



Conclusion: The Future of Emotional Development

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Abstract

In the concluding chapter of the volume, we reflect on common themes across the chapters and highlight important directions for future research.

By thumbing through the pages of most emotion handbooks, one would guess that *emotional development* is but a small subfield of the larger emotion literature. However, we hope that the chapters in this volume make it clear that emotional development is a unique and independent area of research, complete with its own theories, methodologies, and empirical questions. Here we take the first step of unifying emotional development as a field by bringing together some of its most prominent scientists to review the literature in this domain. Despite the variety of methodologies, approaches, and empirical questions represented here, there were several themes that resonated across chapters to keep in mind for future research in emotional development.

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First, many authors reflected on classic theories of emotion. Some call for modifications based on what we have learned from development, while others outline further clarifications that are still needed. Camras, for example, argues that the conceptualization of emotional expression as a series of automatic outputs is outdated and that we should move forward by embracing a more process-based approach to emotional expression that does not rely on emotional facial expressions as its sole measure. Buss, Cole, Zhou, and several others highlighted the need for a stronger understanding of how emotion is (or is not) distinct from other processes like cognition and emotion regulation (Bardack & Widen; Bell, Wolfe, Diaz, & Liu; Buss, Cole, Zhou; Denham; Hastings & Kahle; Morales & Fox; Pérez-Edgar; Stifter & Augustine). Along the same vein, many of the authors stressed the need for multi-method approaches including both experimental and observational methods, with multiple converging dependent measures, consistent with a process-based approach (Bell, Wolfe, Diaz, & Liu; Beyet & Nelson; Camras; Denham; Hastings & Kahle; LoBue, Kim, & Delgado; Morales & Fox; Pérez-Edgar; Pollack; Spinrad & Eisenberg; Stifter & Augustine; Zeman, Cameron, & Price). Further, Hastings and Kahle suggested that these multi-method approaches should be combined with the use of more sophisticated (nonlinear) techniques for modeling complex processes. Others stressed the specific need for more physiological measures

of emotional responding (Hastings & Kahle; Stifter & Augustine) and measures that are appropriate for preverbal infants (Beyet & Nelson; Shablack & Lindquist). Similarly, newer methods that can be used across developmental periods are required so that continuity across the life span can be studied (Bardack & Widen; Dollar & Calkins; Zeman, Cameron, & Price).

Relatedly, several of the authors stressed the need for further research on the mechanisms underlying emotional development across the life span (Burris, Chernenok, Bussey, & Rivera; Dollar & Calkins; Leerkes & Bailes; Malti, Zhang, Myatt, Peplak, & Acland; Morales & Fox; Perry & Gunnar; Harms, Leitzke, & Pollak). A focus on mechanisms will require more longitudinal research that spans developmental time points to determine both continuity and critical periods of change (Burris, Chernenok, Bussey, & Rivera; Dollar & Calkins; LoBue, Kim, & Delgado; Malti, Zhang, Myatt, Peplak, & Acland; Morales & Fox; Pérez-Edgar; Perry & Gunnar; Harms, Leitzke, & Pollak; Shablack & Lindquist), with a particular need for empirical work on older children, adolescents, and adults (Perry & Gunnar; Shablack & Lindquist).

Also consistent with a process-based approach, almost all of the authors acknowledged the need to explore the role of moderators and individual differences that might account for some of the rich variability that is so common of emotional expression (Bardack & Widen; Kiel & Kalomiris; Harms, Leitzke, & Pollak; Pérez-Edgar; Spinrad & Eisenberg). Factors like parenting, attachment, temperament, effortful control, executive function, and language all play an important role in emotional expression at different points in development (Kiel & Kalomiris; LoBue, Kim, & Delgado; Malti, Zhang, Myatt, Peplak, & Acland; Harms, Leitzke, & Pollak; Pons & Harris; Shablack & Lindquist; Stifter & Augustine). Further, many authors emphasized the need for cross-cultural work to explore how socialization might lead to individual differences in emotional responding (Bardack & Widen; Denham; Malti, Zhang, Myatt, Peplak, & Acland; Messinger et al.; Pérez-Edgar; Yang & Wang; Zeman, Cameron, & Price). This work would

encompass, for example, how display rules might cause variation in expressive behavior (Camras) or how variations in emotion perception might help us understand the developmental trajectory of emotional understanding (Bayet & Nelson). Other authors echoed the need for further exploration on differences in emotional expression based on gender (Bardack & Widen; Kiel & Kalomiris; Perry & Gunnar; Zeman, Cameron, & Price), parenting relationships outside the mother (e.g., father, grandparents) (Leerkes & Bailes), or variation in the social environment more broadly (Lewis). Likewise, others posited that more research is needed on the similarities and differences between emotion constructs and how emotions might interact with each other or other domains to affect psychological, social, and academic functioning, as well as physical health (Dollar & Calkins; Zeman, Cameron, & Price).

Importantly, several authors suggested that future work should focus on using what we know about emotional development to help parents and healthcare providers offer the best care for infants, children, and adolescents. Rottman, DeJesus, and Greenebaum, for example, outlined in detail the broader implications of basic research on disgust and the role that disgust can potentially play in treating obesity, in encouraging sanitation and hygiene, and even in promoting social justice. Likewise, Spinrad and Eisenberg suggest that we can use research on individual differences in children's sympathy and empathy to help us learn more about the development of in-group/out-group relations or stigma. Further, several researchers point out the possibility of using empirical data to help parents who have children with emotional problems like anxiety and depression (Kiel & Kalomiris) or to encourage parents to capitalize on the systems underlying emotional functioning at different time points in the development in caring for their children (Bell, Wolfe, Diaz, & Liu; Buss, Cole, & Zhou; Perry & Gunnar).

Finally, and perhaps mostly obviously, information gleaned from basic research on emotional development can help inform preventative programs and interventions for children at risk for developing emotional problems (Burris,

Chernenok, Bussey, & Rivera; Palmer, Lakhanspal & Cicchetti; Perry & Gunnar). In particular, several researchers point out that while there has been a great deal of research on the development of negative emotions and their behavioral outcomes, there is still very little work on the development of positive emotions (Coe-Odes, Narr, & Allen; Leerkers & Bailes; Messinger et al.; Yang & Wang). This is a particularly important area for future research, as we could potentially use our understanding of the development of positive emotions to build coping strategies for regulating negative ones (Stifter & Augustine).

Altogether, we hope the literature reviewed here presents a starting point for the unification of emotional development as a field and as an inspiration for new and innovative research endeavors in this domain. By coming together, we might 1 day build a cohesive developmental theory of emotional responding that can better inform broader theories of emotion, help with the design of empirical strategies for measuring emotion across the life span, and build practical recommendations about how to foster healthy emotional development in children and families.