Gelfand, Messinger, & Isabella, 1995; Van IJzendoorn, Schuengel, & Bakermans-Kranenburg, 1999). Relatedly, Eisenberg and colleagues (1995) have argued that maintenance of a moderate, but nonaversive, level of emotional arousal is important for feeling sympathy in the absence of debilitating personal distress; it may be that attachment security helps maintain an optimal level of arousal, such that secure children neither avoid responding to others' distress nor engage in "compulsive caregiving" out of personal distress. Consideration of "compulsive caregiving" may also help to explain why insecure-resistant children sometimes do not show reduced prosocial behavior; for these children, providing care for others may serve as an adaptive strategy for maintaining closeness with others, even if the care is motivated by personal distress rather than genuine, attuned concern for others' welfare (for discussion of compulsive care and adult anxious attachment, see Bowlby, 1980; Feeney & Collins, 2001; Kunce & Shaver, 1994).

Another possibility is that the inconsistent findings are in part due to moderating factors such as parent socialization. As previously mentioned, although attachment and socialization are constructs from distinct theoretical frameworks and have unique pathways to care for others in childhood, there is some evidence that attachment and socialization interact to predict moral development (Kochanska et al., 2004). Security may provide a foundation upon which socialization can build a stronger ethic of care across development. When measured within the same study, the unique effects of attachment and socialization practices (e.g., elaborative discourse, response to distress, gentle discipline) may reveal a more complete and nuanced picture of the roots of care for others in childhood.

Finally, we cannot rule out the possibility that attachment does not, in fact, play a role in children's care for others, and that the links observed thus far are explained by other factors, such as parent socialization, genetics, child temperament, cultural or contextual influences, or interactions with teachers and peers. It may be that parents who use sensitive, warm discipline and reinforce prosocial behavior also use sensitive parenting more broadly, contributing to children's care for others and to secure attachment via independent pathways. Alternatively, there is some evidence that more empathic parents tend to have securely attached children (Oppenheim, Koren-Karie, & Sagi, 2001; Stern, Borelli, & Smiley, 2015), so it

may be that secure children learn to empathize simply by observing empathic adult models, or that empathy is transmitted from parent to child via genetic mechanisms (Knafo, Zahn-Waxler, Van Hulle, Robinson, & Rhee, 2008). It is also possible that children with high negative emotionality (i.e., a fearful temperament) elicit insensitive parental behavior and are more prone to personal distress, limiting their capacity to care for others. These and other pathways merit exploration as we consider new directions for research on the development of children's concern for others.

Caring for Others in Adulthood

Adult attachment researchers in the fields of personality and social psychology have tended to consider prosocial motives, emotions, and behaviors as related to the caregiving behavioral system proposed by Bowlby (1969/1982) in his effort to explain why parents (and also older children, as well as adults other than the parents) respond to an infant's, and indeed to any person's, needs for help, protection, or support (e.g., Mikulincer, Shaver, & Gillath, 2008; Shaver, Mikulincer, & Shemesh-Iron, 2010). Although this reliance on the caregiving system construct is not essential for studying links between attachment orientations and prosocial emotions and behavior (and was not emphasized in the previous section of this chapter), it has proved to be a useful way to conceptualize adults' responses to people in need. That is, caregiving is not only a primary ingredient of parental behavior but also a major part of romantic and marital relationships, and a key to all forms of prosocial behavior in adulthood.

An adult's caregiving behavior is related to his or her attachment orientation because the parameters of the attachment and caregiving systems are shaped by some of the same forces (most notably, parenting), and because attachment insecurity involves a degree of self-focus and self-protection that interferes with attention to others' needs (just as attachment insecurity interferes with curiosity and exploration in infancy, according to Ainsworth et al., 1978). The two major kinds of attachment insecurity, anxiety and avoidance, are therefore expected to have somewhat different implications for providing care and support to a person in need. Anxiety is associated with feelings of vulnerability and a focus on one's own negative feelings (in particular, what empathy researcher

Daniel Batson [1991, 2010] called “personal distress,” as distinct from empathy). Avoidance is associated with not feeling comfortable getting close to other people and attempting to avoid situations that interfere with personal independence (Mikulincer et al., 2008).

Theoretically, the goal of the caregiving system is to reduce other people’s suffering, to protect them from harm, and to foster their growth and development—in other words, to provide a safe haven and secure base for them (Collins, Ford, Guichard, Kane, & Feeney, 2010; B. C. Feeney & Woodhouse, Chapter 36, this volume; Mikulincer et al., 2008). According to Collins and colleagues (2010), the caregiving system is activated in two kinds of situations: (1) when another person has to cope with danger, stress, or discomfort and is either openly seeking help or would clearly benefit from it, and (2) when another person has an opportunity for exploration, learning, or mastery and either needs help in taking advantage of the opportunity or seems eager to talk about it or to be validated for having aspirations or achieving desired goals. In either case, once a person’s caregiving system is activated (whether appropriately or not), he or she calls on a repertoire of behaviors aimed at restoring or advancing another person’s welfare. This repertoire includes showing interest in the other person’s problems or goals; providing an open, accepting space in which the other person’s needs are heard; affirming the other’s competence and ability to cope with the situation; expressing love and affection; providing advice and instrumental aid as needed, without interfering with the person’s own problem-solving efforts or exploratory activities; and admiring and applauding the person’s successes.

Optimal functioning of the caregiving system requires psychological assets associated with attachment security, as explained throughout the earlier sections of this chapter—assets such as emotion regulation strategies that allow caregivers to deal effectively with the discomfort entailed by witnessing another person’s distress. Deficient emotion regulation can cause a caregiver to feel overwhelmed by personal distress, to slip into the role of another needy person rather than occupying the role of caregiver, or to maintain distance from the needy other as a way of reducing his or her own negative emotions. Optimal caregiving also requires effective self-regulation strategies beyond emotion regulation. Addressing another person’s problems often requires temporary suspension of one’s own goals and plans. Moreover,

one has to diagnose the other person’s problem, develop a plan for assisting the person sensitively and effectively, and suppress motives that interfere with effective helping. According to Collins, Guichard, Ford, and Feeney (2006), caregiving can be disrupted by social skills deficits, depletion of psychological resources, lack of a desire to help, and egoistic motives that interfere with empathic sensitivity.

Attachment Orientations and Patterns of Care

Bowlby (1969/1982) noticed that activation of the attachment system can interfere with the operation of the caregiving system because potential caregivers may feel that obtaining safety and care for themselves is more urgent than providing a safe haven or secure base for others. At such times, adults are likely to be so focused on their own vulnerability that they lack the mental resources necessary to attend sensitively to others’ needs. Only when a sense of security is restored can a potential caregiver perceive others as not only potential sources of security and support but also as worthy human beings who themselves need and deserve sympathy and support.

Reasoning along these lines, adult attachment researchers (e.g., Collins et al., 2010; Mikulincer et al., 2008) hypothesized that attachment security is an important foundation for optimal caregiving. Moreover, being *secure* implies (given the theory and the research reviewed in earlier sections of this chapter) that a secure person has witnessed, experienced, and benefited from his or her attachment figures’ effective care (with those figures being either parents or other important care providers), which provides a model to follow when the person comes to occupy the caregiving role. Because secure individuals are more comfortable with intimacy and interdependence (Hazan & Shaver, 1987), they can allow other people to approach them for help and express feelings of vulnerability and need (Lehman, Ellard, & Wortman, 1986). Secure individuals’ confidence about other people’s goodwill makes it easier for them to construe others as deserving sympathy and support, and their positive model of self allows them to feel more confident about their ability to handle another person’s needs while effectively regulating their own emotions and helping behavior.

Adults who are insecure with respect to attachment (i.e., are either anxious or avoidant, or both) are likely to find it difficult to provide ef-

fective care. Although those who suffer from attachment anxiety may have some of the qualities necessary for effective caregiving (e.g., willingness to experience and express emotions, and comfort with psychological intimacy and physical closeness), their deficits in self-regulation make them vulnerable to personal distress, which interferes with sensitive and responsive care. Their tendency to become sidetracked by self-focused worries, misplaced projections, and blurred interpersonal boundaries can interfere with focusing accurately on other people's pain and suffering. Moreover, attachment-anxious adults' lack of confidence can make it difficult for them to adopt the role of "stronger and wiser" pillar of support. In addition, their strong desire for closeness and approval may cause them to become intrusive or overinvolved, blurring the distinction between another person's welfare and their own.

Attachment-anxious individuals may use caregiving as a means of satisfying their own unmet needs for closeness, acceptance, and inclusion. According to Collins and colleagues (2010), these self-centered motives result in intrusive caregiving that is insensitive to a needy person's signals. Anxious people may try to get too close or too involved when an interaction partner does not want help, and this can generate resentment, anger, and conflict, which in turn leave the anxious person feeling unappreciated or falsely accused.

Avoidant adults' lack of comfort with closeness and negative working models of others may also interfere with optimal caregiving. Their discomfort with expressions of need and dependence may cause them to back away rather than get involved with someone whose needs are strongly expressed. As a result, avoidant individuals may attempt to detach themselves emotionally and physically from needy others, may feel superior to those who are vulnerable or distressed, or may experience disdainful pity rather than empathic concern (Mikulincer et al., 2008). In some cases, avoidant people's cynical or hostile attitudes and negative models of others may replace sympathy or compassion with *schadenfreude*, or gloating.

Providing Care in Parent–Child and Romantic Relationships

B. C. Feeney and Woodhouse (Chapter 36, this volume) reviewed studies of caregiving in parent–child relationships, demonstrating that parents' attachment orientations systematically affect their caregiving-related mental representations and be-

haviors (see also Jones, Cassidy, & Shaver, 2015a, 2015b). Secure parents find it easier to perceive their children's needs accurately and to respond sensitively and appropriately. Anxious parents tend to be anxious themselves, and their self-preoccupation and biased perceptions can cause them to miss or misread their children's needs and calls for help. Avoidant parents tend not to be comfortable with children's expressions of need, and they act in ways that lead their children to become more emotionally inhibited and self-reliant. Viewed in terms of empathy or kindness, these insecure parents' attitudes and behaviors are problematic.

In the romantic and marital domains, research and common sense both indicate that a person's ability and willingness to respond sensitively to a relationship partner's needs are major determinants of relationship quality (e.g., Collins & Feeney, 2000). Adult romantic love involves not only the attachment system, which helps maintain proximity to a relationship partner, but also the caregiving system, which motivates one partner to attend and respond to the other's needs (Shaver & Hazan, 1988). As a result, romantic and marital relationships provide good opportunities to discover how attachment patterns shape caregiving orientations. Many of the relevant studies are reviewed by B. C. Feeney and Woodhouse (Chapter 36, this volume); others are discussed in detail by Mikulincer and Shaver (2007a). These studies indicate that attachment insecurity interferes with compassion, empathy, and loving-kindness in couple relationships. A few examples are provided here.

For example, attachment security is associated with care provision by adult spouses of cancer victims—people who are clearly in need. Kim and Carver (2007) found that greater attachment security (assessed with self-report scales) was associated with more frequent provision of emotional support to a spouse with cancer. Attachment security was also associated with favorable motives for providing care, such as accepting the need for caregiving, feeling loving, and respecting the care recipient (Kim, Carver, Deci, & Kasser, 2008). As expected, attachment anxiety was associated with more self-focused motives for caregiving (e.g., providing care in order to be appraised as a good person). In another study, Braun and colleagues (2012) found that avoidant attachment was associated with less responsive and less sensitive care for a spouse with cancer, whereas anxious attachment was associated with more compulsive caregiving (insisting on care, being intrusive, failing to be sensitive to

the spouse's actual needs). This harks back to an early study by Kunce and Shaver (1994) in which anxious adults and their mates both agreed that the anxious adults' caregiving efforts tended to be unempathic, self-focused, and intrusive.

In two laboratory experiments, B. Feeney and Collins (2001) and Collins and colleagues (2010) provided a detailed analysis of avoidant and anxious adults' caregiving deficits. Dating couples were brought to a laboratory, and one member of the couple (the "care seeker") was informed that he or she would perform a stressful task—preparing and delivering a videotaped speech. The other couple member (the "caregiver") was led to believe that his or her partner was either extremely nervous (high-need condition) or not at all nervous (low-need condition) about the speech task, and was given the opportunity to write a private note to the partner. In both studies, the note was coded in terms of the degree of support it conveyed. In addition, the caregiver's attentiveness to the partner's needs was assessed by counting the number of times the caregiver checked a computer monitor for messages from the partner while the caregiver was working on a series of puzzles (in a separate room). To assess the caregiver's state of mind, Collins and colleagues added measures of empathic feelings toward the partner, rumination about the partner's feelings, willingness to switch tasks with the partner, partner-focused attention, and causal attributions regarding the partner's feelings. More avoidant participants wrote less emotionally supportive notes in both high- and low-need conditions, and provided less instrumental support in the high- than in the low-need condition, when the partner most needed support. Moreover, avoidant participants reported less empathy for their partner, were less willing to switch tasks with the partner, and were less distracted by thoughts about the partner while doing puzzles. More anxious participants were easily distracted by thoughts about their partner and reported relatively high levels of empathy and rumination, but failed to write more supportive notes as their partner's needs increased.

Because most such studies of attachment and caregiving in parent-child and adult couple relationships have been correlational rather than experimental, making it impossible to determine causality, Mikulincer, Shaver, Sahdra, and Bar-On (2013) conducted a study, in both the United States and Israel, to see whether *experimentally augmented security* ("security priming"; in this case, subliminal presentation of attachment figures' names) would improve care provision to a roman-

tic partner who was asked to discuss a personal problem. A second goal of the study was to see whether security priming could overcome barriers to responsive caregiving caused by mental depletion or fatigue. Couples came to a laboratory and were informed that they would be video-recorded during an interaction in which one of them (the care seeker) disclosed a personal problem to the other (the caregiver). Caregivers were taken to another room, where they performed a task that induced (or did not induce) mental fatigue, while also being subliminally exposed to either the names of security providers or the names of unfamiliar people. Following these manipulations, couple members were videotaped while talking about the care seeker's problem, and the recording was later coded to assess the caregiver's supportive or unsupportive behavior. As predicted, attachment security (security priming) was associated with greater sensitivity and responsiveness to the disclosing partner, and the priming overcame the detrimental effects of mental depletion on sensitive responsiveness.

Providing Care and Expressing Social Virtues in the Wider Social World

Empathy, Compassion, and Altruism

The discovery of connections between attachment orientation and caregiving in both the parent-child and romantic/marital domains led researchers to explore the possibility that attachment insecurity interferes with compassion toward suffering others, even if the sufferers do not belong to the caregiver's family. If all forms of loving-kindness draw from the same caregiving well, then contamination of that well by attachment-related worries and defenses is likely.

In fact, studies of adult attachment and prosocial attitudes and behavior do show that avoidant people score lower on diverse measures of prosocial reactions to other people's needs. For example, more avoidant adults report less empathic concern (e.g., B. Feeney & Collins, 2001; Joireman, Needham, & Cummings, 2002; Lopez, 2001; Wayment, 2006), less inclination to take the perspective of a distressed person (Corcoran, & Mallinckrodt, 2000; Joireman et al., 2002), less ability to share another person's feelings (Trusty, Ng, & Watts, 2005), less sense of communion with others, and less willingness to take responsibility for others' welfare (Collins & Read, 1990; Shaver

et al., 1996; Zuroff, Moskowitz, & Cote, 1999). Avoidant adults are also less likely to be cooperative and other-oriented (DeDreu, 2012; Hawley, Shorey, & Alderman, 2009; Van Lange, DeBruin, Otten, & Joireman, 1997), to write comforting messages to a distressed person (Weger & Polcar, 2002), to offer help to needy others in hypothetical scenarios (Bailey, McWilliams, & Dick, 2012; Drach-Zahavy, 2004), or to be sensitive to moral transgressions that can damage other people (Albert & Horowitz, 2009). Sommerfeld (2009) also found that more avoidant people (assessed with the ECR) were more likely to feel a sense of burden when acting generously.

With regard to attachment anxiety, research once again suggests a pattern of overinvolvement and intrusiveness during encounters with people in distress. In particular, although Lopez (2001) found a positive association between attachment anxiety and a measure of emotional empathy, people who score relatively high on measures of attachment anxiety also report higher levels of personal distress while witnessing others' suffering (Britton & Fuendeling, 2005; Joireman et al., 2002; Monin, Schulz, Feeney, & Clark, 2010; Vilchinsky, Findler, & Werner, 2010). Moreover, anxious adults score higher on a measure of unmitigated communion, which taps a compulsive need to help others even when they are not asking for assistance, and even when the help comes at the expense of one's own health and legitimate needs (Fritz & Helgeson, 1998; Shaver et al., 1996).

In an observational laboratory study, Westmaas and Silver (2001) videotaped people while they interacted with a confederate of the experimenter who, they thought, had recently been diagnosed with cancer. The authors found that both kinds of attachment insecurity created specific impediments to effective caregiving. As expected, avoidant participants were rated by observers as less verbally and nonverbally supportive and as making less eye contact during the interaction. Attachment anxiety was not associated with supportiveness, but more anxious participants reported greater discomfort while interacting with the confederate and were more likely to report self-critical thoughts after the interaction. These are signs of emotional overinvolvement and self-related worries, which can sometimes interfere with caregiving.

It is worth mentioning, however, that Ein-Dor and Orgad (2012) found that attachment-anxious people acted prosocially when a real danger threatened them and their group. In their

study, participants were led to believe that they accidentally activated a computer virus that erased an experimenter's computer. They were then asked to alert the department's computer technicians to the incident. On their way, they were presented with four decision points at which they could choose either to delay their warning or continue directly to the technicians' office. More anxious individuals (assessed with the ECR) were less willing to be delayed on their way to deliver a warning message. This finding fits with the "sentinel" mental script characteristic of attachment-anxious individuals (Ein-Dor, Mikulincer, & Shaver, 2011), which might automatically cause them to act prosocially in a dangerous situation by rapidly communicating the threat to others. Kogut and Kogut (2013) also found that attachment-anxious people tend to help others when they can identify with the help receiver or feel similar to or specially connected with him or her, probably thereby satisfying unmet needs for merger and love.

There is also evidence that the link between avoidant attachment and unhelpfulness can be mitigated in specific relational contexts. For example, Richman, DeWall, and Wolff (2015) found that when highly avoidant participants were convinced that helping would not increase closeness to the receiver of help or would not change their own emotions, they tended to help others as much as less avoidant participants; that is, by reducing the psychological linkage between helping and emotional closeness, Richman and colleagues reduced avoidant people's fears of becoming more intimate with the needy other, allowing them to act more prosocially toward him or her. This finding fits with our belief that avoidant people's reluctance to help others is in part due to attachment system deactivation and a preference for emotional distance rather than intimacy.

In an influential study of adolescents that spurred similar research with adults, McKinney (2002) found that those who were insecurely attached to their parents were less involved than more securely attached adolescents in voluntary altruistic activities, such as caring for older adults or donating blood. Gillath, Shaver, Mikulincer, Nitzburg, and colleagues (2005) extended this line of research by assessing young adults' motives for volunteering in their communities. Avoidant attachment was associated with engaging in fewer volunteer activities; among those who did volunteer, avoidance was associated with being involved for less altruistic reasons. Attachment anxiety was not directly related to engaging in volunteer ac-

tivities per se, but it was associated with more egoistic reasons for volunteering (e.g., hoping to be socially accepted and receive approval), another indication of anxious people's self-focus. These findings were replicated in a subsequent study with Dutch students (Erez, Mikulincer, Van IJzendoorn, & Kroonenberg, 2008). In all of these studies, more avoidant adults were less likely to volunteer.

Insecure people's relative lack of a prosocial orientation is also manifested in career choice. Using the AAI to measure adult attachment, Horppu and Ikonen-Varila (2004) found that insecure students at a college for kindergarten teachers endorsed less altruistic, less prosocial motives for becoming teachers, compared with more secure students. Similarly, Roney, Meredith, and Strong (2004) found that less secure occupational therapy students (identified with self-report scales) were less likely to say they chose a therapeutic career because they wanted to help people. In a sample of medical students, Ciechanowski, Russo, Katon, and Walker (2004) found that less secure students (based on self-report scales) were more likely not to choose primary care specialties because primary care demands intense patient-physician relationships that can cause patients to become emotionally attached to their physician.

Recently, a number of investigators have examined the effects of security priming on feelings and attitudes toward needy people. For example, Bartz and Lydon (2004) primed attachment-related mental representations by asking people to think about a close relationship in which they felt either secure, anxious, or avoidant, then assessed the implicit and explicit activation of communion-related thoughts (thoughts about devoting oneself to others and maintaining supportive and warm interactions with them). Implicit activation was assessed in a word fragment completion task (which identified the number of word fragments completed with a communion-related word); explicit activation was assessed with the Communion scale of the Extended Personality Attributes Questionnaire. Contextual priming of representations of avoidant attachment led to lower levels of implicit and explicit communion-related thoughts than did contextual priming of secure attachment.

Along the same lines, Mikulincer and colleagues (2001, Study 1) performed an experiment assessing compassionate responses to others' suffering. Dispositional attachment anxiety and avoidance were assessed with the ECR scales, and a sense of attachment security was activated in one condition by having participants read a story about

support provided by a loving attachment figure. This condition was compared with the activation of neutral or positive affect. Following the priming procedure, all participants read a brief story about a student whose parents had been killed in an automobile accident and rated how much they experienced compassion and personal distress when thinking about the distressed student. As expected, dispositional attachment anxiety and avoidance were inversely related to compassion, and attachment anxiety (but not avoidance) was positively associated with personal distress. In addition, enhancement of attachment security, but not enhancement of positive affect, strengthened compassion and inhibited personal distress in reaction to others' distress. These findings were replicated in four additional studies (Mikulincer et al., 2001, Studies 2-5).

In another set of three experiments, Mikulincer, Gillath, and colleagues (2003) found theoretically predictable attachment-related differences in value orientations. Avoidant attachment, assessed with the ECR, was inversely associated with endorsement of two self-transcendent values, benevolence (concern for close others) and universalism (concern for all humanity), supporting our notion that avoidant strategies interfere with concern for others' needs. In addition, experimental priming of mental representations of attachment figure availability, as compared with enhancing positive affect or exposing participants to a neutral priming condition, strengthened endorsement of these two prosocial values. The findings fit well with Van IJzendoorn and Zwart-Woudstra's (1995) discovery that secure attachment (assessed with the AAI) is associated with more humanistic moral reasoning. The conclusion is further supported by Clark and colleagues' (2011) findings that contextual priming of attachment security reduced the endorsement of materialistic values and decreased the importance people assigned to material objects.

Mikulincer, Shaver, Gillath, and Nitzberg (2005) examined the effects of security priming on the actual decision to help or not to help a person in distress. In the first two experiments, participants watched a confederate (an actress) while she performed a series of increasingly aversive tasks. As the study progressed, the confederate became increasingly distressed by the aversive tasks, and the actual participant (who was merely an observer) was given an opportunity to take the distressed person's place, thereby self-sacrificing for the benefit of the distressed confederate. Shortly before

the scenario just described, participants had been exposed to a series of security or neutral primes subliminally (rapid presentation of the name of an attachment figure or a neutral control person) or supraliminally (vividly recalling an interaction with a supportive person), or in the control condition (recalling a neutral person). At the point of making a decision about replacing the distressed confederate, participants completed brief measures of compassion and personal distress. In both studies, dispositional avoidance was related to lower reported compassion and lower willingness to help the distressed confederate. Dispositional attachment anxiety was related to self-reported personal distress but not to either compassion or willingness to help. In addition, subliminal or supraliminal priming of representations of a security-providing figure decreased personal distress and increased participants' compassion and willingness to take the place of the distressed confederate.

In two additional studies, Mikulincer and colleagues (2005, Studies 3–4) examined whether the contextual bolstering of attachment security overrides egoistic motives for helping, such as mood enhancement (Schaller & Cialdini, 1988) or empathic joy (Smith, Keating, & Stotland, 1989), and results in genuinely altruistic (unselfish) helping. Participants were divided into two conditions (security priming, neutral priming), read a true newspaper article about a woman in dire personal and financial distress, and rated their emotional reactions to the article (compassion and personal distress). In one study, half of the participants anticipated mood enhancement by means other than helping (e.g., expecting to watch a comedy film). In the other study, half of the participants were told that the needy woman was chronically depressed and her mood might be beyond their ability to repair (*no empathic joy* condition). Schaller and Cialdini (1988) and Smith and colleagues (1989) had found that these two conditions, expecting to improve one's mood by other means or anticipating no sharing of joy with the needy person, reduced egoistic motives for helping because a potential helper would gain no mood-related benefit from helping. However, these conditions failed to inhibit altruistic motives for helping when helping was augmented by security priming. The security-supported increased willingness to help seemed to be genuinely unselfish. These findings support our theoretical view that a sense of attachment security reduces selfishness (defensive self-protection) and allows a person to activate his or her caregiving behavioral

system, direct attention to others' distress, take the perspective of a distressed other, and engage in altruistic behavior with the primary goal of benefiting the other person.

Generosity

Generous actions are among the building blocks of positive and stable social relations. However, although extensive theoretical and empirical work has been devoted to the study of empathy, compassion, and altruistic helping in adults, there is little systematic research on acts of generosity, the subjective experiences of people when they act generously, or the associations of these experiences with attachment orientations. One preliminary exploration (Sommerfeld, 2009) involved the development of the Experience of Generosity Questionnaire, a measure of the extent to which adults are prosocially oriented when acting generously or feel a sense of burden, self-criticism/guilt, or self-congratulation when being "generous." Sommerfeld (2009) examined associations between these experiential aspects of generosity and ECR attachment insecurity scores (anxiety and avoidance). She found that attachment anxiety was associated with greater feelings of personal burden and self-criticism/guilt, whereas avoidance was associated with a less prosocial orientation, in addition to feelings of personal burden. Much more research is needed on attachment and generosity.

Gratitude

Gratitude has been portrayed in the psychological literature in diverse ways: as a positive emotion, as a personality trait, as a positive attitude toward others, as a moral virtue, and as a constructive approach to interpersonal relations (Emmons & McCullough, 2003; Weiner, 1985). Emmons and McCullough (2003) proposed that gratitude be conceptualized in terms of three propositions. First, the object of gratitude is always an "other," whether a human being, a nonhuman natural being (e.g., an animal, the weather), or a supernatural being (e.g., God). Second, gratitude is a response to a perceived personal benefit (e.g., a material, emotional, or spiritual gain) resulting from another's actions—a benefit that has not necessarily been earned or deserved. Third, gratitude stems from appraising the benefactor's actions as intentionally designed to benefit the recipient, even if the intention is metaphorical, as

in the case of good weather (“Thank you for not raining on my parade”). According to Lazarus and Lazarus (1994), gratitude results from recognizing another’s goodwill and appreciating the other’s generous action as an altruistic gift. Agreeing with this conception, Tsang (2006) defined *gratitude* as “a positive emotional reaction to the receipt of a benefit that is perceived to have resulted from the good intentions of another” (p. 139).

In Peterson and Seligman’s (2004) taxonomy of human strengths and virtues, the capacity for gratitude is viewed as a core strength that improves people’s well-being and mental health (Snyder & McCullough, 2000). Similarly, Emmons and McCullough (2003) portrayed gratitude as a remedy for many of life’s hardships and as a way to achieve peace of mind, happiness, and satisfying interpersonal relationships. In line with this view, Watkins, Woodward, Stone, and Kolts (2003) found that grateful people tend to experience greater “abundance” in their lives, feel more thankful to other people for contributions to their personal well-being, and are more likely than other people to appreciate even the small pleasures in life. Moreover, the expression of gratitude to a generous relationship partner has been found to have beneficial effects on relationship satisfaction, emotional and physical closeness, and positive appraisals of the partner (e.g., Algoe, Gable, & Maisel, 2010; Algoe & Haidt, 2009; Lambert, Clark, Durtschi, Fincham, & Graham, 2010).

From an attachment perspective, the experience of gratitude can be expected to be associated with feelings of being protected, accepted, and valued by others. Warm, comforting interactions with a sensitive, responsive, and supportive caregiver during childhood foster not only positive mental representations (working models) of others but also a feeling that one has received a gift that “keeps on giving” (as advertisers sometimes boast). This feeling makes it easier, in later phases of life, to feel grateful for other people’s kindness and generosity. In other words, attachment security can be expected to correlate with dispositional gratitude. In contrast, attachment-related avoidance may constrict feelings of gratitude in response to others’ generous behavior because avoidant people tend to doubt other people’s good intentions. Moreover, expressions of gratitude toward a relationship partner can be interpreted as a sign of closeness or dependence, which is inconsistent with avoidant people’s preference for emotional distance.

Attachment anxiety may lead to ambivalent reactions to others’ generous behavior. People who

score high on attachment anxiety tend not to believe they deserve others’ kindness and worry that they will not be able to reciprocate adequately or meet a generous person’s needs and expectations (Mikulincer & Shaver, 2007a). This, in turn, may taint gratitude with anxiety. In addition, for attachment-anxious people, positive interpersonal experiences may be reminiscent of previous experiences that began well but ended poorly. Once attuned to negative memories, the anxious mind suffers from a spread of negative affect (Mikulincer & Orbach, 1995), which is likely to interfere with genuine gratitude.

In two studies, Mikulincer, Shaver, and Slav (2006) explored links between attachment scores and feelings of gratitude toward a generous relationship partner. The first study was cross-sectional and correlational; it indicated that secure participants scored higher on a dispositional measure of gratitude than avoidant participants and reported more feelings of security, happiness, love, and generosity—and fewer feelings of narcissistic threat and distrust—when feeling grateful. Attachment anxiety was not significantly associated with dispositional gratitude, but it was associated with a more ambivalent experience of gratitude. People who scored higher on attachment anxiety recalled experiencing security-related feelings (e.g., “I felt there was someone who cared for me”), happiness, and love, together with narcissistic threats and inferiority feelings (e.g., “I felt weak and needy”), which seemed to mar the otherwise positive experience of gratitude.

In a second study (Mikulincer et al., 2006), newlywed couples (both husbands and wives) completed a daily questionnaire each evening for 21 days. In it, they listed positive and negative behaviors exhibited by their partner on a given day and rated the extent to which they felt grateful toward the partner that day. For both husbands and wives, attachment security predicted higher levels of daily gratitude across the 21-day period. Moreover, more secure husbands reported greater gratitude on days when they perceived more positive spousal behavior, whereas more avoidant husbands reported relatively low levels of gratitude even on days when they noticed their wife’s positive behavior.

Attachment insecurities also seem to interfere with the positive effects that gratitude normally has on prosocial behavior. Mikulincer and Shaver (2009) randomly assigned undergraduates to a gratitude condition (“Think about the many things in life for which you might feel grateful”)

or a control condition (“Think about your typical day”). They then measured the extent to which participants helped an experimenter’s confederate, who asked them to complete a cognitively taxing problem-solving survey. The major dependent variable was the time spent working on the survey. The results indicated that participants in the gratitude condition spent more time helping with the survey than did participants in the control condition, and more anxious and/or avoidant participants spent less time helping. However, these effects were qualified by significant interactions between gratitude and attachment insecurity scores: The gratitude exercise led to more helping behavior than the control condition mainly when participants scored relatively low on anxiety and/or avoidance. The prosocial effect of gratitude was lower when attachment anxiety or avoidance was relatively high.

Overall, research findings reported thus far suggest that gratitude and its links with prosocial behavior are complex and moderated by attachment orientations. It seems relatively easy for a secure person to feel grateful, especially after being rewarded by someone else. It is difficult for an insecure person to be unambivalent about receiving a benefit from another person, and to pass the benefit along to someone else. To an important extent, gratitude depends on feeling loved, valued, supported, and cared for, both in the moment and over the years.

Forgiveness

Forgiveness is often key to maintaining relational harmony and affectional bonds following conflicts, offenses, and transgressions in relationships (e.g., Fincham & Beach, 2010; Gordon, Hughes, Tomcik, Dixon, & Litzinger, 2009; Karremans & Van Lange, 2004). In addition, forgiveness contributes to positive emotions toward an offending other, to intimacy and emotional closeness, and to relationship satisfaction and stability (e.g., Finkel, Rusbult, Kumashiro, & Hannon, 2002). Moreover, the ability to forgive is related to psychological and even to physical well-being (e.g., Karremans, Van Lange, Ouwerkerk, & Kluwer, 2003). However, forgiveness is not an automatic response to another person’s offenses and transgressions. It often requires a transformation (or what Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991, called “accommodation”) of interpersonal motives—containment of angry feelings and regulation of the impulse to act destructively,

while finding a constructive way to overcome an impasse created by another person’s hurtful behavior (e.g., McCullough, 2000). According to McCullough, Worthington, and Rachal (1997), forgiveness requires “a set of motivational changes, whereby one becomes decreasingly motivated to retaliate against and maintain estrangement from an offending relationship partner and increasingly motivated by conciliation and goodwill for the offender, despite the offender’s hurtful actions” (pp. 321–322).

From an attachment perspective, the motivational transformation involved in forgiving an offending other is likely to be facilitated by attachment security. Secure people are confident of others’ availability and love, view others as generally trustworthy and dependable, and believe in others’ goodwill (Shaver & Hazan, 1993). In addition, secure people have been found to provide more benign explanations for others’ hurtful actions and attribute them to less intentional and less stable causes. Therefore, they are more inclined to forgive. In contrast, avoidant individuals are likely to be less forgiving because they possess negative working models of others and tend to attribute others’ objectionable behavior to bad intentions.

In the case of individuals who score high on attachment anxiety, reactions to others’ offending behavior are likely to be influenced by two conflicting forces. On the one hand, their inclination to intensify negative emotions and ruminate about threats should fuel intense and prolonged bouts of anger toward an offending other, thereby interfering with forgiveness. On the other hand, such people’s fears of rejection and separation may cause them to suppress or hide resentment and anger and incline them toward self-protective forgiveness. This kind of forgiveness might be accompanied by recurrent intrusive thoughts about the transgression and heightened doubts about others’ availability and dependability. In other words, although attachment anxiety may not preclude forgiveness, it may engender ambivalence about forgiveness and therefore reduce its relational and personal benefits.

Correlational evidence indicates that attachment anxiety and avoidance are in fact associated with lower scores on measures of dispositional forgiveness (e.g., Burnette, Taylor, Worthington, & Forsyth, 2007; Kachadourian, Fincham, & Davila, 2004; Lawler-Row, Younger, Piferi, & Jones, 2006; Mikulincer et al., 2006; Yármoz-Yaben, 2009). Moreover, Mikulincer and colleagues (2006) found that less secure people were more inclined

to report intense feelings of vulnerability or humiliation and a strong sense of relationship deterioration when forgiving a partner. In other words, attachment insecurities were associated with a less constructive experience of forgiveness. Burnette, Davis, Green, Worthington, and Bradfield (2009) provided evidence concerning the potential mediators of such effects: Whereas the link between attachment anxiety and reduced forgiveness was mediated by excessive rumination on relational injuries, the link between avoidance and reduced forgiveness was mediated by lack of prosocial attitudes.

In a diary study of daily fluctuations in the tendency to forgive a spouse, Mikulincer and colleagues (2006) found that attachment insecurities predicted lower levels of forgiveness across 21 consecutive days. Moreover, whereas secure people were more inclined to forgive their spouse on days when they perceived more positive spousal behavior, less secure people reported little forgiveness even on days when they perceived their spouse to be available, attentive, and supportive. In other words, attachment insecurities not only prevented forgiveness but they also interfered with the ability of a partner's positive behavior to restore understanding and empathy.

Beyond these associations between dispositional measures of attachment and forgiveness, there is increasing evidence that state-like senses of security or insecurity can alter the tendency to forgive a hurtful partner. For example, Finkel, Burnette, and Scissors (2007) experimentally enhanced attachment anxiety or measured its natural weekly fluctuations for 6 months and found that heightened attachment anxiety reduced forgiveness for a partner's offenses. In addition, Hannon, Rusbult, Finkel, and Kumashiro (2010) found that a betraying partner's provision of security to the injured partner (by genuinely expressing interest in being responsive to the victim's needs) promoted forgiveness and restoration of relational harmony. Karremans and Aarts (2007) found that security priming (with the name of a loving other) elicited more automatic forgiving responses to interpersonal offenses than neutral priming.

In a series of experimental and longitudinal studies, Luchies, Finkel, McNulty, and Kumashiro (2010) showed that situational *felt security* (the extent to which a partner is perceived to be responsive and able to provide a sense of security and stability) is a prerequisite for the beneficial effects of forgiveness. For example, they found that the association between marital forgiveness and

heightened self-respect over the first 5 years of marriage depended on the extent to which spouses appraised their partners as safe and responsive. Moreover, the positive effects of forgiveness on self-respect and self-concept clarity following an experimentally induced hurtful relational episode depended on the perpetrator's expression of genuine interest in being responsive to the victim's needs. Overall, these findings imply that, under insecurity-heightening circumstances, forgiveness negatively affects feelings about oneself, which may help to explain why dispositionally insecure people are often reluctant to forgive an offending partner.

Empirical Studies of Adults: Discussion

Based on only the relatively small sample of studies of adult attachment and caregiving reviewed here (for a fuller treatment, see Mikulincer & Shaver, 2007a), a clear and quite general pattern emerges. Adults who score high on self-report measures of attachment anxiety have difficulty caring for another person without becoming personally distressed in an unproductive manner, often because they are more focused on their own needs and sense of vulnerability than on the needs of a person who needs their help. They are lacking not in empathy but in what Buddhists call *effective compassion*, which goes beyond empathy to include "skillful" action. Attachment-anxious adults' ineffective compassion is evident in parent-child relationships, romantic/marital relationships, and interactions with peers and strangers. Their failure to take effective action is also affected by their somewhat negative models of self, which includes a sense of poor self-efficacy. It is worth mentioning, however, that although anxious adults' heightened sensitivity to threats (to self) often results in poorly timed or poorly considered efforts to help others, their heightened vigilance can sometimes benefit members of the groups to which they belong because their ability to detect threats can sometimes save their own and other people's lives (Ein-Dor, Mikulincer, Doron, & Shaver, 2010; Ein-Dor et al., 2011).

Adults who score high on self-report measures of attachment-related avoidance are quite different. They are generally less empathic, less compassionate, and less willing to help others. They are often uncomfortable with other people's reliance on them, especially if it requires close physical or emotional contact or prolonged assistance. At the group level, however, their self-preoccupation,

and what Bowlby (1969/1982) called their “compulsive self-reliance,” can sometimes make them quick to figure out, in a threatening situation, how to escape or save themselves, and this can provide a useful model for other members of their group to escape danger (Ein-Dor et al., 2010, 2011).

Both anxious and avoidant adults are capable of feeling and being generous, grateful, and forgiving, but their versions of these feelings are often colored by qualifications, such as feeling depleted, “ripped off,” or overly obligated. Underlying such complicated forms of what would otherwise be positive feelings is a sense of insecurity, doubts about one’s own value to others, and fear of vulnerability.

To date, an advantage of the literature on adult care is the relative ease of conducting experimental studies involving various kinds of security priming: guided imagery or recall of being treated well by attachment figures; pictures of attachment figures’ faces; subliminal stimulation with attachment figures’ names or words such as *being loved*, *hug*, *support*, or *affection* (Mikulincer & Shaver, 2007a, 2007b). This adds considerably to the huge volume of correlational research, which indicates that self-reported individual differences in security, anxiety, and avoidance are associated strongly with many questionnaire and behavioral measures of empathy, compassion, gratitude, and forgiveness. Activating an adult’s network of mental associations related to security (associations that are both cognitive and affective) increases prosocial feelings and motivates prosocial behavior. Fewer studies have been conducted with “insecurity primes,” but those studies show that being reminded of insecurity (e.g., memories of past rejections and hurt feelings) reduces empathy and prosocial behavior. Taken in combination with the developmental studies of children and adolescents reviewed earlier in this chapter, the adult studies offer convincing evidence that attachment security and insecurity influence a wide range of prosocial motives, feelings, and behaviors.

Future Directions

Despite the impressive size of the literature reviewed in this chapter, indicating that attachment orientations are related to various aspects of concern for others, there are still many needs and possibilities for future research. Because our large sections on attachment and care in childhood and

attachment and care in adulthood are somewhat different in focus and methods (because of the different developmental levels of the research participants, requiring different verbal and nonverbal measures, and the different social contexts in which they live; with parents, in university communities, in homes with their spouses, etc.), we consider future directions separately for the two large research domains.

Future Directions for Research on Attachment and Prosocial Phenomena in Childhood

Existing research and its limitations indicate that the field is ripe for further investigation of the link between attachment security and the development of care for others in childhood, when these capacities are first coming online and there is the greatest opportunity to influence their development in the next generation. To do this, a first priority is to improve the sensitivity and specificity of measures used to assess care for others at different developmental stages. When operationalizing constructs, researchers should delineate clear boundaries around empathy and prosocial behavior, so that the unique developmental antecedents and consequences of each can be identified. Further insights may be gained by measuring specific dimensions of both constructs. For example, it may be important to assess both cognitive aspects of empathy (e.g., emotion recognition and understanding, perspective taking) and its affective aspects (e.g., emotional resonance, compassion, concern). Similarly, future research should consider specific dimensions of prosocial behavior such as sharing, helping, and comforting behaviors, verbal versus nonverbal responses, the relative success or effectiveness of prosocial overtures, and whether they occur in the presence or absence of emotional stimuli.

Central to the pursuit of valid measures of care for others is observational research in the home, neighborhood, and school, as well as in laboratory settings. Research has shown that responses to hypothetical situations (e.g., to imagine donating to someone in need) do not always map onto actual behavior (e.g., Ajzen, Brown, & Carvajal, 2004). For example, although children may know that they should share a prized teddy bear with a child who has no toys, they may not do so when faced with the immediate conflict between their own desires and another’s needs. Observational measures used to study the normative

development of children's empathy and prosocial behavior provide creative and ecologically valid tools that can be extended to the study of attachment-related individual differences. These include home-based observations of children's reactions to naturalistic and simulated distress (e.g., Zahn-Waxler, Radke-Yarrow, et al., 1992); laboratory situations in which an adult experimenter displays needs that differentially call for helping, sharing, and comforting (e.g., Dunfield & Kuhlmeier, 2013); and tasks that isolate specific motives (e.g., sympathy vs. seeking social rewards) underlying prosocial behavior (e.g., Hepach et al., 2013a). In addition, observational paradigms used with adults, such as donating behavior and willingness to help a distressed confederate (e.g., Mikulincer & Shaver, 2005), have been used successfully with children (e.g., Benenson, Pascoe, & Radmore, 2007) and provide other valid approaches to the study of attachment-related individual differences in care for others in childhood.

Exploring potential interactions of empathy with other mental capacities such as emotion regulation, theory of mind, and social information processing may illuminate connections that help to explain the development of care for others. Moving beyond cross-sectional, correlational studies toward intervention and longitudinal designs may shed light on questions of continuity and change, sensitive periods, and the temporal sequence of this link. For example, research examining the effects of attachment interventions such as the Circle of Security (Hoffman, Marvin, Cooper, & Powell, 2006) on children's empathy and prosocial behavior may illuminate whether enhancing security might support the development of greater capacities for extending care to others beyond the parent-child relationship.

Furthermore, priming studies of the kinds developed by researchers studying adult attachment provide a promising paradigm for investigating causal pathways in the short term. It is reasonable to hypothesize that experimental priming of attachment security in children will enhance their empathy and prosocial behavior given evidence of this link in the adult literature. Indeed, one study by Over and Carpenter (2009) demonstrated that subliminal priming of affiliation (i.e., a picture of two dolls facing each other) significantly enhanced 18-month-old children's spontaneous helping toward an experimenter who had dropped her pencils. In adult samples, however, attachment priming has been shown to have specific effects beyond those of affiliation in enhancing

empathy and willingness to help a distressed other (Mikulincer et al., 2005). It remains to be seen whether attachment priming has similarly unique effects beyond affiliation in children.

Alongside developmental questions regarding individual differences, future research may be informed by the recent upsurge of creative methods used to examine the normative development of human altruism, which have shed light on contextual, motivational, and evolutionary factors influencing children's care for others (e.g., Warneken & Tomasello, 2009). For example, evidence suggests that toddlers sympathize with and are motivated to help victims of harm, even when the victims show no emotion, suggesting that children's early perspective taking and understanding of harm support their care for others, even in the absence of distress cues (Vaish, Carpenter, & Tomasello, 2009). It may be that the link between attachment and children's care for others is moderated by whether harm occurs in the presence or absence of emotional distress. A study of 5-year-olds demonstrated that children show the bystander effect made famous by social psychologists (Darley & Latane, 1968), helping at high levels when alone but less often when others are available to help (Plötner, Over, Carpenter, & Tomasello, 2015). Attachment security may moderate children's susceptibility to the bystander effect. Other research has shown that children are more prosocial following reciprocal (vs. simply friendly) social interactions with an adult (Barragan & Dweck, 2014) and following synchronous music making (Kirschner & Tomasello, 2010), suggesting that responsive, coordinated social interactions experimentally boost children's care for others. On one level, attachment security involves similar experiences of responsivity and mutual coordination; however, questions remain regarding how specific the role of caregiver-child interactions may be in promoting children's concern for others. Future investigations may benefit from drawing on the novel methods and context-specific paradigms in the emerging literature on child altruism to illuminate the nature of attachment-related individual differences.

In addition, it will be important to continue the search for further mechanisms underlying the link between security and care for others. For example, it may be that security reduces attention to threat to oneself, which allows children to shift mental resources away from the self and toward others in need (as described in this chapter in relation to adults). Examining the parameters of

the automatic nature of some prosocial behavior should also prove useful. Alternatively, security may foster openness to emotional pain and vulnerability (Cassidy, Shaver, Mikulincer, & Lavy, 2009), such that others' suffering need not be defensively excluded. One particularly interesting avenue to explore is the biological basis of the ways in which attachment gets "under the skin" (in this volume, see Polan & Hofer, Chapter 6, and Ehrlich, Miller, Jones, & Cassidy, Chapter 9), and how, in turn, this may influence the capacity to care for others who are suffering. A viable starting point may be to examine the role of oxytocin in the development of children's concern for others, as it has been implicated in attachment and pair bonding (Carter, 1998; Feldman, Weller, Zagoory-Sharon, & Levine, 2007; Young & Wang, 2004), parenting (Bakermans-Kranenburg & Van IJzendoorn, 2008; Feldman et al., 2012; Galbally, Lewis, Van IJzendoorn, & Permezel, 2011), empathy (Bartz et al., 2010; Hurlemann et al., 2010), and altruistic behavior (De Dreu et al., 2010; Zak, Stanton, & Ahmadi, 2007). (See also Hane & Fox, Chapter 11, this volume.) These mechanisms likely interact with emotion regulation in linking security and concern for others.

Pursuing further research along these lines has broader implications for attachment theory. Specifically, a better understanding of attachment-related differences in children's care for others may prove useful in illuminating key processes involved in the intergenerational transmission of attachment. In parents, self-reported attachment security has been linked to their own enhanced emotion regulation capacities, which in turn are associated with parents' more empathic responses to their children's distress (Jones, Brett, Ehrlich, Lejuez, & Cassidy, 2014). A similar model may apply to children, whereby attachment security in childhood supports the development of both emotion regulation capacities and the capacity to care for others, so that, in adulthood, secure individuals are able to extend such care to their own children in the form of sensitive, empathic parenting. Indeed, evidence suggests that empathy and prosocial behavior early in development are carried forward into adulthood (Eisenberg et al., 2002), that adults' empathic concern is positively related to retrospective accounts of their parents' sensitive responses to their distress in childhood (Kanat-Maymon & Assor, 2009), and that parental empathy mediates the link between parent and child attachment security (Stern et al., 2015). Assembling the pieces of the intergenerational puzzle

calls for future longitudinal work on attachment and concern for others across the lifespan.

More broadly, there is a need for a positive psychology of children—encompassing virtues such as compassion, gratitude, mindfulness, and forgiveness (e.g., Froh et al., 2011; Greenberg & Harris, 2012)—that includes the potential influence of attachment. The extensive and exciting findings reported in the adult literature provide an avenue for similar exploration in childhood, with the creative adaptation of existing measures, as well as the development of new paradigms and methods for enhancing concern for others in the short and long term. We echo Greenberg and Turksma's (2015) call for leveraging the unique insights from developmental research to foster kindness and empathy in homes, neighborhoods, and schools, and add that these efforts likely need to be rooted in secure human relationships if they are to be effective, sustainable, and transmitted to the next generation. Understanding the developmental roots of care for others in childhood is central not only to attachment research but also to the broader goal of cultivating a kinder, more compassionate society.

Future Directions for Research on Attachment and Prosocial Phenomena in Adulthood

As demonstrated in this chapter, there is extensive evidence linking attachment security and two major forms of insecurity (attachment anxiety and avoidance) with prosocial motives, emotions, and behavior. The connections between attachment and prosociality have been demonstrated in the laboratory and in the community, using both correlational and experimental designs. It is now important to branch out in new directions.

One rich source for new studies would be a search for both mediating and moderating factors. In particular, future studies should examine times and situations in which secure attachment fails to promote prosocial behavior as well as the conditions that may favor prosocial behavior among insecure people. The priming studies conducted thus far clearly indicate that security can be heightened temporarily by priming. It has been assumed that longer-term priming (1) would produce stronger and more lasting effects on mental and behavioral processes, and (2) might be similar to what happens naturally in security-enhancing close relationships with friends, romantic partners, mentors, leaders, or therapists. But more work is needed to

explore the process of security enhancement in real-world relationships and to determine whether that kind of natural security enhancement results in increased empathy and care for other people. If it does have this bonus benefit, it will be important to learn how the effects are mediated (e.g., through changes in working models of self, such as increased self-esteem and self-efficacy, or changes in working models of others, such as formerly avoidant individuals changing their critical, skeptical working models of others).

In addition, research should examine how cultural settings and variables moderate the link between attachment and prosocial behavior given that physical and cultural settings can shape cognitive representations of people and relationships. For example, although there is evidence to suggest that security priming attenuates hostile attitudes toward outgroup members, even among groups engaged in years of intractable conflict (Mikulincer & Shaver, 2001, 2007c), one pilot study found that more secure Palestinians living in the territories occupied by Israeli soldiers were more, rather than less, hostile toward Israeli Jews and more accepting of violence against them (Mikulincer & Shaver, 2007c). Thus, although the pursuit of the possible benefits of psychological security enhancement is promising, the assumption that security and pacifism are synonymous would be faulty. Achieving a world at peace requires humane ethics, a more tolerant cultural and educational climate, and good judgment and effective political will on the part of leaders, not just securely attached individual citizens.

Because of the growing emphasis in adult attachment research on physiological and neurological underpinnings (in this volume, see Coan, Chapter 12, and Hane & Fox, Chapter 11), it will be important to explore further how the brain and various hormones underlie the link between attachment orientations and prosocial behavior. There are already numerous studies showing that self-reported anxiety and avoidance are related to various neurophysiological processes (e.g., reactions to social rejection; DeWall et al., 2012; Gil-lath, Bunge, Shaver, Wendelken, & Mikulincer, 2005). The next step would be to extend these studies into the realm of prosocial emotions and behavior.

Bowlby (1969/1982) viewed attachment and caregiving as two innate behavioral systems, both of which evolved because they increased the likelihood that primate (including human) infants would survive in a world of full of danger,

despite these infants' immaturity at birth. The attachment and caregiving behavioral systems presumably develop throughout life as a function of experiences in important relationships, and by the time adults enter psychological studies, their dispositional attachment and caregiving orientations, although not identical or totally unified, are clearly intertwined. In adult attachment research, prosocial emotions and behavior have generally been viewed as aspects of the caregiving system, but in the child attachment literature, less attention has been given to the concept of a developing caregiving system. Ideally, future research would involve measurement of both the attachment and the caregiving systems and then would determine, using longitudinal designs, how the two influence each other over time, and how each is influenced, separately or simultaneously, by social experiences of various kinds, with parents, other caregivers, teachers, coaches, and so on.

There might be other kinds of influences worth assessing, such as books, films, television series, and religious practices. Granqvist, Mikulincer, and Shaver (2010; see also Granqvist & Kirkpatrick, Chapter 39, this volume), for example, have reviewed literature showing that religious figures, such as Jesus or the Virgin Mary, can serve as symbolic attachment figures, and many religions encourage their adherents to pray to such figures for help in times of distress or crisis. In Buddhism, there have long been meditation practices that involve imagining being loved by a family member (e.g., one's mother) or a religious figure (e.g., the Buddha), then turning that feeling of love, in one's mind, toward other people, including "difficult" ones, which might make it easier to engage in constructive (prosocial) relationships with such people in real life (e.g., Hoffman, 2015b; Mipham, 2013; Nhat Hanh, 2014). Empirically, these loving-kindness practices have been shown in turn to strengthen feelings of social connectedness (Hutcherson, Seppala, & Gross, 2008) and boost prosocial behavior (Block-Lerner, Adair, Plumb, Rhatigan, & Orsillo, 2007; Kemeny et al., 2012; Leiberg, Klimecki, & Singer, 2011).

The role of the attachment system in prayer and Buddhist loving-kindness meditation is indicated by prayers that stress such factors as being protected in times of danger, and being "nearer" to God. A common Buddhist prayer is "I take *refuge* in the Buddha, the Dharma (the Buddha's teachings and Buddhist practices), and the Sangha (the community of fellow practitioners)." Many of these religious practices are being recast in a more

secular form as Buddhist practices such as mindfulness meditation and self-compassion meditation make their way into Western psychology and psychiatry (e.g., Hoffman, 2015a, 2015b; Miller, 2009, 2015). In the same way that mindfulness meditation is being studied by psychologists and neuroscientists, it should be possible to assess the effects of other forms of meditation—focusing on self-compassion, compassion for others, and loving-kindness—on the brain, and on people's prosocial emotions and behavior.

Concluding Comments

It is interesting that ideas stemming at first from close scrutiny of the parent-child relationship have proven to apply not only to other close relationships but also to all kinds of social relationships in which concern for others' welfare arises. It seems that all forms of sensitive, responsive, and compassionate care across the lifespan (e.g., caregiving in parent-child relationships, in adult romantic relationships, in relationships between middle-aged adults and their infirm older adult parents) and in different contexts (e.g., in close relationships and in the wider social world, where thousands of strangers need help and support) have a common basis and resemble each other. This implies that the research literatures on parenting, romantic caregiving, social support, helping, empathy, and counseling and psychotherapy—and even social justice/human rights and peace-building—are fundamentally related, and that further theoretical and empirical efforts should be made to create an overarching perspective on them.

Generous caregivers—human, nonhuman, spiritual, and symbolic—can contribute to a person's sense of security and to his or her caregiving propensities; they can also provide models of compassion and loving-kindness that can be copied. Thus, if we wish to create a kinder and more peaceful world, we need to foster better parenting, more nurturing romantic relationships, better mentoring, and more positive and prosocial spiritual models. Simply championing virtues in the abstract or using socialization practices alone to encourage virtue, without providing a sense of love and security, is unlikely to be very helpful because, as we have shown here, insecure individuals do not experience opportunities for kindness and virtue in simple, unadulterated ways. They tend not to have confidence in the possibility of goodness.

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