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Taking perspective on attachment theory and research: nine fundamental questions

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ABSTRACT

Since its inception more than 50 years ago, attachment theory has become one of the most influential viewpoints in the behavioral sciences. What have we learned during this period about its fundamental questions? In this paper, we summarize the conclusions of an inquiry into this question involving more than 75 researchers. Each responded to one of nine “fundamental questions” in attachment theory. The questions concerned what constitutes an attachment relationship, how to measure the security of attachment, the nature and functioning of internal working models, stability and change in attachment security, the legacy of early attachment relationships, attachment and culture, responses to separation and loss, how attachment-based interventions work, and how attachment theory informs systems and services for children and families. Their responses revealed important areas of theoretical consensus but also surprising diversity on key questions, and significant areas of remaining inquiry. We discuss central challenges for the future.

KEYWORDS

Attachment; security; internal working models; stability and change; culture; clinical intervention

More than fifty years after its inception, there is little doubt that attachment theory has become one of the most influential frameworks in the social and behavioral sciences. Created by Bowlby to explain the child’s emotional tie to caregivers, the theory quickly expanded in scope to encompass topics such as adult romantic relationships, the origins of developmental continuity and change, developmental psychopathology, and public policy problems concerning divorce and custody, child care, and child protection. During this period, attachment theory evolved in response to changes in family formation and relationships, the increased participation of young children in early care and education programs, and emergent research in developmental neuroscience, behavioral and molecular genetics, life history theory, psychoneuroimmunology, and many other fields. As this was happening, a rapidly growing research literature on attachment was providing new understanding of the mental representations associated with security and insecurity, the implications of attachment for clinical intervention, attachment in relation to culture, the legacy of early attachment for personality and relational functioning, and other issues

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related to Bowlby's original formulations. Methodological achievements have built on the organizational perspective of Ainsworth's Strange Situation, providing well-validated, developmentally appropriate assessments of attachment across the life span and measures of attachment representations.

What have we learned about the fundamental questions at the heart of Bowlby's theory? What is the current status of attachment theory with respect to the continuing legacy of early attachments, the mental representations underlying security and insecurity, and other central issues? More broadly, for which questions does theoretical consensus exist, and for which questions is there still considerable debate? For which issues, in turn, have new questions or problems arisen that require further scrutiny? Such questions invite attachment scholars to reflect on how the theory has progressed during the past half-century and on the issues requiring future thought and study.

This is an opportune time to consider these questions for several reasons. Psychological theories are rarely prominent for as long as attachment theory has been influential, and considering what has been learned about the questions motivating Bowlby's inquiry increases understanding of the areas in which the theory has been generative and/or stale. This consideration also enables theorists to see whether the broadening reach of attachment thinking to new theoretical and practical concerns, and its applications to a changing social context for families, has overextended its formulations and/or enlivened them. Fundamental to the growth of attachment theory is understanding what new questions remain for attachment theorists to ponder and study. Considering how Bowlby's fundamental questions have been addressed helps to clarify what we currently do and do not know. Others have also engaged in recent appraisals of attachment theory and its development, including Duschinsky (Duschinsky, 2020; Duschinsky et al., 2021), Schuengel et al. (2021), Karen (*in press*), and others.

We recently enlisted attachment scholars into this reflection by formulating a set of nine "fundamental questions" that we believe are at the heart of attachment theory, and then inviting them to comment on the state of the theory with respect to these questions. We solicited comments from individuals whose views have been influential for the field as well as scholars with important perspectives whose views are not as well known. We assembled a diverse group of 75 commentators from developmental psychology, social and personality psychology, developmental psychopathology, public policy and intervention science, social work, and other fields. Their 48 brief essays were not intended to be point-counterpoint exchanges. Rather, our goal was for each author to present their perspective on the question they were asked to address, including their thoughts about future directions for the field. Although the nine questions we identified surely do not exhaust all of the "fundamental questions" of attachment theory, we expected that they would touch on many of the most important issues, concerns, and debates that have driven attachment research for more than 50 years.

In this paper, we summarize the central lessons we learned about the state of the theory in relation to these nine questions. Because one of our goals was to encourage greater understanding of different views within attachment theory in order to promote greater theoretical clarity, we hope that this summary will contribute to new directions in

attachment research. In the end, we were struck by the fact that despite its long and productive history, many fundamental questions that undergird attachment theory remain open, generative, and inviting of further inquiry. Readers can turn to the essays themselves to learn more (Thompson et al., 2021).

What kinds of relationships constitute attachment relationships?

Our first question is the most fundamental because it concerns defining attachment and attachment security. Bowlby's focus on the child-parent relationship provided a narrow, rather specific window into the nature of attachment. As the window expanded in subsequent years to include out-of-home caregivers, adult romantic partners, and even relationships with friends and coworkers, a question emerged: Why we should call certain close, affectional relationships "attachments" and not others? One answer is that attachment relationships serve specific functions. They provide individuals with a safe haven and a secure base, which is why attachment figures are sought in stressful situations, such as when a person feels threatened or distressed. Some attachment researchers also include proximity maintenance as another key function of attachment relationships. Additionally, attachment relationships are distinct from other close relationships in their characterization as secure or insecure, the latter represented by attachment avoidance, anxiety, or disorganization.

Despite general consensus on these basic attributes of attachment relationships, some of our contributors commented that attachment relationships differ from one another in other important ways. Ahnert (2021), for example, noted how child-caregiver attachments formed in child care develop differently than child-parent attachments, especially as they are influenced, for example, by the adult's sensitivity to the group as well as to the individual child. Moreover, security with caregivers has similar but also different correlates for children in child care settings. Functional differences like these also exist between child-parent attachments and adult romantic attachments, and probably for other kinds of attachment relationships as well. More broadly, contributors differed in their thinking about the development of attachment relationships across life and the significance of early relationships. Their views ranged from those emphasizing the formative influence of infant-caregiver attachment, to those emphasizing the continued malleability of attachment security in response to life stress, psychotherapy, and the influence of later relationships, to the view that people acquire and maintain multiple representations of relationships over time that shape their overarching attachment orientation in adulthood.

These are important differences in perspective bearing on a larger, and still unresolved, question: How do attachment relationships that have developed with different partners and in different contexts over time become integrated (if they do) to shape an individual's attachment orientation(s)? It is widely recognized that most individuals develop multiple attachments during their lives. Do children and adults, therefore, draw on different working models based on different attachment experiences to guide their functioning in different contexts, or are they instead characterized by a single, integrated general attachment orientation that is broadly influential? If the latter, how is this integration achieved? Researchers who study attachment in childhood and in adulthood have each considered these questions in limited ways

and with different conclusions, and there has been little cross-fertilization of their views. The diversity of approaches to these questions among researchers compels, therefore, further consideration of how multiple attachments exert developmental influence, a fundamental question remaining for attachment theory.

How should attachment security be assessed?

As different measures of attachment have been developed and validated, broader methodological strategies have emerged, ranging from narrative interviews to self-report measures to attachment script-based assessments to priming methods, and more (see, Waters et al., 2021). The fundamental question here is whether or not there is a central element defining attachment relationships that is captured by each of these diverse assessment approaches. Are we all measuring the same thing?

The straightforward answer appears to be no. As Crowell (2021, pp. 90–91) concluded with respect to the Adult Attachment Interview and the Experiences in Close Relationships questionnaire: “Although both measures predict important aspects of close relationship functioning in adulthood, they do not predict the same outcomes in the same ways.” Similar conclusions were reached by authors examining the consistency of attachment assessments within and between different developmental periods. Stated simply, attachment indexed by one well-validated measure is not necessarily convergent with attachment indexed by another.

This conclusion is not surprising in light of the different measurement methods, approaches, goals and purposes, and developmental characteristics of attachment that have guided the creation of different measures. But it is consequential for at least two reasons. First, conclusions concerning some important theoretical issues, such as stability and change in attachment over time, are likely to be qualified when different attachment assessments are used at different ages (as is often true). Estimates of the consistency of attachment are confounded by measurement variation. We return to this problem in a subsequent section. Second, different measures of attachment are likely to have somewhat different correlates because they incorporate different sources of variance. This has important implications, for example, for what we believe are the consequences of security and insecurity. Taken together, generalizations about the nature of attachment based on research derived from different measures – especially those employing different overall assessment strategies – must be made somewhat cautiously.

Dimensional measures, which characterize attachment according to a two-factor structure indexing attachment anxiety and attachment avoidance, are sometimes favored because they afford comparability of measurement across different stages of life and relationships (script methodology may also have this capacity). However, a cautionary note emerged from among our contributors. Steele and Steele (2021) argued that although dimensional approaches have psychometric benefits, differences in attachment are fundamentally differences in quality rather than quantity along a dimension, consistent with the organizational view. They pointed to infant disorganization and adult unresolved loss and trauma as two illustrations of the multidimensional variability captured in categorical assessments.

Their conclusion suggests that although efforts to establish consistency across different attachment assessments are worthwhile, researchers' choice of measures may ultimately depend on the purposes and goals of a study and the relative strengths of each measurement strategy. Studying attachment in clinical samples, with infants, or through priming is likely to dictate certain methodological choices that make comparison of findings to those of other samples inappropriate. To an important extent, therefore, methodological pluralism is likely to continue to complicate the derivation of broad, generalizable conclusions across attachment research literatures. Building generalizable conclusions about attachment will require studies with measurement approaches explicitly oriented to suit to cross-age and cross-sample comparisons.

What are internal working models, and how do they operate?

One of the most generative elements of Bowlby's theory is his concept of affectively-colored, dynamic, relationally-based mental representations that stem from attachment-relevant experiences and influence later aspects of social and personality functioning. His internal working models (IWMs) concept is frequently employed by attachment researchers when they interpret empirical findings because it connects attachment-related relational experience to its hypothesized outcomes. But is there theoretical consensus about what IWMs are and how they function? This was our third fundamental question.

Our contributors' portrayals of IWMs were, in fact, diverse. To some, IWMs are relationship-specific and hierarchically organized; to others, they reflect a person's entire relational experience. IWMs are primarily nonconscious to some, but to others they are associated with the development of consciously accessible social-cognitive skills. Contributors also varied in their portrayal of IWMs as functioning primarily to ensure safety in the context of threat or as having much broader adaptive purposes. These different views reflect the theoretical diversity that current exists among attachment scholars. There is, in other words, no clear consensus about what IWMs are and how they operate.

Despite this, there are some features of IWMs that these diverse portrayals share. First, most attachment researchers agree that IWMs derive from relationships with attachment figures and guide interactions with them, especially with respect to the central functions of attachment described above (e.g. secure base). Second, most also agree that IWMs change developmentally based on new relational experiences, a view nicely expressed by Theodore Waters, who stated that IWMs "contain multiple constructs that unfold in a particular developmental sequence, change in latent structure, and undergo extensive generalization and elaboration across development" (Waters, 2021, p. 82). Contributors described these developmental and relational changes in the context of cognitive script theory, memory and autobiographical representation, and social discourse, which are just some of the identified avenues through which IWMs are developmentally constructed and revised.

Attachment researchers also agree that IWMs underlie a range of social, personality, and relational characteristics. However, the breadth of attachment-related characteristics that have been attributed to the influence of IWMs has elicited some of the more serious criticisms of this construct, such as that it can "too easily explain anything" (Hinde, 1988).

As several contributors noted, a broadly-defined and unmeasured IWM construct is problematic for attachment theory because it produces an unduly flexible explanatory construct.

One potential correction to this problem is for researchers to consider more seriously alternative explanations for the association of attachment security (or insecurity) with key outcomes. As described in several chapters, for example, attachment may be influential via its effects on neurobiological development, physical health, stress buffering systems, emotion regulation, and other processes besides IWMs, and these mediating processes can be measured. Other studies show that attachment may be influential as a moderator of the effects of other relational processes (e.g. parental harsh discipline) on behaviors such as children's antisocial functioning, even when it has no direct influence (e.g. Kochanska & Kim, 2012). Along with using narrower, more precise conceptualizations of IWMs, therefore, future attachment researchers may find alternative explanations for the influence of attachment by considering concurrent developmental processes that are affected by attachment as well as examining more complex predictive models. Unfortunately, when researchers focus on only the direct relations between attachment and hypothesized outcomes, these intervening influences are not considered and are thus unmeasured.

In addition, better and more direct measurement of IWMs and their functioning will contribute to theory development and more interpretable research findings. Innovations in attachment research (e.g. script methodology) and advances in allied fields (e.g. research in autobiographical representation) together provide incentives for attachment researchers to consider afresh what internal working models are, how they develop, and how they can be assessed. We return later to this issue.

Should we expect attachment security to remain consistent over time?

The expectation that attachment security should remain fairly stable over time and serve as a "prototype" for later relationships generated considerable early interest in attachment theory and produced some of its most important research findings. Thus, from the perspective of nearly five decades of subsequent research, our next fundamental question addressed what we have learned about stability and change in attachment security.

The answer: it's complicated. Several contributors commented that documenting consistency in attachment over time often involves the use of different attachment measures that reflect different measurement strategies, sometimes in relation to different attachment figures at different ages. Moreover, as Allen (2021) noted, even when the security of attachment to a parent during childhood and adolescence is compared using similar measures, each developmental period encompasses different psychological changes that evoke unique child-parent interactions and different attachment-related cognitions and emotions affecting the interpretation of those measures. Allen asked, therefore, "stability in what?" For all these reasons, it is unsurprising that even when there are reliable empirical associations between measures of early and later attachment security, these associations tend to be modest.

The question of stability and change in attachment is also complicated because modeling processes of *change* has become as interesting and important as documenting *stability* originally was. To adult attachment researchers like Arriaga and Kumashiro (2021),

for example, understanding how adult attachment orientations change because of the influence of one romantic partner on another's security contributes new understanding of what developmental researchers have long called "lawful change" in attachment. Other contributors described how adult attachment orientations change when adults are chronically stressed or enter new life roles. This work is relevant to efforts to foster more secure attachment relationships at any age, and reconceptualizes the question of attachment stability. As summarized by Fraley and Dugan (2021), adult attachment security is more stable in some relationship domains (e.g. adult relationships with parents) than others (e.g. romantic relationships), and there is only modest consistency in security across domains at any time.

Not surprisingly, additional questions flow from the foregoing. For example, is attachment insecurity more prone to change over time than security? How do the relational experiences eliciting a transition to security compare with those producing insecurity? Are the experiences that inspire changes in security for children meaningfully different, or similar, to those affecting changes in security for adults? What are the implications of this question for the potential that children who are insecurely attached can become secure as adults? Finally, are there some children or adults who are simply unable to change from insecure to secure, perhaps owing to specific or chronic traumatic experiences? As research often does, the exploration of this fundamental question has generated important new questions for the next generation of attachment scholars to address.

These questions reflect, however, an important change in thinking about the developmental dynamics of attachment relationships. Whereas stability over time was previously the theoretical expectation for how attachments normatively develop, the field has moved toward recognizing that "lawful discontinuity" is not just an explanation for why stability does not occur, but an important normative dynamic to attachment relationships meriting a place in attachment theory. Further study of how attachment relationships typically *change* developmentally, and the reasons they do so, could significantly advance understanding of attachment as a developmental construct.

What domains of later behavior should early attachment relationships predict, and why?

The next fundamental question concerned the boundary conditions for the influence of early attachment. We asked authors to comment on the domains of later behavior that should be predicted by early attachment security *and* the domains for which we should *not* expect predictive associations. We framed the question in this manner because research findings have revealed a broadening range of attachment correlates over the years, and we reasoned that future researchers might be better guided by narrower, more theoretically-guided expectations about the enduring influence of early attachment. Narrower theoretical expectations would not only focus research inquiry; they would also contribute to more incisive interpretations of new findings. When researchers unexpectedly find that attachment is associated with outcomes outside these theoretical expectations, for example, this should result in a search for alternative causes (e.g. third variables) rather than an expansion of theoretical claims concerning the influence of early attachment on later behavior.

The essays addressing this question highlighted the variety of research fields that have informed attachment theory since Bowlby's time. Authors discussed the effects of early attachment in light of research on stress neurobiology and inflammation, developmental neuroscience, molecular genetics, life history theory, and other intellectual currents, in many cases identifying distinct boundary conditions based on the relevance of early attachment to each domain. From life history theory, for example, secure and insecure attachments are consistent with "slow" and "fast" life history strategies that predict outcomes such as pubertal timing and mating strategies, but not necessarily life satisfaction or religiosity (Szepeswol & Simpson, 2021). From the perspective of physical health, secure and insecure attachments predict vulnerability to physical and mental health conditions associated with stress and inflammation, but not necessarily to conditions that have strong genetic predispositions (Ehrlich & Cassidy, 2021). In these and other ways, the contributors demonstrated how contemporary attachment theorists now have a broader variety of conceptual tools for (a) hypothesizing how and why early attachment might affect a range of later outcomes and (b) proposing more specific expectations regarding what its influence should be.

These ideas can inform the expansive empirical literature on the associations between early attachment and later behavior. Meta-analyses summarized by Roisman and Groh (2021), for example, show that attachment has a significant but modest association with peer social competence and behavior problems, but how should we interpret these associations? Different conceptual lenses offer different views. Attachment may moderate the influence of health vulnerabilities on children's participation in social activities and the growth of peer competence, especially if vulnerabilities are stress-related. Parental sensitivity contributing to attachment security may influence developing neurobiology, including neural networks related to the processing of emotional cues, which might in turn influence peer sociability. Peer sociability and behavioral problems may each be derivative of differences in emotion regulation capacities to which secure and insecure attachments contribute. These are testable hypotheses. Furthermore, as several contributors noted, the associations between attachment and other behaviors might be bidirectional: security or insecurity may have an influence on *and* be an outcome of differences in physical health, differential brain maturation, emotion regulation, and other developmental processes over time.

In short, inquiring about which domains of later behavior early attachment relationships theoretically should predict can yield different answers depending on the conceptual lens one applies. As attachment theory increasingly connects with other relevant domains of behavioral science, work on this fundamental question is likely to yield additional complicated but interesting perspectives that will inform and guide future research on the influence of early attachment.

How are attachment processes manifested in different cultures – and how does culture manifest itself in attachment processes?

These dual fundamental questions reflect the ongoing debate concerning attachment and culture. Attachment theory was formulated in the context of Western culture and industrialized societies, but its theoretical applications are potentially universal because they address the evolutionary adaptations by which infants can survive to maturity. This

claim has been questioned, however, sometimes vigorously. In an important critique, Rothbaum et al. (2000) contrasted research findings in the United States and Japan regarding some of the core hypotheses of attachment theory and concluded that attachment theory is biased toward Western ways of thinking about young children and patterns of caregiving. Their conclusion was questioned, in turn, by respondents from within and outside attachment theory who argued that differences in particular cultural practices in early care do not necessarily violate broader generalities regarding the functions of attachment relationships, especially when measures are tailored to the cultural context (e.g. Kondo-Ikemura, 2001; Posada & Jacobs, 2001). As K. Behrens (2004, 2010) noted, for example, an indigenous understanding of the complex Japanese concept of *amae* – a relational construct related to dependency, intimacy, and acceptance – reveals, as it is applied to mother-infant relationships, many aspects that are consistent with attachment formulations in addition to cultural differences with attachment.

More recently, researchers of culture such as Keller (2021) have claimed that attachment researchers assume a specific type of child-caregiver relationship that is inapplicable to many cultures emphasizing communal care, that attachment researchers tend to use research methods that are less applicable to families in low- and middle-income agrarian communities, and more broadly, that evolutionarily adaptive processes are context-sensitive and not necessarily universal. Thus, when attachment researchers claim that attachment theory has cross-cultural validity (Mesman, van Ijzendoorn et al., 2016), the stage is set for further disagreement.

Despite this, the essays pertaining to attachment and culture highlighted areas of agreement between attachment researchers and some of their cultural critics. All agreed, for example, that early relationships are important to young children's survival and development. All agreed that young children form attachment relationships in all but the harshest circumstances, and that other relationships are also developmentally important. Notably, there was also recognition that all cultures must address the challenge of ensuring that young children survive to reproductive maturity and, although social systems differ in their practices of care and developmental goals, none can chronically ignore infant needs or render children incapable of developing competencies necessary for adult functioning. Stated differently, attachment is one of the universal developmental tasks that all cultures must address (Keller & Kärtner, 2013).

So how do we proceed from here? One avenue suggested by the authors addressing this question is exerting greater effort to narrow the gap between the questions posed and the methods used by researchers examining attachment and culture, many of whom sometimes speak past each other. Understanding which adults in an agrarian community are attachment figures requires, for example, not just counting how many people provide care for a child, but also identifying children's differential displays of attachment behaviors toward them, which usually results in a much smaller number of attachment figures from the child's perspective (Meehan & Hawks, 2013). Attachment researchers must also refine their measurement approach. Mesman, Minter et al. (2016) adapted Ainsworth's sensitivity scale to assess infants' "received sensitivity" from the network of adults in their community and showed, from observations in a forager community, that received sensitivity was a more accurate index of the quality of care than the sum of individual caregiver sensitivity scores. Building on studies like these, Mesman (2021) asked why the cross-

cultural database of attachment studies, especially studies that have used well-validated measures, remains small and underdeveloped. She also challenged attachment researchers to resist the confirmation bias that can beset theory-driven researchers, inviting them to entertain uncomfortable questions and theoretically inconsistent findings that cast doubt on cross-cultural generalizability. More broadly, she urged greater modesty in claims that attachment theory has universal applicability.

There will continue to be debate over the evidence bearing on attachment's core hypotheses in the context of different cultural systems. But there might be greater value in refocusing on the central question posed earlier, which is important to both attachment researchers and researchers of culture. How do cultures solve the problem of ensuring that young children survive to reproductive age and develop the competencies essential to adult functioning? Different social systems may do so with different developmental goals, different normative practices of early care, different numbers of care providers, and different resources. However, thoughtful examination of the *differences and commonalities* observed across different cultural contexts is more likely to inform and advance both attachment theory and cultural theory than increasingly sterile debates over the evidence concerning universality claims. Indeed, greater attention to the diversity in how cultural practices promote infant survival and developing competencies might generate new, provocative hypotheses for attachment theorists to ponder concerning how goals for adaptation are accomplished in different ways. Although it is too soon to expect rapprochement between attachment theorists and their cultural critics, the essays on this topic highlighted enough areas of common ground to provide the basis for a constructive dialogue into the future.

How do people respond to the loss of an attachment figure?

Separation from and loss of an attachment figure was a central concern to Bowlby in his *Attachment and Loss* trilogy, and they remains important to both developmental and adult attachment researchers. Are there common threads in the processes of loss and detachment across ages and contexts that can contribute to our understanding of why attachment relationships are so psychologically significant?

The authors addressing this question focused on different forms of separation and loss, ranging from a child's traumatic loss of a primary caregiver, to the breakup of romantic or marital relationships, to normal as well as pathological bereavement. What these experiences share are the processes of detachment and reorganization initially explored by Bowlby (Shaver & Mikulincer, 2021). Separation and loss often provoke attachment hyperactivation processes in children and adults manifested in protest behaviors designed to literally or figuratively retrieve the lost attachment figure. Attachment deactivation processes also occur, typically manifested in detachment, which helps individuals lessen or relinquish the emotional bonds with their former attachment figure in order to facilitate the formation of new attachment relationships. The psychological importance of attachment is reflected in the emotional intensity of these reorganizational processes, which also reveals the importance of attachments to behavioral and physiological self-regulation.

Another theme running through these chapters is the variability in how people respond to separation and loss in relation to their attachment organization. Several contributors underscored the connection between responses to loss and the quality of the lost attachment relationship, which can be especially important when reorganizational processes fail and disordered grief and mourning ensue. Variability in response can also occur because of the circumstances associated with loss, such as when divorce leads to the end of a marital attachment but also, quite often, continued contact with the former spouse in the context of child custody and visitation. As Feeney and Monin (2021) noted, recovery from the loss of a marital attachment may be easier if it entails relief from the unhappiness and distress of a dysfunctional marriage.

Much less is known about variability in children's responses to separation and loss of their attachment figures, perhaps owing to the emotional intensity of this experience to most children (Chu & Lieberman, 2021). This is ironic in light of Bowlby's early (Bowlby, 1944) and longstanding (Bowlby, 1973) concern with the psychological damage to children resulting from early and unexpected separation from their caregivers – a concern that has contemporary relevance to the plight of children separated from their parents at the United States – Mexico border (Jones-Mason et al., 2019). Young children are cognitively as well as emotionally unprepared to cope with the unexpected separation and/or the loss of an adult on whom they rely, and children have significantly less capacity than adults to find suitable replacement attachment figures. It is unsurprising, therefore, that variability in children's responses depend significantly on the psychological functioning of the surviving parent or alternative attachment figure(s). Understanding the association between the security of the preexisting relationship with the lost attachment figure and children's responses to separation and loss also remains an important research question.

In addition, studying how repeated experiences of attachment loss affect subsequent responses to separation and loss is relevant to understanding the experience of children in the foster care system, adults who have experienced repeated family losses, and other major experiences that challenge the attachment system. These potential applications underscore the importance of high-quality basic research inquiry to the translational applications of attachment theory. Bridging core theoretical concerns of attachment theory with applications to practice and policy are the focus of the last two fundamental questions.

How do attachment-based interventions work?

In light of the clinical origins of Bowlby's interest in attachment, it is also ironic that the design and evaluation of attachment-based clinical interventions emerged relatively late in the development of the field, beginning in the 1980s. In the thirty years since then, a variety of child- and adult-focused clinical interventions based on attachment theory have been developed and validated. Our fundamental question centered on whether there are common themes in these intervention strategies that help to illuminate what an attachment-based intervention is and how it works.

Although they focused on different programs and practices, the contributors to this section readily identified several common themes. First, there is a relational focus such that "the patient is the relationship" (Lieberman & Van Horn, 2008). Attachment-based

interventions for children target the security of the child-parent attachment, while attachment-informed psychotherapeutic approaches for adults provide corrective relational and emotional experiences that strengthen clients' trust of themselves and others. Second, the relational focus extends to an emphasis on the relationship between the therapist and the client(s) as a key engine of therapeutic change. Child-oriented attachment-based interventions, for example, emphasize the therapist as an engaged and empathic secure base from which a caregiver can safely explore new parenting behaviors. Likewise, in attachment-based interventions for adults, the client's alliance with the therapist provides a secure base from which the adult can consider new working models of self and other. Each of these themes derives directly from Bowlby's ideas about the therapeutic process. Third, each of the five essays in this section devotes careful attention to *how* the intervention is delivered through practices such as evaluating how parent coaches' comments support parents' practice of targeted behaviors toward their children (Dozier & Bernard, 2021) or assessing the therapist's meta-communication practices to repair communicative ruptures with their client (Talia & Holmes, 2021).

Attachment-based interventions are not unique, of course, in their attention to intervention fidelity, but their efforts are important to attachment theory because of the incorporation of core theoretical assumptions into the intervention design. In this respect, they provide another way of testing central elements of attachment theory regarding the development of secure relationships in children and adults. With respect to children, for example, the development of secure attachment is the most common intervention target, which is achieved by enhancing parental sensitive behavior or, less frequently, through changes in parental attachment-based representations, mentalization, or social support. In some programs, changes in attachment security are further expected to mediate changes in child behavior problems or other behaviors. Evaluations of intervention efficacy that assess such mediated pathways have yielded some support for theoretical expectations concerning the influence of caregiver sensitivity on attachment security, but further work is needed to assess fuller mediation models. Likewise, evaluating intervention efficacy for adult-focused programs should be designed to assess key therapeutic practices relevant to attachment theory (e.g. establishing trust in the therapist; effective emotion communication between client and therapist) in relation to key intervention targets of developing trust in oneself and others. These mediation models also remain to be tested.

In these ways, the evaluation of attachment-based interventions informs attachment theory and simultaneously broadens understanding of the ways in which attachment relationships can become therapeutically reorganized. Although the bridge between basic attachment research and its intervention applications is clear and longstanding, the reverse transmission of insights from intervention research to basic theory is not as well developed. Intervention research has the potential to contribute insight to basic questions such as: How readily can earlier developed patterns of attachment be changed? How do the therapeutic processes that generate change compare with the natural processes that lead to the formation of attachment relationships? Are there some individuals or contexts in which such change is impossible, and what then? As intervention researchers conduct future evaluations in theoretically-informed ways, there is every reason to hope for greater cross-fertilization of the attachment field in this important direction.

How are attachment theory and research relevant to systems and services for children and families?

Since its beginning, attachment theory has developed in response to social conditions affecting children and families and, over the years, it has become increasingly applied to the design of public policies affecting children and families. These include the formulation of custody standards when parents divorce, the design and evaluation of child care and early education programs, child protection policies, foster care, and home visitation services. The link between attachment theory and child and family programs is a natural one because many of the questions posed by attachment researchers tie into the challenges of designing developmentally appropriate systems for children. Who, for example, is an attachment figure? How do children respond to separation and loss of their attachment figures? How do earlier attachment relationships affect subsequent development? In what ways can well-designed interventions improve the chances of children developing secure attachments? The last fundamental question of our project, therefore, focused on how attachment theory has influenced systems and services for children and families, and how its influences can further benefit them in the future.

The contributors to this section, each of whom addressed the influence of attachment thinking on a specific child- and/or family-serving system, highlighted several ways that attachment theory has been influential. One is by emphasizing the importance of maintaining the continuity of significant relationships for children, whether child-parent relationships after a marriage has ended, relationships with biological parents and foster parents in child protection, or transitions between caregivers in child care programs. This contribution is important given the tendency of some adults in these situations to seek to move on without attending to children's continuing needs for relational stability and predictability. Another related contribution of attachment theory has been its attention to multiple attachment relationships. Young children develop attachments to adults with whom they regularly interact in child care and early education programs, and attachment theory contributes to the recognition that these relationships in no way diminish the closeness or significance of children's relationships with their parents or other primary caregivers. To the contrary, wise public policy seeks to affirm and coordinate children's attachment relationships with significant adults in different settings, whether through shared parenting responsibilities when parents divorce, enhanced communication between child care providers and parents, or by coordinating the transitions between a child's alternative caregivers within the child protection system. One way that systems for children could be improved by attachment theory centers on greater attention to this kind of interrelational coordination.

A third way that attachment theory influences services for children and families is its emphasis on the quality of care for children, especially the quality of the interactions between children and their caregivers. Lamb (2021) urged the creation of parenting plans enabling divorced parents to maintain close, warm, and everyday relationships with their children, creating "networks of attachment relationships" emerging from divorce to support their children (Forslund et al., 2021). Hamre and Williford (2021) drew attention to monitoring and evaluation practices within early education systems that emphasize the quality of relationships between young children and their child care providers or

preschool teachers. Discussing home visitation, Berlin et al. (2021) underscored the importance of efforts to improve parental sensitivity during home visits. Interventions to improve child-oriented services have been significantly informed by attachment theory, such as use of the Attachment and Biobehavioral Catch-Up caregiving intervention program in foster care and child protective systems (Zeanah & Dozier, 2021). In a contemporary climate of public policy in which policymakers persistently and disappointingly reference child care “slots” characterized by custodial health and safety standards but not relational expectations, these key principles of attachment theory warrant broader application.

Those who have followed the diverse applications of attachment theory to public policy are well aware of the misapplications of attachment ideas to complex systems and services. Concepts like attachment disorganization are mistakenly applied in clinical or policy settings to indicate emergent psychopathology, a legacy of child maltreatment, or an intrinsic characteristic of troubled children, none of which is endorsed by attachment theory or research (Granqvist et al., 2017). Furthermore, as Keller (2021) noted, there are too many instances in which particular patterns of care based on Western norms are mistakenly deemed essential for a child’s well-being. Yet amid the daunting patchwork of federal mandates and state- and locally-implemented initiatives governing these systems, the application of certain core principles from attachment theory has helped to make public and private child and family services more developmentally appropriate and relationally humane than they might otherwise be.

Further deepening of these benefits can occur not only through reform of policies and practices, but also through more comprehensive training in attachment theory and research, provided as part of educational programs in social work, law, medicine, education, and other professions, along with continuing education workshops and expert consultation. The enlistment of attachment concepts and attachment measures into program evaluation is another avenue of influence, especially because the design of evaluation research foregrounds core intervention goals that, in turn, provide guidance for the continued development of services and practices. Taken together, attachment theory has been, and can continue to be, an important voice for children. With the growing interest in attachment-based translational research recently discussed by Schuengel et al. (2021) and by Van Ijzendoorn and Bakermans-Kranenburg (2021), there is every reason for optimism that this will continue.

A look to the future

The many scholars who addressed the fundamental questions we posed have together provided a picture of the current status of attachment theory that is expected in some ways and surprising in others. What we expected is the portrayal of a theory that has grown and evolved significantly in the more than half-century since its inception through its impact on important areas of science and public policy, its incorporation of new ideas from the biological and behavioral sciences, and the perspectives it has provided to complex issues of developmental continuity and change, developmental psychopathology and clinical intervention, and the importance of early relationships. More surprising –

in light of the theory's longevity – is the number of questions for which a diversity of views exists and which, therefore, remain open to new directions for theory and research. All considered, this leaves us optimistic about the future of the field.

It is important to note, however, that a more critical conclusion is possible, including from the authors who participated in our project. Roisman and Groh (2021), for example, described the current era of attachment work as one of *exhaustion*, suggesting that theoretical and methodological rigidity have limited scientific and translational advances. As earlier described, Mesman (2021) noted the proneness to confirmation bias among many attachment researchers, and Keller (2021) argued that attachment theory is weak due to conceptually fuzzy concepts and explanatory processes. These criticisms, from both within and outside the community of attachment scholars, caution against undue self-congratulation and underscore the need for clearer thinking and more self-criticism, both hallmarks of good scientific inquiry. Indeed, someone reading this article might wonder how a theory that has stood the test of time so well has still not resolved fundamental questions such as what kinds of relationships constitute attachment relationships, how to measure attachment consistently at different ages, and what is the nature and function of IWMs. Are these unresolved issues indicators of theoretical generativity or ambiguity?

Accordingly, we close with two challenges for the field as moves into the future. First, we believe that attachment theory needs an integrated lifespan view of attachment and its development, one that has a central theoretical focus on IWMs, how they operate, and how they develop and change over the life course. By “integrated” we mean a view that synthesizes attachment scholarship conducted by developmental, clinical, and social/personality researchers into a more coherent, consolidated perspective. We emphasize IWMs because this construct is central to the theory's definitional and measurement problems and to understanding the correlates and outcomes of attachment, including the modeling of consistency and change in attachment. IWMs are also important to understanding the nature and effectiveness of interventions. Simply stated, it is impossible to understand the development and functioning of attachment without a systematic understanding of internal working models. This task will require further development and refinement in theory, especially reconciling the different understandings of attachment that exist in different research communities, as well as development in methodology, particularly measuring IWMs better and more directly. These tasks are connected, and they will require addressing some of the unanswered questions this article has highlighted because of the importance of these answers to further progress.

We are not alone in recommending this direction for future inquiry. In their recent review, Schuengel et al. (2021) drew attention to the communication difficulties between attachment scholars in different disciplinary fields which often contributes to ambiguity and confusion about the meaning of key constructs and concepts. Significant variability in the definition and meaning of terms like “internal working model,” “security,” “disorganization,” and even “attachment” (cf., Granqvist, 2021) underscores how attachment theorists and researchers have moved in different directions and sometimes in ways that undermine theoretical coherence. An integrated view of the life-span development of attachment is clearly needed.

Second, attachment theorists must devote greater effort to defining the boundary conditions of attachment. It is important to clarify not only what attachment is and its influences, but also what it is *not* and what it should *not* directly influence. Attachment researchers have long been more attentive to convergent validity than to discriminant validity of attachment constructs. This has resulted in a literature in which the correlates of attachment have broadened considerably, sometimes in ways that challenge or confound theoretical coherence. This second challenge connects with the first, insofar as unmeasured IWMs have provided an extremely flexible explanatory device for interpreting novel (and occasionally unexpected) correlates of attachment security. Clearer demarcation of the boundary conditions of attachment constructs and processes will help researchers more effectively build and interpret the next generation of attachment findings, including those that are ambiguous or inconsistent in relation to the theory.

Attachment theory has clearly not run its course. The most interesting and compelling theoretical challenges it faces inspire hopeful anticipation of what is to come.

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