In the course of a distinguished and influential career, Carroll Izard was devoted to elucidating the constructive influences of emotion in behavior, personality, and development. In his account of emotions as motivational and organizational, serving adaptive functions, engaged in dynamic interplay with cognition, and guiding social communication and relationships, he portrayed emotion processes as generative in fundamentally new and innovative ways. Later, he incorporated these ideas into the development of interventions to promote social and academic competence in children by fostering their effective enlistment of emotions into everyday transactions with others. Because of his work, our understanding of emotion today is much different than when he began: it is theoretically richer, and emotion has a more central place in our understanding of development and motivation.

Izard was not alone in changing our conceptualization of emotion in developmental science. He was fortunate to work in a scholarly context where others advanced similar ideas. Bowlby’s (1969) attachment theory also described emotion as having constructive motivational influences, and this view was elaborated in Sroufe and Waters’s (1977) view of attachment as an organizational construct. Temperament theory established emotional reactions as a central feature of infant–caregiver interactions (M. Lewis & Rosenblum, 1974; Thomas, Chess, & Birch, 1968). Studies in the 1970s of social referencing, the development of fear on the visual cliff, empathy, and developing self-awareness provided forums for exploring the interaction of emotion with cognition, emotional expressions as social signals, and the effects of emotional development on other aspects of psychological growth (see, e.g., M. Lewis & Rosenblum, 1978; Sroufe, 1979). In this climate, Izard contributed original research and sought to create a comprehensive theoretical perspective within which these and other characteristics of developing emotion could be understood.

It is easy to underestimate how significant was the change in perspective that Izard and others created for the field. Izard himself characterized the research climate when his work began as the “excommunication of emotion from the cathedral of science” owing to the dominance of the methods and theory of behaviorism in academic psychology (Izard, 1971, p. 1). The conditioning of emotional responses was well understood but uninteresting as an emotion theory, while motivational psychology adopted a unidimensional (pleasant/aversive) rather than differentiated portrayal of emotion and its influence. In developmental psychology, the “cognitive revolution” inaugurated by the discovery of Piaget’s ideas (Flavell, 1963) contributed to
a view of subjective emotional experience as derivative of cognitive schemas and emotional development the result of intellectual growth. In these respects, emotion was at the margins of developmental and personality theory and was often viewed as inimical to the organized behavioral processes that psychologists sought to study. Although his training in clinical psychology equipped Izard with rich conceptualizations of emotion in psychopathology, the gap in theory concerning “separate and distinct emotions, each capable of definition as a construct that can be studied” (Izard, 1971, p. 3) remained.

In addressing this challenge, Izard benefitted from his collaboration with Silvan Tomkins (1962, 1963), whose ideas about discrete, biologically based affects at the center of human experience influenced Izard and also Paul Ekman. But Izard took these ideas further, as reflected in the titles of some of the volumes he wrote or edited during his research career: *Affect, Cognition, and Personality* (Tomkins & Izard, 1965), *The Face of Emotion* (Izard, 1971), *Patterns of Emotions* (Izard, 1972), *Human Emotions* (Izard, 1977), *Emotions in Personality and Psychopathology* (Izard, 1979), *Emotions, Cognition, and Behavior* (Izard, Kagan, & Zajonc, 1984), *Emotion in Adult Development* (Malatesta & Izard, 1984), and *The Psychology of Emotions* (Izard, 1991). Differential emotions theory (DET) was developed to provide a comprehensive understanding of the influence of discrete emotions in development, personality, and psychopathology, and it emphasized that emotions are organizational and motivational, interact continuously with cognition, and derive adaptive functions from a biological heritage that accounts for the synchrony between feeling, expression, and motivated action. Izard not only developed DET but also vigorously defended it in commentaries, rejoinders, and his own empirical research. But he also changed DET in the face of new evidence, such as acknowledging that emotion feeling can occur in the absence of relevant facial expressions of emotion (see, e.g., Izard, 2011; Izard, Woodburn, & Finlon, 2010).

In this article, my aim is to place these contributions in the context of contemporary research on early socioemotional development. With other contributors devoting attention to the relevance of Izard’s work to the study of facial expressions of emotion, emotions and personality, psychopathology, early intervention, and affective neuroscience, my task is circumscribed but also expansive. In the section that follows, I focus on what we have learned about early socioemotional development and the influence of Izard’s thinking on contemporary researchers. Next is a discussion of emotion, attachment, and emotion–cognition relations—three themes that Izard explored early in his career. Concluding reflections follow.

**Early Socioemotional Development**

Having devoted the initial part of his career to research on perceptions of human faces by clinical and nonclinical adult samples and related topics, Izard turned his attention to emotion in infants and young children. In doing so, he was likely influenced by emergent ideas at the time about the remarkable and often unacknowledged competencies of the young infant, including emotional competencies (e.g., Stone, Smith, & Murphy, 1973). A focus on the early years permitted tests of some of the formulations of DET that related to the emergence and measurement of emotions.

In many of these studies, infants’ facial expressions of specific emotions were the focus of research using Izard’s Maximally Discriminative Facial Action Coding System (MAX; Izard, 1995). One study reported, for example, that for 2- to 8-month-old infants, facial expressions of interest and visual fixation increased in a linear and consistent manner to pictures that increasingly resembled a human face, while heart rate deceleration was greater to face-like stimuli (Langsdorf, Izard, Rayias, & Hembree, 1983). In another sample of 2- to 19-month-olds, anger was increasingly apparent with age in the facial expressions evoked by an inoculation (Izard, Hembree, Dougherty, & Spizirri, 1983; see also Izard, Hembree, & Huebner, 1987). Young infants were also reported to respond affectively in distinct ways to their mothers’ posed expressions of sadness and joy (Termine & Izard, 1988) and sadness and anger (Izard et al., 1995). Individual differences in infants’ facial expressions of different negative emotions were also found to be fairly consistent from early infancy to 19 months (Izard et al., 1987) and during the second year of life (Hyson & Izard, 1985).

Much of the impetus of this body of work was to support the theoretical expectation that facial expressions are an essential and reliable component of discrete emotion. This view is controversial (e.g., Camras & Shutter, 2010), and a full discussion of the evidence is beyond the scope of this article (but see Cole & Moore, 2015). But the research generated by this proposal has led to at least two conclusions that are important advances in thinking about early emotional development.

The first conclusion is that the concordance of differentiated facial expressions and emotion feeling is a developmental emergence, not a fixed pattern. This is consistent with Izard’s view that “neurobiological systems enable infants to experience and express basic or first-order discrete emotions only as they become adaptive through growth of emotion–cognition–action connections over developmental time” and that emotion feeling may or may not include facial feedback (Izard et al., 2010, p. 134). Inquiry has proceeded apace into the processes associated with the developmental convergence of emotional experience, expression, and perception. These processes likely include, for example, how certain developmentally graded experiences (such as the visual cliff or maternal separation) naturally generate convergent feelings and perceptions (“emotional affordances”). They also include dynamic, self-organizing processes associated with early emotional development and expression (Camras & Witherington, 2005; M. D. Lewis, 2000), and rapidly developing emotional appraisals, in part through the influence of the perceived expressions of others on the infant’s own feelings (i.e., social referencing; Saarni, Campos, Camras, & Witherington, 2006). These processes may together contribute to the increasing coherence and specificity of facial expressions during the first year and their more reliable association with emotion elicitors (e.g., Bennett, Bendersky, & Lewis, 2005).
Likewise, developmental processes rather than biological programming help to account for infants’ progressive perception of others’ facial expressions in differentiated, emotion-relevant ways with increasing age. Quinn and colleagues argue that the early development of infant emotion perception involves both domain-general and domain-specific influences on face perception by which facial expressions of emotion are progressively discriminated, imbued with emotional meaning, and become associated with more generalized emotion schemas in the context of social interaction (Quinn et al., 2011). Most interestingly, developmental influences associated both with growing expression–experience congruence and emotional perception may be linked, such as through an early-developing capacity to represent others’ actions self-referentially (described by Meltzoff, 2007, as a “like me” orientation), possibly drawing on the mirror neuron system. All of these issues are currently the focus of continuing research.

A second conclusion is that when emotion is appraised multimodally, it is apparent that emotional experience is organized categorically, even early in life. Developmental researchers commonly use procedures like arm restraint, barrier obstacles, stranger approach, unexpectedly intrusive toys, and contingent play in their studies of infant emotion, and validate these procedures as elicitors of anger, fear, happiness, and other emotions using convergent measures of facial expression, behavior, vocal responses, and general observer ratings (e.g., Braun-Engelke, Hill-Soderlund, & Karrass, 2010; Buss & Goldsmith, 1998). Research on the development of emotion regulation is also consistent with the categorical organization of emotional life in showing that children use different strategies, with differential effectiveness, to regulate different negative emotions (e.g., Buss & Goldsmith, 1998; Dennis, Cole, Wiggins, Cohen, & Zalewski, 2009). By early childhood, young children can themselves identify distinctly different strategies that are effective in managing feelings of anger, sadness, and fear (Dennis & Kelemen, 2009; Waters & Thompson, 2014).

Like the children they study, developmental researchers conceptualize emotional development as categorically (if not discretely) organized, with meaningful delineations between different negative and positive emotions in terms of eliciting circumstances, action tendencies, self-regulatory strategies, and behavioral outcomes (see, e.g., Lewis, Haviland-Jones, & Zalewski, 2010). Consistent also with the ideas of DET is that they approach emotional growth both functionally and relationally from early in life. These are significant advances in the theoretical environment of developmental emotions research of the 1970s, and derive in part from the generative conceptualization of the development of emotion provided by Izard and his colleagues.

**Emotion, Attachment, and Emotion–Cognition Relations**

The value of differentiating between negative emotions early in life is also reflected in studies of emotion and attachment. In Izard’s lab, several studies were conducted involving observations of infants in the Strange Situation. In one, the facial expressions of 13-month-olds observed during the infant-alone separation episode of the Strange Situation were analyzed to reveal that infants in the insecure-resistant (and B) group showed significantly higher amounts of sadness and lower interest compared to securely attached infants, while infants in the insecure-avoidant group showed greater anger than any other emotion (Shiller, Izard, & Hembree, 1986). Other studies showed, in repeated Strange Situation separations from the mother at 13 and 18 months, a decrease over time in facial indicators of distress intensity and an increase in component expressions that were interpreted as reflecting greater emotion self-regulation (Izard & Abe, 2004; see also Hyson & Izard, 1985).

These findings take on added interest in light of subsequent research by others on the security of attachment and emotional development. In an important study, Kochanska (2001) observed infants in the Strange Situation at 14 months and also observed these children with their mothers in standardized emotion assessments designed to elicit fear, anger, or joy at 9, 14, 22, and 33 months (using Goldsmith and Rothbart’s [1996] LAB-TAB assessment). Children’s expected and unpredicted responses to these emotion assessments were coded using indicators of facial, vocal, and bodily activity. Kochanska reported that over time, insecurely attached children showed a significant increase in negative emotions, while secure children exhibited decreasing negative emotion and greater positive responses to the same assessments.

The discrete quality of emotion was also important to attachment organization. In Kochanska’s study, avoidant children were least fearful at 14 months (consistent with their subdued emotionality in the Strange Situation) but by 33 months were significantly more fearful than secure children. Resistant children also were significantly more fearful than secure children at 33 months, showed the greatest distress in procedures designed to evoke joy, and showed the greatest decrease in joy over time. Infants classified disorganized in the Strange Situation showed a substantial increase in anger over time and, by 33 months, were significantly higher in anger than infants in the secure or resistant groups. Kochanska (2001, p. 488) summarized these findings by suggesting that “early attachment organization may influence future outcomes through the mediating effect of basic features of the child’s affective functioning.”

Kochanska offered this view as an alternative to prevalent interpretations of the association of secure attachment with later behavior, such as developing mental representations (“internal working models” in attachment theory). But these are not necessarily conflicting explanations of the continuity of emotional functioning over time. It seems more likely that they are complementary, and that one of the reasons why infants in different attachment groups embark on such different emotional trajectories is that they are developing different representations of emotion and its meaning for themselves and others. Izard (2009) would describe these as emotion schemas—defined as emotion-cognitive interactions that generate feelings, thoughts, and behavioral tendencies—that develop differently depending on the nature of infants’ experiences with attachment figures.
The view that different emotion–cognition representations arise from differential attachment experiences is consistent with other attachment research focused on the development of emotion understanding. Securely attached children exhibit enhanced emotion understanding, especially of negative emotions, compared to insecure children, and this is one resource for their more competent coping and emotion regulation (Thompson, 2008). One reason for enhanced emotion understanding is that the mothers of securely attached children talk with them about their feelings in a more richly elaborate, interactive manner, and this may contribute to children's better understanding of others' emotions and the cognition–emotion relations that develop (Thompson, Laible, & Ontai, 2003). The parent's sensitive acceptance of the child's feelings and willingness to communicate openly about them, as well as the adult's constructive emotion coaching, likely provide further resources to competent emotion regulation in the context of a secure attachment.

Research from the Izard lab on the emotion schemas of at-risk children shows, by contrast, how more negative and potentially destructive emotional trajectories can develop. In a longitudinal study with children from Head Start centers, for example, his research group reported that children's overattribution of anger to story characters was associated with measures of family instability and caregiver depression and, in turn, predicted concurrent teacher reports of aggression (for boys) and peer rejection (for boys and girls; Schultz, Izard, & Ackerman, 2000). When these children were seen again in third grade, these researchers found that anger overattribution bias, along with reports of parental physical discipline, predicted teacher-reported aggression 2 years later with earlier rates of aggression controlled (Fine, Trentacosta, Izard, Mostow, & Campbell, 2004). Living in stressful family circumstances, especially in the context of socioeconomic insufficiency, may well contribute to the overattribution of anger in everyday situations that confer risk to well-being.

In light of the significance of young children's emotion processing to social and academic competence also revealed by this group (e.g., Schultz, Izard, & Bear, 2004; Trentacosta & Izard, 2007), these findings underscore the importance of better understanding the developmental origins of the emotion schemas that guide young children's social transactions and, through them, their academic success. In doing so, the development of emotion knowledge, its connections to social competence and self-regulation, its interaction with emotion–cognition schemas, and its relational enlistment into a constructive emotional connection with others are issues promising to further enliven developmental emotions theory.

Concluding Comments

One indicator of an influential scholarly career is its generativity. Izard's ideas concerning the differential organization of early emotional life, the continuous interaction of emotion and cognition, the organizational and motivational functions of emotion, and their importance to social communication and relationships were consistent with and helped to advance a changing climate of inquiry into early emotional development that influences current inquiry. As a consequence, we work in a very different scholarly climate of developmental emotions research than what existed when Izard began his work. Emotion has a much more central place in our understanding of behavioral development and motivation, and it is viewed as having more constructive functions in cognition and social behavior. We have a conceptually richer approach to emotion in development.

References


