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Title: Attachment in Family Relationships: An Overview and Appreciative Critique of Theory and Research

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Abstract:

Attachment theory is a dominant theoretical framework guiding research on close relationships across the lifespan. Research on the role of attachment in family relationships, in particular, has been highly generative, resulting in a large empirical base spanning over five decades. In this chapter, we review evidence from the attachment literature addressing key questions in family relationships research including the developmental origins, legacy, and stability of children's early relationships with parents. Evidence from meta-analytic and large-sample research reviewed in this chapter generally provides support for the key tenets of attachment theory as they pertain to early parent-child attachment relationships. However, throughout the chapter, we note important gaps in the current empirical base and offer suggestions for future research. In addition, we discuss how greater connection between different perspectives and approaches to studying close relationships can advance understanding of the role of attachment in family, as well as romantic, relationships.

Keywords: Attachment; Intergenerational Transmission; Legacy of Early Experiences; Stability; Sensitivity; Family Relationships

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Attachment theory is a dominant theoretical perspective guiding research on close relationships. Bowlby's transformative theoretical formulation of the nature of children's tie to parents (Bowlby, 1982) and Ainsworth's groundbreaking empirical research on patterns of parent-child attachment (Ainsworth et al., 1978) are among the most influential works in child psychology (Dixon, 2002). Given the centrality of parent-child relationships to attachment theory, a considerable amount of research has focused on attachment relationships within the family system. Attachment theory has been highly generative because it provides a testable

theoretical framework for evaluating the origins and significance of children's relationships with parents. Thus, it allows for rigorous evaluation of several key questions in family relationships research that will be addressed in this chapter, including:

- (1) What are the origins of the quality of parent-child relationships?
- (2) What is the developmental significance of children's early relationships with parents?
- (3) How stable are parent-child relationships over time?

Given the wealth of attachment research addressing each of these questions, our review prioritizes evidence from meta-analytic and large-sample research, using standards derived from psychological and attachment research to evaluate the magnitude of associations (i.e., small: $r = .10$, medium: $r = .20$, large: $r = .30$; Funder & Ozer, 2019; Schuengel et al., 2021). We also identify key gaps in the empirical literature and, when relevant, offer suggestions of how research on other topics and relationships reviewed in this handbook might advance understanding of the role of attachment in family relationships, with a particular focus on facilitating connections between attachment scholarship on parent-child and adult romantic relationships.

<a> Setting the Stage: Defining and Assessing Attachment

According to attachment theory, infants are biologically predisposed to form strong psychological bonds with their caregivers because proximity to caregivers would have promoted infant survival. Thus, stemming from our evolutionary history, all infants are equipped with the capacity to establish attachment relationships, which serve as a secure base from which to explore the world and a haven of safety in times of challenge (Bowlby, 1982). Elaborating on Bowlby's theory, Ainsworth made several critical contributions (see Groh, 2021), including the development of the Strange Situation Procedure (SSP; Ainsworth et al., 1978), a separation-

reunion procedure for evaluating individual differences in patterns of parent-child attachment. Secure attachment (characteristic of 51.6% of infants worldwide; Madigan et al., 2023) is evident during the SSP by a balance of using the caregiver as a secure base to explore the environment and a haven of safety to relieve distress. Infants classified as insecure-avoidant (14.7%) display limited outward expressions of distress and direct attention away from their caregiver upon reunion. Infants classified as insecure-resistant (10.2%) display strong expressions of distress and simultaneously seek out the caregiver and resist their attempts at providing comfort. Main and Solomon (1986) identified an additional attachment pattern, disorganized (23.5%), characterized by momentary, striking anomalous behaviors suggestive of a breakdown or disorganization of one of the “organized” attachment patterns (secure, avoidant, resistant).

The development of the Adult Attachment Interview (AAI; Main et al., 2003-2008)—a semi-structured interview about childhood attachment experiences—designed to evaluate attachment variations in adulthood expanded the application of attachment theory to family relationships, including an intergenerational focus (see below). In the AAI, individuals with secure-autonomous states of mind coherently discuss early attachment experiences with their parents without becoming emotionally overwrought. Paralleling avoidant attachment, AAI dismissing states of mind are indicated by limited discussion of attachment experiences via lack of memory, idealization of caregivers, and/or derogation of attachment. Paralleling resistant attachment, AAI preoccupied states of mind are indicated by individuals becoming emotionally overwhelmed and psychologically confused when discussing early attachment experiences. Attachment disorganization is captured by AAI unresolved states of mind in which individuals become psychologically confused when discussing traumatic experiences (Main et al., 2003-2008).

<a> Developmental Origins of Parent-Child Attachment Relationships

A central question in research on family relationships concerns the developmental origins of children's relationships with their parents. Attachment theory makes the bold prediction that the origins of the quality of children's attachments to parents lie in the caregiving environment (Bowlby, 1982). According to the sensitivity hypothesis, sensitive parenting (i.e., prompt, appropriate responding to attachment signals) is the key determinant of infant attachment security (Ainsworth et al., 1978). With the introduction of the AAI as a measure of parents' attachment representations derived from their own prior caregiving experiences, the sensitivity hypothesis was elaborated to include the prediction that attachment security is transmitted across generations from parent to child via sensitivity (Main et al., 1985).

Genetically informed research provides strong evidence supporting the environmental origins of early attachment security. Behavioral genetic twin studies indicate that the heritability component of attachment security is negligible. Instead, the environment (both shared and nonshared) plays a major role in accounting for variation in attachment security (e.g., Bokhorst et al., 2003; Roisman & Fraley, 2008). Converging with these findings, molecular genetic research provides scant evidence that specific genetic polymorphisms are reliably associated with infant attachment security (Luijk et al., 2011; Roisman et al., 2013).

In terms of the specific aspects of the environment that shape attachment security, research also provides support for the intergenerational transmission and sensitivity hypotheses. Specifically, the most recent and comprehensive meta-analysis of the intergenerational transmission of attachment indicates that the association between parents' AAI secure-autonomous attachment representations and observed parent-infant attachment security is robust ($r = .31$) and comparable for mother-child and father-child dyads (Verhage et al., 2016; 2018).

However, the effect size is smaller than the prior documented meta-analytic effect ($r = .47$; Van IJzendoorn, 1995), suggesting the association between parents' and infants' attachment security has decreased over time. Moreover, expected transmission of specific patterns of insecure and disorganized attachment (dismissing → avoidant, preoccupied → resistant, unresolved → disorganized) received limited support as the prevalence of anticipated associations did not differ from crossover associations with other patterns of insecurity (e.g., dismissing → resistant).

The sensitivity hypothesis has received support in both experimental and correlational studies (Bakermans-Kranenburg et al., 2003; Madigan et al., in press). The most recent and comprehensive meta-analysis indicates that sensitive caregiving is moderately associated with infant attachment security ($r = .25$), and that the association is similar for mother-child and father-child dyads and across attachment patterns (Madigan et al., in press). Tying these findings together, a meta-analysis of a subset of studies assessing all components of the expected mediation model (parent security → sensitivity → infant security) revealed that sensitive caregiving mediates the link between parent and infant attachment security. However, sensitivity accounted for only ~25% of the association between parent and infant attachment insecurity, leaving most of the association (~75%) unexplained (Verhage et al., 2016). This is the current "transmission gap" in understanding how security is transmitted across generations.

The wealth of research conducted to date provides support for the expected environmental origins of infant attachment quality as well as the more specific intergenerational transmission and sensitivity hypotheses. However, research also reveals important gaps that warrant attention. Although the transmission gap has garnered considerable attention (see Van IJzendoorn & Bakermans-Kranenburg, 2019; Verhage et al., 2018) and is important, a focus on

closing the transmission gap overlooks an arguably more pressing gap—the *environmental origins gap*. That is, despite evidence supporting the contribution of the environment to explaining individual differences in parent-child attachment security, the specific environmental determinants of attachment security early in the life course remain poorly understood. Indeed, parents' secure-autonomous representations account for only ~10% of the variation in infant attachment security, and even if sensitivity operated independently of parent attachment, it accounts for only ~6% of the variation in infant attachment security.

Following the first meta-analytic report of the moderate significance of maternal sensitivity for infant attachment security (De Wolff & Van IJzendoorn, 1997), several avenues for future research to improve our understanding of the determinants of infant attachment security were proposed. These avenues primarily focused on improving the predictive significance of sensitive caregiving by refining assessments to focus more specifically on sensitivity to attachment signals (e.g., distress; Thompson, 1997) or considering characteristics that make children differentially susceptible to their caregiving environment (Belsky, 1997). Subsequent research provided support for these ideas. Sensitivity to distress (versus non-distress) is more strongly associated with infant attachment security; however, the association between sensitivity to distress and attachment security remains modest (Leerkes, 2011; McElwain & Booth-LaForce, 2006). Similarly, a test of differential susceptibility yielded evidence that infant temperament moderates the association between sensitivity and attachment security; however, the modest association between sensitivity and security was found among temperamentally difficult infants, but not among relatively less difficult infants (Leerkes & Zhou, 2018). Thus, although fruitful, these avenues fall short of providing a comprehensive understanding of the environmental origins of infant attachment security.

To close the environmental origins gap, moving beyond a focus on sensitivity as the primary determinant of infant attachment quality is necessary (see Bernier et al., 2014 for similar argument applied to intergenerational transmission). We offer several suggestions of other factors that warrant attention, with the caveat that they are not exhaustive. Our goal is to generate connections between the family and couple relationships literatures to stimulate new lines of research. Given that several attachment patterns are represented at the lower end of security (avoidant, resistant, disorganized), each of which is theorized to have distinctive caregiving determinants (Ainsworth et al., 1978; Cassidy, 1994; Main & Solomon, 1986), one of the most straightforward next steps would be to expand the focus on sensitivity to include other caregiving behaviors. With the exception of disorganization, however, the distinctive caregiving correlates of patterns of insecure attachment have received little attention. Given that sensitive parenting is important for promoting secure attachments, adding specific forms of lower quality caregiving tied to patterns of insecure and disorganized attachment (e.g., intrusiveness, negative regard/harshness, detachment, inconsistency, etc.) may explain additional variance in secure (versus insecure) attachment and provide a richer understanding of the antecedents of all attachment patterns. Indeed, this approach aligns with meta-analytic evidence that disorganized attachment is predicted by both anomalous *and* insensitive caregiving (Madigan et al., in press; Madigan et al., 2006) and that other forms of supportive parenting account for unique variance in infant security, above and beyond sensitivity (e.g., Whipple et al., 2011).

In addition to providing support for the environmental origins of variation in infant attachment, findings from behavioral genetic research indicate the shared *and* nonshared environment explain unique variance in infant security. Although the nonshared environment does not solely capture aspects of the environment that make twins different (it also captures

measurement error and gene \times nonshared environment interactions), the robustness of the effect of the nonshared environment across studies indicates the need to expand the theorized determinants of attachment to carefully consider the aspects of the *nonshared* environment that contribute to the attachment formation process (e.g., Fearon et al., 2006, 2016; Roisman & Fraley, 2008). This approach also requires moving beyond study designs of one parent and one child, which dominate the attachment literature, to those that allow for investigation of the nonshared environment (i.e., behavioral genetic family studies).

Beyond caregiving behavior, parents' neurobiological responding in relation to infant attachment has received increasing interest (e.g., Groh et al., 2019; Laurent & Ablow, 2012; Leerkes et al., 2017) because different parameters of neural and autonomic physiological responding index parents' stress, emotional reactivity and regulation, and cognitive processing during interactions with their infants. Evidence that mothers' autonomic physiological responding to their infants is a unique predictor of infant attachment variation beyond sensitive caregiving (Groh et al., 2019; Leerkes et al., 2017) suggests that parents' neurobiological responding during interactions with their infants might be an additional unique antecedent of infant attachment patterns. How parents' neurobiological responding contributes to infant attachment beyond their parenting behaviors remains an open question. However, several mechanisms have been proposed, including emotional contagion and physiological synchrony (Leerkes et al., 2017). In addition, neurobiological responding might manifest in subtle changes in parents that are perceptible to infants (e.g., tone of voice, tenseness of body) but not well-captured by current caregiving assessments.

Beyond parent predictors, attachment scholars need to consider the role of the child in contributing to patterns of infant attachment. Much of the work on child-driven factors focuses

on temperament. However, meta-analytic evidence indicates that temperamental emotional reactivity plays little role in determining security status (Groh et al., 2017b). Thus, there is need to consider other contributions of children to the attachment formation process. Given that children's attachment experiences become represented as internal working models (IWMs) that guide future behavior within relationships, one intriguing possibility concerns the role of infants in the construction of IWMs. For example, it is possible that infants vary in how they perceive and internalize attachment-relevant experiences. Indeed, the perception of parenting behaviors by youth explains differences in the impact of controlling/punitive behaviors on youth outcomes between African Americans and European Americans (Deater-Deckard & Dodge, 1997), and even infants take situational constraints into consideration when interpreting others' behaviors (e.g., infants are less likely to imitate an adult's novel actions, such as turning on a light with one's head, when there is an alternative explanation for the novel behavior, such as the adult being unable to use their hands; Gergely et al., 2002). Currently, little is known about the content and nature of IWMs in infancy, despite a wealth of evidence regarding the rich mental world of infants (e.g., Spelke, 1994) and evidence for the presence of attachment-relevant cognitions as early as 4 months (Jin et al., 2018) indicating that the cognitive building blocks of attachment emerge early. Thus, leveraging methodological tools from infant cognition research to study how infants represent attachment experiences has the potential to yield novel insights into the role of infants in co-constructing attachment relationships with parents.

<a> Developmental Significance of Parent-Child Relationships

A second central question in family relationships research concerns the developmental significance of children's early relationships with parents. Again, attachment theory offers several core predictions regarding the legacy of children's early attachment patterns to their

parents. Specifically, infant attachment security is expected to promote children's subsequent adjustment across the developmental domains of social competence, externalizing problems, and internalizing symptomatology, with stronger associations expected for interpersonal outcomes (e.g., functioning in peer relationships; Belsky & Cassidy, 1994). Moreover, such effects are expected to be enduring across the life course (Sroufe et al., 1990). The developmental sequelae of specific patterns of insecure and disorganized attachment also are predicted to differ. Although all patterns of insecure and disorganized attachment are expected to undermine children's social competence, insecure-avoidant and insecure-resistant attachments are expected to serve as distinctive diatheses for externalizing versus internalizing problems (respectively). Moreover, disorganized attachment is expected to broadly pose risk for externalizing and internalizing problems (see Groh et al., 2017a).

These predictions have garnered considerable attention. Given the sheer size and complexity of the literature, a series of meta-analyses was conducted to evaluate these hypotheses in light of extant evidence. In line with the expected predictive significance of early attachment security, meta-analytic evidence indicates that early secure (versus insecure) mother-infant attachment is moderately associated with better social competence with peers ($r = .19$; Groh et al., 2014a), fewer externalizing problems ($r = .15$; Fearon et al., 2010), and, to a lesser extent, fewer internalizing symptoms ($r = .08$; Groh et al., 2012; Madigan et al., 2013). Supporting the expected relative significance of attachment across developmental domains, early security is more strongly associated with social competence and fewer externalizing problems (typically manifested in peer contexts) than internalizing symptoms, for which the association was notably small (Groh et al., 2017a). Strikingly, across meta-analyses, the magnitude of the association between early attachment (in)security and subsequent outcomes did not wane as the

age at which outcomes were assessed increased, providing support for one of the most provocative claims of attachment theory—that early attachment security has enduring effects on subsequent adjustment (Groh et al., 2017a). However, findings were mixed regarding the differential predictive significance of patterns of insecure and disorganized attachment. In line with expectations, avoidant, resistant, and disorganized attachment were comparably associated with poorer social competence (Groh et al., 2014a), and early avoidant and disorganized (but not resistant) attachment were associated with greater externalizing problems (Fearon et al., 2010). However, contrary to expectations, avoidant (but not resistant or disorganized) attachment was associated with internalizing symptomatology (Groh et al., 2012).

Although some scholars have cautioned against stretching attachment theory beyond its theoretical bounds (Thompson, 2016), others have drawn on attachment theory to propose that early security might also contribute to children's cognitive outcomes (Van IJzendoorn et al., 1995). Testing the bounds of the significance of early attachment, a recent meta-analysis yielded evidence that early mother-child attachment security (versus insecurity) is moderately associated with better cognitive outcomes (i.e., cognitive capacities, intelligence; $r = .17$) and language skills ($r = .16$; Deneault et al., 2023), and that associations did not wane as children's age increased. Moreover, findings revealed that the magnitude of these associations did not differ from meta-analytic estimates of the association between early security and children's social competence and externalizing problems. Thus, establishing a secure attachment relationship with mothers in infancy is generally associated with better social *and* cognitive development.

A striking finding that consistently emerges across meta-analyses is that the magnitude of attachment-outcome associations does not wane over the life course, signaling the need to better understand the mediating processes that might explain such enduring effects. According to

attachment theory, IWMs are the mechanism linking early attachment experiences with later outcomes (Bowlby, 1973; Bretherton & Munholland, 2008). Understanding of IWMs has been advanced by research informed by cognitive psychology showing that repeated attachment experiences become represented in memory as “secure base scripts”, defined as an understanding that attachment figures may be relied on to provide support and resolve problems (Waters & Waters, 2006). Although this work has been generative with respect to understanding IWMs in adulthood (Waters & Roisman, 2019), more work is needed on how IWMs develop in early childhood and their role in explaining links between attachment patterns and subsequent adjustment.

In addition to IWMs, other mechanisms have been proposed such as social information processing, emotional reactivity/regulation, and continuity of caregiving (see Fearon et al., 2016). More recently, neurobiological mechanisms underlying emotional and stress responding have also been proposed given that attachment relationships are often the context in which emotions and stress are regulated. Although early attachment variation is linked with children’s neurobiological responding in attachment-relevant contexts (Groh & Narayan, 2019), more research is needed to determine whether neurobiological mechanisms underlie the legacy of children’s attachment patterns.

Taken together, research supports many of the key predictions regarding the developmental significance of early attachment security. However, a striking limitation of this literature is the disproportionate focus on children’s attachments to *mothers*, particularly given that fathers are integral members of the family system and play a critical role in children’s development (Bakermans-Kranenburg et al., 2019; Cabrera et al., 2018). Recently, studies reporting on children’s attachments to fathers have increased, allowing for a meta-analytic

evaluation of this small corpus of studies. Findings indicate that children's attachment security to fathers is moderately associated with better social competence ($r = .14$), fewer externalizing problems ($r = .18$), and (to a lesser extent) fewer internalizing symptoms ($r = .09$). Moreover, the magnitude of associations for externalizing and internalizing symptomatology was comparable to those found for mother-infant attachment patterns, but not for social competence, with the association being stronger when attachment was assessed with mothers (Deneault et al., 2021; Groh et al., 2014a). Notably, too few studies reported specific patterns of insecure and disorganized attachment to be meta-analyzed, and only two studies reported the link between father-child attachment patterns and cognitive outcomes, precluding analysis (Deneault et al., 2021; Deneault et al., 2023; Groh et al., 2014a).

Although findings demonstrate the developmental significance of both mother-child *and* father-child attachment relationships, conducting analyses in parallel fails to consider how these relationships work *together* within the broader family system to impact children's development. For example, the effects of mothers and fathers may be additive (i.e., two secure attachments are better than one, which is better than none) or buffer one another (i.e., a secure attachment to one parent buffers the negative impact of an insecure attachment to the other parent). Further, if an attachment relationship with one parent (versus the other) plays a more salient role in children's development, there may be hierarchical effects (Dagan & Sagi-Schwartz, 2018). These possibilities were recently tested in a meta-analysis of the small set of studies reporting the significance of mother-child *and* father-child attachment on children's internalizing and externalizing problems. Due to limited representation of avoidant and resistant attachment patterns, analyses focused on secure (versus insecure) and disorganized (versus not-disorganized) status. Findings indicated that children who established insecure attachments to

one or two parents—regardless of whether it was the mother or father—exhibited higher levels of internalizing symptomatology. Moreover, children who had disorganized attachments to both parents exhibited higher levels of externalizing behavioral problems than children who had only one or no disorganized attachments (Dagan et al., 2021).

Although groundbreaking, caution is warranted in interpreting these meta-analytic findings given the relatively small number of studies upon which findings are based, especially when compared to mother-child attachment studies (depending on the outcome assessed, 82-100% of samples examine mother-child attachment). Regardless, these initial efforts demonstrate that children's attachment patterns to fathers matter for their development, in many cases comparably to that of mothers, signaling the need for greater inclusion of fathers in attachment research. Moreover, findings reveal the complex way in which children's attachment patterns to mothers and fathers jointly contribute to their development, indicating that siloed research focusing on just one attachment relationship (regardless of caregiver) is not sufficient to understand the developmental significance of children's early attachment relationships. Moreover, attachment research needs to move beyond traditional two-parent, heterosexual households, which are not representative of the complexity of the family structures experienced by many children (Aragão et al., 2023), to provide a more comprehensive understanding of how children's attachment relationships in diverse family structures contribute to their (mal)adjustment across the life course.

< a > Stability of Parent-Child Relationships

A third major question in attachment research on family relationships concerns the stability of attachment over time. Early attachment experiences become internalized as IWMs that are thought to be relatively stable over time due to the increasing automatization of parent-

child interactions, the habitual nature of interaction patterns, and resistance from relationship partners to change routinized relationship patterns. However, IWMs also are open to revision in light of relevant changes in attachment relationships. Thus, “lawful” discontinuity in attachment security is expected (Bowlby, 1973; Bretherton & Munholland, 2008).

Stability and lawful change in attachment security has been the focus of much empirical inquiry. However, research on both short-term stability in the security of parent-child attachments in infancy and long-term stability in the organization of attachment behavior in infancy to representations of attachment in adulthood has yielded mixed evidence (Fraley & Dugan, 2021). One of the leading interpretations of this discrepancy is that attachment security is generally stable except in higher risk populations that experience major life stressors and, therefore, more changes in the caregiving environment (e.g., Waters et al., 2000). Indeed, Fraley (2002) conducted a meta-analysis of studies reporting the association between attachment security assessed via the SSP and either the AAI or another behavioral measure of attachment (e.g., SSP, Attachment Q-Sort, modified SSP). Attachment security was moderately stable from infancy to adulthood ($r[\Phi] = .39$), with less stability in higher risk samples ($r = .27$) as indicated by the presence of attachment-relevant life stressors (e.g., family instability, marital discord, abuse) compared to lower risk ($r = .48$) samples. In line with Fraley’s (2002) findings, Pinquart and colleagues (2013) provided updated meta-analytic evidence for moderate stability in attachment security across early childhood ($r = .24 - .46$, dependent on time between assessments), with the effect being weaker in at-risk samples ($r = .21$) as indicated by the presence of social (e.g., divorce, parent psychopathology, abuse) and biological (e.g., physical illness, disability) factors expected to increase risk for instability versus not at-risk samples ($r =$

.36). However, attachment security was not significantly stable from infancy to adulthood ($r = .14$), possibly due to the inclusion of a range of different adult attachment assessments.

Importantly, the total number of individuals studied from infancy to adulthood has been modest, resulting in a limited corpus to estimate stability. The National Institute of Child Health and Human Development Study of Early Child Care and Youth Development (NICHD SECCYD) is a longitudinal study that has followed low-risk participants from infancy to adulthood, comprising several observational assessments of mother-child attachment in early childhood and the AAI administered at age 18 to 857 participants. As the largest, most comprehensive single investigation to date, findings reconcile prior mixed evidence by indicating that although attachment security is significantly stable over the early life course, the magnitude of stability is weak ($r = .12$; Groh et al., 2014b). Moreover, the findings provide little support for stability of specific patterns of insecure and disorganized attachment (Groh et al., 2014b). Additionally, the large longitudinal nature of the SECCYD allowed for the examination of variation in caregiving and contextual sources that might contribute to lawful change in attachment security. Positive deflections in attachment security from infancy to adulthood were explained by experiencing greater maternal and paternal sensitivity post-infancy, whereas negative deflections were explained by experiencing lower maternal sensitivity across childhood, father absence, and experiencing more negative life events (Booth-LaForce et al., 2014).

Taken together, findings from across the literature indicate that attachment security is not especially stable, but that discontinuity can be explained by attachment-relevant changes in the caregiving environment. However, several limitations warrant attention. The literature on attachment stability largely focuses on *mother-child* attachment. Although meta-analytic evidence indicates the stability of father-child attachment security is comparable to that of

mother-child attachment (Pinquart et al., 2013), this is based on limited data (~13% of studies included fathers as attachment figures). Given that attachment security with both mother and father predict states of mind with respect to attachment in adulthood, investigations that include assessments with both mothers and fathers are needed.

Additionally, two diverging perspectives of attachment stability have emerged. The *revisionist* perspective suggests that working models are updated in light of ongoing experiences, whereas the *prototype* perspective suggests models developed in infancy remain unchanged and continue to affect experiences (Fraley, 2002). Longitudinal investigations that include only two attachment assessments cannot distinguish between these perspectives, which requires attachment to be assessed repeatedly. Fraley (2002) meta-analytically evaluated such claims, providing evidence consistent with the prototype perspective. However, given evidence of relatively weak stability of attachment security from infancy to adulthood (Groh et al., 2014b; Pinquart et al., 2013), such claims should be re-evaluated.

The literature on attachment stability is based upon the assumption that stability should be measured from infant (e.g., SSP) to adult (e.g., AAI) assessments. This focus may be overly conservative given Bowlby's (1973) theorization that IWMs are only tolerably accurate representations of prior experiences. For example, when examining attachment-relevant experiences with caregivers over the course of childhood to adults' AAI states of mind, 20% of the variance in dismissing and 11% of the variance in preoccupied states of mind are accounted for by assessments of adults' prior caregiving experiences (Haydon et al., 2014).

Research examining factors that contribute to lawful change in attachment also focus on a limited set of major life events (e.g., divorce, financial strain). Although predictive of deflections in attachment security, such factors explain only part of the variance. Broader consideration of

additional experiences is needed to more fully explain changes in attachment security, which could provide clearer insights into the specific experiences that contribute to the updating of IWMs. Toward that end, recent research offers promising leads. For example, Waters and colleagues (2019) found that minor, frequently occurring life changes (e.g., difficulties at school) better explain instability in attachment representations across childhood leading into adolescence than major life events (e.g., death of loved one). Moreover, Volling and colleagues (2023) have highlighted the role of normative changes in family structure, such as the transition to siblinghood, in contributing to positive and negative deflections in attachment security to mothers and fathers.

<a> Gaps, Future Directions, and Opportunities for Connection

The vast literature on children's early attachment relationships with parents provides support for key tenets of attachment theory and has transformed our understanding of the development and legacy of parent-child relationships. However, as noted throughout this chapter, research to date is not without limitations. We now highlight limitations that transcend the literatures reviewed and offer suggestions for how they might be addressed in future research. In addition, we note opportunities for greater connection with various perspectives on close relationships that might advance our understanding of attachment within family relationships.

The evidence reviewed in this chapter indicates that hypothesized associations between early attachment security and theoretically relevant antecedents/sequelae are robust, though generally modest in magnitude. Moreover, the expected distinctive correlates of avoidant versus resistant (preoccupied/anxious) attachment have not always materialized. Leveraging approaches applied in research on adult romantic attachment, Fraley and Spieker (2003) provided evidence that variation in infant attachment is best represented by two dimensions reflecting avoidance

(versus proximity-seeking) and resistance/disorganization. However, this dimensional approach has received considerable pushback among some parent-child attachment scholars (e.g., Sroufe, 2003). In contrast, the dimensional approach is widely used in adult romantic attachment research and has yielded a wealth of evidence for the distinctive correlates of avoidant versus anxious attachment (see Chapter 2 this volume). Indeed, the dimensional approach offers several advantages, including: (1) improving statistical power in modest-sized samples, which are typical in the infant attachment literature (Groh et al., 2017a), (2) addressing issues of low base-rates of insecure attachment patterns by scaling all children on avoidance and resistance dimensions, and (3) improving detection of distinctive correlates of avoidant versus resistant attachment by aligning representations of attachment with their latent structure (for application and comparison of dimensional versus categorical approaches, see Groh et al., 2019). Thus, the dimensional approach offers a viable option for studying patterns of insecurity necessary to reduce the risk of avoidant and resistant attachment losing their relevance in parent-child attachment research.

Central to attachment theory is the expected universality of parent-child attachment relationships and their role in affecting development (Bowlby, 1982). However, the majority of samples comprised in the meta-analytic research reviewed here involve White/non-Hispanic individuals (only 17% [median; range: 6-30%] non-White) from high/middle socioeconomic backgrounds (only 17% [median; range: 16-27%] low SES) living in North America and/or Europe (only 4% [median; range: 0-38%] outside this region). Echoing Mesman and colleagues' (2016) conclusion that "...the cross-cultural database is absurdly small compared to the domain that should be covered" (p. 871), these figures document further gaps in the representativeness of the empirical base. There can be no question that the attachment literature is far from

representative of the global population. However, even when evaluated against the United States (the country most represented in the literature), underrepresentation is evident when considering that approximately 40% of the U.S. population is not White and 30% live in lower income households (United States Census Bureau, 2022). Thus, there remain notable gaps in testing the Universality hypothesis, raising questions about the generalizability of findings beyond Western, White/non-Hispanic, high/middle SES families. Perhaps more importantly, given the significance of culture, ethnicity, and SES for family relationships (see Chapters 21 and 23 in this volume), improving the representativeness of attachment research will provide a deeper understanding of how attachment processes work across diverse families.

This handbook features chapters on attachment within salient close relationships in childhood (parent-child) and adulthood (couples). These literatures are dominated by distinctive methodological traditions that are represented in separate areas of psychology, including observational and narrative assessments in the study of parent-child attachment within developmental psychology and self-reports in the study of attachment in adult romantic partners within social-personality psychology, contributing to largely parallel lines of research. Moreover, the resource-intensive nature of the AAI has posed an impediment to greater use of narrative measures beyond the developmental tradition.

However, research comparing the significance of narrative and self-report attachment measures has provided evidence that both measures predict complementary aspects of adjustment (e.g., Simpson et al., 2002). In addition, the development of the Attachment Script Assessment (Waters & Rodriguez-Doolabh, 2004) as a well-validated narrative assessment of attachment security (Waters & Roisman, 2019) and a recently developed system for evaluating patterns of insecurity and disorganization using the ASA (Groh & Haydon, 2021a, 2021b)

provides a resource-efficient alternative to the AAI. Thus, including self-reported attachment measures that tap conscious appraisals of attachment phenomena together with narrative attachment measures that tap unconscious scripts of how attachment relationships function might provide a more comprehensive understanding of the role of attachment in family and couples' relationships.

In addition to methodological sharing, greater cross-communication and collaboration stands to advance research on parent-child and romantic attachment in other ways. As detailed above, the application of statistical approaches to parent-child attachment for evaluating the latent structure of attachment long-used in romantic attachment research has challenged traditional approaches toward the representation of individual differences in infant attachment, demonstrating striking consistency in the latent structure of attachment from infancy to adulthood (Fraley & Spieker, 2003; Fraley & Waller, 1998; Raby et al., 2022). Additionally, the application of longitudinal methods that are a mainstay of parent-child attachment research has yielded novel insights into the developmental origins of adult romantic attachment (Fraley et al., 2013). Increased connection also has the potential to expand questions typically examined primarily within each literature (e.g., the intergenerational transmission of romantic attachment, Obegi et al., 2004; the significance of parent-child attachment relationships for parents' romantic attachment). Ultimately, efforts to connect these literatures will support an important goal of attachment theory—to provide a better understanding of close relationships across the entire lifespan.

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