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Editors

Bases of Adult Attachment

Linking Brain, Mind and Behavior

 Springer

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Chapter 1

Normative Processes in Romantic Attachment: Introduction and Overview

Cindy Hazan and Emre Selcuk

In 1987 Hazan and Shaver published an article entitled “Romantic Love Conceptualized as an Attachment Process.” In the years since, adult romantic attachment has been the focus of more than a dozen books and edited volumes. An additional three dozen books and edited volumes have included extensive coverage of adult attachment theory and research. The present volume has something unique to add to this discourse. It addresses the phenomena of adult romantic attachment from perspectives that have heretofore been missing and that promise to move the field forward in both significant and exciting ways.

When asked about their familiarity with attachment theory it is not unusual for anyone outside the field to say something along the lines of, “...that theory about the three different ways that babies attach to their mothers?” The reference is to the groundbreaking research by Mary Ainsworth et al. (1978) showing that human infants tend to form either a secure or one of two forms of insecure attachment to their primary caregivers. This common (mis)understanding of Bowlby’s (1982) theory is due in large part to Ainsworth et al.’s brilliant experimental paradigm—the “strange situation”—and the associated landmark findings which revolutionized developmental psychology. Hazan and Shaver (1987) unintentionally perpetuated this narrow focus by offering a new measure of three similar ways that adults attach to their romantic partners. As a consequence of these two parallel lines of inquiry, attachment research diverged from attachment theory by focusing not on why or how bonds of attachment are formed and maintained but rather on differences in the ways individuals relate to attachment figures.

Bowlby’s original theory was very explicitly a normative one. It was developed to explain why all normal human infants, who as members of an highly altricial species born in a state of extreme immaturity and helplessness, are evolutionarily predisposed to develop strong and enduring emotional ties to adult caregivers. If

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our young did not form attachment bonds with their adult caregivers they simply would not survive. Two central postulates of the theory are (1) an innate attachment behavioral system evolved to regulate proximity to an attachment figure, and (2) the attachment behavioral system is operative across the entire lifespan.

The functioning of the attachment behavioral system is readily observable in the behavior of a typical 1-year-old infant in relation to his or her attachment figure. She/he maintains proximity to the attachment figure, resists and is distressed by separations from the attachment figure, retreats to the attachment figure for comfort and protection, and explores confidently in the presence of the attachment figure. Attachment bonds are qualitatively different from other types of social ties, and the dynamics of the attachment system highlight the defining and differentiating features: proximity maintenance, safe haven, separation distress, secure base. This dynamic also underscores a core feature of attachment bonds—i.e., emotion regulation. If the infant is confident that the attachment figure is available and responsive and the situation is relatively safe, she/he feels content and secure. If, however, the infant senses either that the situation is threatening or the attachment figure is unavailable or unresponsive, she/he feels anxious and insecure. In essence, whether an infant feels content and secure or anxious and insecure depends primarily on whether she/he perceives that an attachment figure is able and willing to provide protection and care as needed.

In Bowlby's words, attachment is integral to human behavior "from the cradle to the grave." However, infant-caregiver attachments differ from adult romantic attachments in at least two fundamental respects. First, pair bond attachments are typically reciprocal; partners not only seek care from but also provide care to each other. Second, pair bonds are inherently sexual in nature. Romantic attachments thus involve not only the attachment behavioral system, but also the parental/caregiving and sexual mating systems as well. Despite these normative developmental changes, emotion regulation continues to be a central function of attachment bonds. Growing evidence convincingly demonstrates that simply holding a romantic attachment figure's hand (Beckes and Coan, this volume) or merely viewing her/his photograph (Selcuk et al. 2012) alleviates negative emotions in times of stress. It is this ability of attached pairs to regulate each other's affective states that determines well-being in adulthood. Again, to quote Bowlby (1988), people of all ages are "happiest when life is organized around a series of excursions, long or short, from the secure base provided by our attachment figures." (p. 62).

While the attachment system itself is innate, attachment bonds between infant and caregiver—like any close interpersonal relationship—take time to form. Bowlby proposed four phases in the ontogeny of attachment bonding. In the *pre-attachment* phase (0 to 2 months) infants are inherently interested in social interaction and open to care from virtually anyone. In the *attachment-in-the-making* phase (2 to 6 months), infants will typically still accept care from anyone but begin to show preferences among caregivers, such as smiling at some more than others or being more readily soothed by some versus others. In the *clear-cut attachment*

phase (6 to 8 months), a few important developments coincide. Just as infants become capable of self-produced locomotion and thus able to venture into potentially dangerous situations they simultaneously and quite suddenly express wariness of strangers and also distress at being separated from attachment figures. In the final phase, *goal-corrected partnership* (around 2 years of age), children have less immediate needs for physical proximity thanks to their increasing ability to mentally represent their attachment figures, and, importantly, to derive comfort from the representations.

Whether a similar, four-phase model applies to romantic attachments (in whole or in part) will require considerable further investigation (see Zayas, Gunaydin, and Shoda, this volume, for a discussion). At the level of observable behavior, however, the similarities are quite striking (Zeifman and Hazan 1997). In a pre-attachment phase, attraction draws potential partners together into flirtatious and physiologically arousing interactions. If mutual interest continues it may evolve into an attachment-in-the-making phase characterized by more intimate physical and psychological exchanges. Eventually, if a clear-cut attachment bond is established it might be revealed not so much in the pleasure and comfort of the partner's presence as the distress and disorganization experienced during separations. In the final, goal-corrected-partnership phase, the establishment of a base of security—along with a comforting mental representation that can be conjured when needed—frees the partners to refocus their attention on more exploratory-type activities.

Although much more research is needed it is highly probable that a veridical model of romantic attachment formation will be more complex, first due to the lasting effects of early attachment experiences, second due to the advanced social cognitive abilities and a larger social network in adulthood (vs. infancy), and finally because romantic attachments involve reciprocal emotion regulation and sexual mating. The central foci of the present volume are these processes of attachment formation and maintenance between adult romantic partners. Each of the chapters in the first section addresses a process that promotes the formation of romantic attachment bonds—i.e., the development of physiological coregulation and the development of expectancy-value working models. Chapters in the second section identify possible mechanisms by which attachment experiences in infancy and childhood might affect the formation and maintenance of attachment relationships in adulthood. This includes specifying which aspects of early relationships have lasting influence, detailing how early attachment experiences shape the functioning of stress-reactivity systems, and modeling the psychological transference processes by which attraction to mates is facilitated by caregiver-based template matching. Chapters in the third section cover development and change in the course of adult pair bonding, specifically, how parental figures serve as bases of security from which to explore peer attachments, the development of "coupled" cognitive systems that both mark the formation of and help maintain romantic attachments, and the engagement of the dopamine-reward neural system as one of the core features of adult romantic attachment.

Processes that Promote Adult Attachment Formation

In Chap. 1, authors Lane Beckes and James Coan propose that physiological coregulation is a hallmark of adult attachment. They define coregulation as the conditioning of the hypothalamic–pituitary–adrenal (HPA) axis to the stimulus of a specific romantic partner. They begin with evidence that threat promotes social affiliation and responsive interpersonal contact reduces threat-induced stress. Over time, the combination of threat and a comforting social response leads to the development of a secure attachment bond. Thus, the process of adult attachment formation relies heavily on negative reinforcement conditioning. Adult romantic relationships are also characterized by positive reinforcement in the form of sexual and/or playful interactions, but only negative reinforcement influences the security of the bond. Oxytocin and endogenous opioids are critical to these processes. Oxytocin motivates social approach whereas opioids down regulate stress. It is the conditioning of both systems to the stimulus of a specific romantic partner that results in coregulation. In their view, this distress-relief dynamic is critical for adult attachment formation.

In Chap. 2, authors Jennifer Bartz, John Lydon and Mark Baldwin argue that people's expectations regarding whether an interpersonal goal is achievable or not should be as central to attachment theory as the value they attach to the said goal. Attachment researchers and theorists have traditionally emphasized the importance of expectancies in working models of the interpersonal world. These traditional perspectives translate attachment requirements into emotional reactions and plans for action. But attachment working models depend not only on commitment to and motivation for but also on the subjective value of achieving attachment goals. In the authors' view, expectancy-value calculations influence whether and how people initiate new relationships, move from casual to committed relationships, and persevere in the face of conflict within long-term relationships.

Effects of Previous Experience on Adult Attachment Formation

In Chap. 3, authors Jeffrey Simpson, Andrew Collins, Allison Farrell and Lee Raby posit that specific aspects of early attachment experiences will be predictive of individual and relationship functioning in adulthood. Their organizational-developmental model is based on findings from the Minnesota Longitudinal Study of Risk and Adaptation. The focus of their chapter is on why and how certain types of early interpersonal experience can have profound and lasting effects on later interpersonal functioning.

In Chap. 4, Lisa Diamond presents a model of how early attachment experiences can shape not only later attachment-related affect, behavior, and cognition but also a range of basic physiological systems involved in stress reactivity and stress

regulation. Specifically, she proposes that (1) the quality of early caregiving and overall stress exposure calibrate an individual's basic stress-regulatory systems—i.e., autonomic nervous system (ANS) and HPA; (2) the profile of ANS and HPA reactivity shapes individual capacity for emotion regulation and interpersonal skills; and (3) such skills affect individuals' ability to form and maintain romantic attachments. In other words, an individual's ANS and HPA reactivity is influenced by early attachment experience and, in turn, influences later attachment experiences via the pathway of impacting interpersonal skills and especially the ability to serve as a haven of safety and base of security for a romantic partner.

In Chap. 5, authors Marie Heffernan and Chris Fraley address the question of how early attachment experiences shape adult mate preferences. People sometimes fall in love with individuals who bear a striking resemblance to their parents. Indeed, there is evidence that early experiences with parental caregivers contribute to the construction of a mate template, and that adult pair bonding is facilitated by template matching. The authors propose that psychological transference—and specifically the activation of a mate template—may be the underlying mechanism that explains the connections between and similarities of childhood caregivers and adult romantic partners.

Development and Change in Adult Attachment Bonds

In Chap. 6, authors Omri Gillath and Gery Karantzas explain how by serving as bases of security, childhood attachment figures potentiate not only exploration but also social affiliation. The resulting social network of peers provides opportunities for adult attachment and pair bonding. A major normative development is the formation of attachment bonds outside one's initial hierarchy of (mostly) familial attachment figures. A central focus of the chapter is how factors such as social network density (i.e., how close members of a social network are to each other) and multiplexity (i.e., the number of social functions fulfilled by each member of a network) play important roles in bridging the gap between infant and adult attachment.

In Chap. 7, authors Vivian Zayas, Gul Gunaydin and Yuichi Shoda tackle the question of how an individual moves from the status of unknown other to attachment figure, and specifically how the corresponding mental representation evolves from stranger to beloved. They propose that a “coupled” cognitive system develops as a result of multiple factors but most especially aspects of partners' proximity and exposure to each other. Further, such a “coupled” cognitive system is hypothesized to be evident in a wide variety of social-cognitive processes, including elaboration, accessibility, automaticity, and interconnectedness of self-other representations.

In Chap. 8, author Bianca Acevedo cites findings from fMRI studies identifying the neural correlates of human attachments. The dopamine reward system appears to play a central role in attachment formation. Romantic partners, and even their mere images, can trigger the circuitry underlying neural reward processing systems. In addition, it is proposed that the ventral pallidum may play an important role in

distinguishing pair bonds from other types of close, rewarding social ties. Evidence is mounting that attachment formation, whether between infants and caregivers or adult romantic partners, is based on common neurobiological systems.

As emphasized in several of the chapters in this volume, the neurobiological systems underlying pair bonds play a fundamental role in virtually every aspect of human social cognition. Recent work suggests that even the development of our relatively large brains compared to those of other species is likely a response to the complexities of pair bond formation and maintenance (Dunbar and Shultz 2007). The ability to form and maintain these bonds is a central process characterizing adult development and affects future happiness, mental and physical health, and even longevity. Examining this process at multiple levels from neural and physiological activity to cognition and behavior, and to social networks, the present volume provides a unique perspective and a novel research agenda for understanding why and how we form and maintain attachment bonds.

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Part II The Processes that Promote Adult Attachment Formation