CHAPTER 7

Parental Coregulation of Child Emotions

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Emotions can be conceived as systems that regulate actions in ways that serve a person's concerns (Frijda, 1986). They establish, maintain, or disrupt individually significant relations between a person and the internal or external environment (Campos et al., 2018). Understanding how emotions regulate a person's actions in social contexts opens up a sophisticated approach to how emotions develop over the course of ontogenesis from biologically given precursor emotions to a repertoire of differentiated emotions that the developing child becomes increasingly aware of. This awareness of one's own and others' feelings can be seen as a prerequisite for a volitionally driven regulation of one's own emotions. Parents play a pivotal role in this development, which can be conceptualized as a transition from comprehensive coregulation of an infant's emotions and behaviors to increasing self-regulation of emotions and actions by the growing child. This chapter highlights these interwoven developmental trajectories and gives an overview of how parents contribute to them. The first section focuses on the development of emotions, and the second section on the development of a reflective form of emotion regulation. The third section provides an outlook on further research questions that follows from the described state-of-the-art.

7.1 Development of Emotions

7.1.1 Defining Emotions

Emotions are defined as a functional psychological system involving the interplay of several components that serve to initiate and regulate a person's actions. These components appraise and regulate the relation between the person and their environment in the service of that person's concerns (needs, motives, values, aims of life) (Campos et al., 2018; Frijda, 1986). Emotions occur as episodes with a limited time span. They

129

disappear (or change into another emotion) when an adaptive action changes the person's relation to the environment in a way that affects the signaled concern (Shuman & Scherer, 2014).

The set of components that an emotion must have in order to fulfill these functions is controversial (Shuman & Scherer, 2014). However, most emotion theories, and especially so-called multicomponent theories of emotions (Campos et al., 2018; Camras, 2022; Frijda, 1986; Holodynski & Friedlmeier, 2006), agree on the following components: appraisal, action readiness and expression, body reactions, and feeling.

1. Through the *appraisal* component, the actual or imagined situation is appraised in terms of its significance for the person's concerns (Moors et al., 2013). Initial appraisal processes are involuntary and not conscious. They need to be distinguished from any (subsequent) conscious reflection on and voluntary evaluation of possible elicitors of an emotion (Engelen et al., 2009).
2. The component of *action readiness and expression* comprises the motor activities that initiate the appraised urge to establish, maintain, or change the person–environment relation during an emotion episode (Frijda, 1986); this indicates that the emotions are regulating the actions. Action readiness relates to an instrumental use of movements to change the person–environment relation directly, for example, the readiness to flee when a situation is appraised as threatening, whereas the expression part relates to a semiotic use of movements to change the person-environment relation indirectly by appealing to the interaction partner to bring about the desired change, for example, a passerby shows an expression of fear on their face as a dog approaches, such that the dog's owner, upon noticing the expression, feels compelled to leash their dog, which, in turn, causes the passerby's fear to subside.
3. *Body reactions* comprise an interplay of (peripheral) physiological processes (e.g. blood pressure, heartbeat, breathing) as well as psychoendocrinological reactions (e.g. cortisol secretions) that prepare the body to deal with the elicited action readiness and expressions (Norman et al., 2014). There is, nonetheless, some controversy over whether emotions always have to be accompanied by body reactions (Lewis, 2011).
4. Regardless, the *feeling* component can be defined as the internally experienced sensations of the ongoing body reactions, action readiness, and expressions from a first-person, present-tense perspective (Damasio, 1994; Price & Harmon-Jones, 2015). A feeling works as an internal monitoring device by signaling that one should either act or stop acting (Frijda, 1986; Scherer, 2004). Longstanding controversy

exists over the significance of this component and, in particular, over how it relates to the other components (Russell, 2014).

7.1.2 Trajectories of Emotional Development

The development of emotions has been conceptualized in very different ways ranging from evolutionary (e.g. Izard, 2009) to functionalist (e.g. Campos et al., 2018), and from dynamic-system theories (e.g. Camras, 2022) to sociocultural theories (Holodynski & Friedlmeier, 2012). A closer look at the course of emotional development reveals at least three over-arching developmental trajectories: the differentiation of emotion qualities, a shift from coregulation to self-regulation, and an increasing awareness of one's own emotions. For all trajectories, parents play a pivotal role in how children manage these tasks.

7.1.2.1 Differentiation of Emotion Qualities

Development starts from a restricted set of so-called precursor emotions (Sroufe, 1996) and differentiates into a set of culturally reshaped emotions in children, adolescents, and adults. Beyond the ongoing discussions between functionalistic and discrete emotion theorists, who debate the emotions with which newborns are equipped, five emotional reaction patterns have been identified in newborns according to the coincidence of elicitors and expressions. These are distress, disgust, interest, endogenous pleasure, and fright. At the age of 2 to 3 years, about 15 emotion qualities are differentiated, according to the elicitors, inferred appraisal patterns, and perceivable expressions (Camras, 2022; Holodynski & Seeger, 2019; Sroufe, 1996). These emotion qualities are joy, amusement, affection, distress, frustration and anger, fear, disgust, interest, surprise, jealousy, and embarrassment as well as the moral emotions of pride, shame, guilt, and compassion that enable children to consider the concerns of others in their own actions long before they are capable of metacognitive perspective taking.

7.1.2.2 From Coregulation to Self-Regulation by Emotions

This developmental trajectory deals with the question of whose actions are regulated by an elicited emotion. Emotional development can be described as a shift in the way emotions regulate subsequent actions during an emotion episode, namely from comprehensive coregulation by parents to self-regulation of actions by emotions in older children (Holodynski & Friedlmeier, 2006). As Sroufe (1996, p. 151) puts it, "In fact, the general course of emotional development may be described as movement from dyadic regulation to self-regulation of emotion. Moreover, dyadic regulation represents a prototype for self-regulation;

the roots of individual differences in the self-regulation of emotion lie within the distinctive patterns of dyadic regulation."

In infants, the main function of emotions is to regulate the actions of their parents *by* the expression of emotions. A cry expressing distress does not lead an infant to engage in any actions. Instead, it is directed toward influencing their parent's mind and leads them to perform the necessary action to satisfy the infant's need, which will stop the infant's crying.

Alongside the aforementioned differentiation of emotions, children learn a variety of actions in their first years of life that enable them to autonomously satisfy some of their concerns and needs signaled via their emotions, such as fetching things for themselves, handling everyday objects and extending their range of mobility. As a consequence, by the age of 3, they can already carry out a number of need-serving actions by themselves, making them less dependent on vicarious regulation by their caregivers.

Children need to learn to address their emotions as signaled by expressions not only so that their caregivers respond, for example by comforting them when they are sad, but also so they can use their emotional feelings and expressions acquired during coregulation for their own self-regulation. They should start using their feelings as an appeal to the self to carry out the necessary actions alone, for example by comforting themselves when they are sad. This transition to self-regulation of actions by emotions is a very lengthy process extending across the entire preschool age and into the elementary school age (Holodynski & Friedlmeier, 2006).

7.1.2.3 From Unreflective to Reflective Emotions

Feeling an ongoing emotion from a first-person, present-tense perspective is not the same as being aware that one is currently feeling an emotion. For example, a person in a life-threatening situation may feel an overwhelming urge to run away. However, only during a short rest in a hiding place may the person become aware that what they are feeling is fear. Fogel (2009) labels the former state of feelings as embodied self-awareness and the latter state of mediated feelings as conceptual self-awareness, because, in the latter scenario, the protagonist can label their feelings and can describe them with gestures and words. Lambie (2009) also differentiates in a similar fashion between so-called unreflective and reflective emotions.

Conceptual self-awareness is not innate. It develops during early childhood and is a necessary prerequisite for becoming able to regulate one's own emotions volitionally (Holodynski, 2017; Holodynski & Seeger, 2019). One of the pivotal characteristics of emotions is that they are felt as involuntarily happening to the person and are accompanied by a strong urge to act (or to withdraw from acting) (Frijda, 1986).

Controlling this (emotional) urge to act requires the ability to psychologically distance, such that one can acknowledge "I am currently in an emotional state and can thereby reflect on possible alternatives to the strong impulse to take action provided by the emotion I feel." In their Affective Social Competence Model, Halberstadt and colleagues (2001) describe four levels of such an ability: (1) the protagonist becomes aware that they are feeling something like an emotion; (2) they can label the felt emotion and its elicitor; (3) they fully understand its significance in the given context and the possibility of regulating their feelings and/or expressions; and (4) they can choose emotion regulation strategies for regulating their emotion appropriately. An even more highly developed ability is the ability to anticipate which emotion may be elicited in a forthcoming situation in order to decide how to regulate the emotion in advance, which is much easier than regulating an already elicited emotion. Gross and Thompson (2007) label this type of regulation as situation selection and modification.

Becoming aware of one's feelings and labeling them is a challenging task (Gebauer, 2012; Lambie, 2009). At first glance, it seems similar to perceiving and labeling a property of an object. For example, one can say, "this dog is black" because of its evident color or "this person is happy" because of the smile on their face. However, this kind of labeling does not apply to the subjective state of a feeling, which is, by definition, a sensation that is accessible only to the person experiencing it and nobody else (Gebauer, 2012). Therefore, a first challenge for parents and a child is to refer an emotion term to a mental state, the child's feeling, that cannot be observed from the outside. A second challenge is that children can observe their parents' emotional expressions and corresponding antecedents and consequences but cannot observe their parents' feelings. During their own emotional episodes, children may experience many subjective sensations but are not yet able to link these sensations to an image of how these sensations may look from the outside in the form of perceivable expressions, which is especially the case for facial expressions. Therefore, for a child to assign a word or an expression to a subjective feeling and not just to an expression, this requires that they already have the ability in question: being aware of one's feelings.

How can children acquire the ability of becoming conceptually aware of their embodied feelings? Emotional expressions can serve as an interface between embodied and conceptual feelings, as postulated in so-called feedback theories of emotions. These theories have a long but also controversial tradition in psychology (Russell, 2014). The core idea is that a perceivable expression is the connecting link that is represented as a subjective sensation for the sender (the feeling component) but also as a perceivable expressive behavior for the receiver (Holodynski, 2017;

Holodynski & Seeger, 2019). An important task of parents during early infant–caregiver interactions is to help their child grasp this relationship between feeling and expression and establish a mode of mutual reassurance by referring to feelings via expression signs. Gergely (2007) has formulated a social biofeedback theory of parental affect mirroring that shows how this task can be solved; Stern (1985) called it affect attunement.

By observing infant–caregiver interactions in Western samples, both Gergely (2007) and Stern (1985) found that caregivers intuitively mirror their infants' emotion-specific expressions in their own expressions. They do this using conventionalized, succinct expression signs that are marked clearly through exaggeration and repetition, which makes it possible to distinguish between when a caregiver is mirroring the child's emotion and when the caregiver is showing a genuine emotion. This mirroring process provides children with a perceivable expression in others of the sensations they are currently feeling through their emotion in themselves. Because young children are capable of grasping contingencies in their flow of experiences, they learn that their parents are referring to their feeling when mirroring their expression, given sensitive parents who mirror their child's expression appropriately. Fonagy et al. (2002) refer to this competence, called mentalization, as the capacity to ascribe and understand the mental states of others and of oneself (Midgley et al., 2017).

At least for mothers in Western cultures, affect attunement is often observed during everyday mother-infant interactions with 2- to 12-month-olds (Jonsson & Clinton, 2006). Infants from 10 months onward begin to understand the mirrored expressions as symbols that refer to their own corresponding feeling state. However, this understanding initially works only on the level of exchanging expressions. In a subsequent developmental task, children begin to assign words to feelings via expressions and begin to understand elicitors, consequences, and the social dynamic of an ongoing emotion episode; in turn, they acquire all three ability levels of full-blown reflective emotions (Álvarez et al., 2022; Holodynski, 2017, Itakura et al., 2013). In recent studies, reflective functioning has also been conceptualized to involve parents' references to their children's mental states in their sensitive affective and behavioral responses to their children's needs and demands (Camoirano, 2017; Slade, 2005).

7.1.3 Differential Impact of Parents on the Development of Emotions

For all three aforementioned developmental trajectories, parents play a pivotal role in supporting their children in mastering these developmental tasks (Morris et al., 2007). This is because children's emotions develop in a social context that is mainly preselected and shaped by their

caregivers, especially their parents, in their first years of life. Parents interpret their children's emotional reactions against the background of both their cultural and their individual child-rearing attitudes. Different child-rearing attitudes are related to different child-rearing practices that result in different impacts on children's development of emotions (Holodynski & Friedlmeier, 2012; Röttger-Rössler et al., 2013).

Three interrelated parental strategies can be identified that shape the actions and expressions of children in a given context. Whether this shaping contributes to a more functional or dysfunctional development seems to depend mainly on parental sensitivity, at least in Western cultures (Mesman et al., 2018), with parental sensitivity being defined as a caregiver's ability to perceive and infer the meaning behind the infant's behavioral and expressive signals and to respond to these promptly and appropriately. In the long run, differential parental child-rearing practices lead to both cultural and individual pathways of emotion differentiation (e.g. Kärtner et al., 2013; Keller et al., 2018).

7.1.3.1 Preselection of Contexts

Parents preselect the contexts in which their infants and children grow up, which enables and restricts their modes of experience. For example, when parents strongly encourage their infants to have face-to-face interactions and provide opportunities for object manipulation and exploration, as many parents in Western cultures do, they enable their infants' early experiences of self-efficacy, resulting in joy, but such interactions may also result in infants experiencing a loss of self-efficacy, resulting in frustration. In contrast, when parents favor a rather calm child, as they do in rural Nso in Cameroon or rural Bara in Madagascar, for example, they restrict infants from exciting exploration but enable close body contact and often feeding; this satisfies their infants' needs, making it unnecessary for them to show distress through distress expressions (Kärtner et al., 2013).

7.1.3.2 Mirroring Children's Expressions and Reflective Functioning

Sensitive parents often model and mirror their children's expressions from an early age. This provides the child with an image of what their inferred feeling looks like. This affect mirroring is not a mere copying of the child's expression but a succinct, conventionalized pattern of emotion expression that is being assigned to the child. One result of this affect mirroring is that the child's expressions are shaped toward more synchronized and conventionalized expression signs for the inferred emotion. A second result is that the child can match their actual feeling of an emotion to the corresponding expression of what their feeling looks like (Álvarez et al., 2022). In her review of empirical studies, Camoirano

(2017) summarized that maternal reflective functioning correlates with quality of caregiving (even in clinical samples), correlates with children's own reflective functioning and promotes children's understanding of emotions and their emotional self-regulation. Low maternal reflective functioning was correlated with impairments in emotion regulation and children's externalizing behaviors.

7.1.3.3 Modeling

Children learn the elicitors of emotions not only through their own experiences but also through observing and imitating their parents' emotional expressions, especially when confronted with new or ambiguous objects, people or situations. From the age of 10 months onward, children start using the signaled conventionalized expressions of their parents as social referencing for how to feel toward ambiguous elicitors (Vandivier & Hertenstein, 2013); this is especially the case for elicitors of fear (e.g. de Rosnay et al., 2006).

Taken together, infants' precursor emotions develop into fully functioning emotions. Parents support this development by appropriately interpreting their infant's expressions and body reactions, mirroring them in their own expressions in the form of succinct expression displays, and responding promptly with actions that meet their child's signaled needs. Hence, emotional development and processing in infants are initially shared between the child and caregiver. Starting with coregulation initiated by the caregiver, the infant develops an increasingly autonomous regulation of their actions by their own elicited emotions.

7.2 Development of a Reflective Form of Emotion Regulation

7.2.1 Relation between Emotion and Emotion Regulation

The aforementioned shift from coregulation to self-regulation is also related to the emergence of a reflective form of regulating one's own emotions by volitionally applying emotion regulation strategies. This regulation *of* emotions is called emotion regulation and can be defined in line with Thompson (1994, pp. 27–28) as "extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goal."

The concept of emotion regulation has been defined in multiple ways. In a broader sense, every action associated with the modification of emotions could be seen as emotion regulation (Thompson, 1994). However, from a developmental perspective, we find it critically important to distinguish regulation *by* emotion from regulation *of* emotion

(Gross & Thompson 2007; Holodynski et al., 2013). Both constitute developmental achievements during children's development, but they occur at different ages. Regulation by an emotion refers to an action readiness that is inherent to the emotion itself (Frijda, 1986), for example, the avoidance of gaze in situations of (social) overstimulation or fleeing in situations of fear. This process develops relatively early in ontogenesis (Holodynski & Friedlmeier, 2006). By contrast, regulation of an emotion refers to situations that arise when the individual first experiences an emotion and then tries to regulate it, for example, they avoid looking at an attractive gift in a situation that requires delaying gratification. Thus, the emotion and its associated action readiness are no longer the motivating force of behavior but are the target process that becomes regulated. In this case, emotion regulation is based on the volitional inhibition or modification of an elicited emotion so that the dominant action readiness of an emotion is not enacted but replaced by a subdominant behavioral alternative (Campos et al., 2004). In the following discussion, this process is referred to as reflective emotion regulation (Holodynski et al., 2013).

7.2.2 Emotional Awareness and Acquisition of Emotion Regulation Strategies

The acquisition of a reflective mode of emotion regulation is an endeavor that takes one's whole childhood and consists of at least two intertwined abilities: (1) transitioning unreflective emotions into reflective emotions, that is, becoming aware of one's own and others' emotions and (2) acquiring emotion regulation strategies and using them appropriately. Most recent parental intervention programs, such as Tuning in to Kids, Parent–Child Interaction Therapy-Emotion Development and Emotion Enhanced Triple P, address both abilities (but in slightly different terms) with empirically confirmed success, especially concerning improved parenting behavior (England-Mason & Gonzalez, 2020).

7.2.2.1 Transitioning Unreflective Emotions into Reflective Emotions
The ability to perform this transition has been already described in Section 7.1.2, Trajectories of Emotional Development. Becoming aware of a currently felt emotion and understanding its relational meaning in the specific context enables children to psychologically distance themselves from the spontaneous action readiness of the felt emotion; this distancing facilitates the selection and application of an appropriate regulation strategy. However, only a few intervention programs explicitly mention the strategy of affect mirroring as a first step in triggering emotional awareness (Silkenbeumer et al., 2016). Most of them start with the second step, labeling, exploring, and validating the inferred feeling of

the child, which is suitable only when the child is already aware of their feelings (England-Mason & Gonzalez, 2020; Gottman et al., 1997).

7.2.2.2 Acquiring Emotion Regulation Strategies

Gross and Thompson (2007) distinguish four classes of regulation strategies: distraction, reappraisal, soothing, and response modulation. These strategies have their primary impact at different points in the emotion-generative process, but any of these strategies can lead to the desired behavioral outcome, that is, effective emotion regulation. For instance, whereas distraction strategies shift the focus to a new event that establishes a new line of consecutive emotion-generative processes (e.g. appraisal, action readiness, feeling) resulting in a different emotion, response modulation strategies directly operate on the level of the behavioral inclination and either inhibit the impulse or transform it to an appropriate response.

During the preschool years, children establish an increasing repertoire of effective emotion regulation strategies. Early in the second year, a significant developmental achievement can be seen in social referencing and the self-initiation of interpersonal regulation. Hence, an intentional search for social support is considered a rudimentary form of self-regulation. During the second and third years, there is a transition from using passive to more active strategies of emotion regulation, and, as a consequence, the two first truly self-initiated strategies emerge, namely distracting oneself from emotion-eliciting events and self-soothing (Bridges & Grolnick, 1995; Calkins & Hill, 2007; Spinrad et al., 2004).

During preschool years, children learn advanced forms of mentalizing (Matthews et al., 2018) and self-distancing (Grenell et al., 2019) that enables them to become aware of their emotional and motivational action readiness and to inhibit and modify them by applying a regulation strategy on them. The latter ability is also called "hot executive functions" because they are directed to emotional and motivational action readiness and their volitional inhibition and modification in contrast to "cool executive functions" that are directed to thoughts and actions and their volitional inhibition and modification (Zelazo et al., 2005). Together with further sociocognitive achievements, such as normative development that enables thinking based on rules and social norms (Rakoczy & Schmidt, 2013), children refine their skills to modulate emotionally triggered behavioral inclinations, and they acquire increasingly complex cognitive regulation strategies, such as reappraisal strategies, that allow them to satisfy their motives in socially coordinated and accepted ways. Regulation of behavior and emotions that are disapproved of can also be achieved by acquiring and eliciting moral emotions such as

compassion, shame, and guilt, which trigger a strong readiness to override the ostracized behavior (Hofmann & Doan, 2018).

The acquisition of emotion regulation strategies can also be described as a shift from coregulation to self-regulation, as was already stated for the action regulating function of emotions. The internalization model of reflective emotion regulation addresses the gradual transition that occurs as a child acquires increasingly self-regulated levels of emotion regulation (Silkenbeumer et al., 2016, 2018). During infancy and early childhood, parents' and other caregivers' focus is primarily on coregulation *by* their child's emotions, that is, they interpret their child's emotion expressions as appeals to carry out suitable actions on behalf of the child. However, as children grow older, parents increasingly start to apply coregulation *of* their child's emotions, as defined previously, when they use distraction or soothing strategies when the intended action would be infeasible or inappropriate, for example, when a young child starts crying because their father prevents them from picking up a sharp knife, as it would be inappropriate to let the child have the knife. In social interaction, parents introduce culturally generated emotion regulation strategies that, in the course of development, their child can adopt and internalize as mental functions.

The internalization model of reflective emotion regulation (Silkenbeumer et al., 2016) postulates three different levels that specify the strategies used by parents and the implications that these levels have for child development (see also Figure 7.1).

At Level 1 (substitutional emotion regulation), parents adopt all components of reflective emotion regulation. Thus, it is the parent who becomes
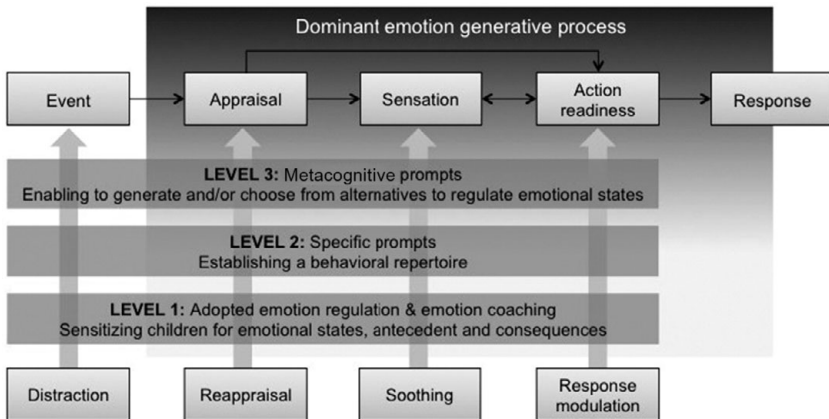

Figure 7.1 The internalization model of reflective emotion regulation

aware of their child's emotion by mirroring it, understands its significance and decides whether and how an emotion needs to be regulated, and does so where necessary, for example, by soothing or distracting the child.

At Level 2 (specific prompts), parents start prompting the child to carry out simple actions that enable a modification of the emotion in question. More specifically, coregulation is characterized by providing specific prompts that the child should follow. This might, for example, be an instruction to follow a specific rule (e.g. to take turns), to take a deep breath, or to play with the building blocks instead of the ball. This level of coregulation helps the child to establish a basic repertoire of effective behavioral routines to regulate emotions. Children can adopt the used strategy, the verbal instructions, into their repertoire by instructing themselves how to behave in order to regulate an elicited emotion.

At Level 3 (metacognitive prompts), caregivers use metacognitive prompts that leave the generation, selection, and application of strategies to the child: more specifically, caregivers prompt the child either to choose from a set of alternative appraisals or responses and execute the self-chosen alternative or to generate alternative appraisals or behavioral responses. This level of coregulation supports the child in flexibly exploring and evaluating alternative regulation strategies and in choosing and executing a specific regulation strategy from a set of possible responses.

Through these different levels of coregulation, children regulate emotions in increasingly self-regulated ways: they become aware of their inner feeling states (starting at Level 1), they establish a repertoire of effective strategies to regulate emotions (starting at Level 2), and they start to generate alternative strategies and select and enact one of these alternatives (starting at Level 3). Unlike other approaches (e.g. Crick & Dodge, 1994; Lemerise & Arsenio, 2000), this model postulates a formative phase in which self-regulation is critically constituted by the way in which caregivers coregulate emotionally challenging episodes.

7.2.3 Parents' Influences on the Development of Coregulation

Both correlational and intervention studies support the claims of the internalization model of reflective emotion regulation. For instance, a gradual transition occurs from parents to their child regarding who initiates emotion regulation, and parents' coregulation decreases as children acquire the necessary skills for self-regulation (Grolnick et al., 1998; Holodynski & Friedlmeier, 2006). Although parents initially adopt distraction and soothing strategies, children increasingly apply these strategies themselves (Bridges & Grolnick, 1995; Sroufe, 1996). Furthermore, evidence suggests that a shift occurs from more substitutional strategies that are typically provided at Level 1 or 2 (e.g. distraction, soothing) to

more instructive and reflective ways of coregulation that are provided at Level 2 or 3 (e.g. prompts for reappraisal or response modulation). Importantly, these age-dependent changes support children's emotion regulation competence concurrently and prospectively (Morris et al., 2011; Putnam et al., 2002).

Following a transactional approach, Silkenbeumer et al. (2018, 2022) showed that, first, caregivers' (i.e. preschool teachers') coregulation was sensitive to children's developmental status. More specifically, the likelihood of coregulation decreased across the preschool years, and caregivers more often coregulated using metacognitive prompts when children had higher levels of socioemotional competence. Furthermore, caregivers were more likely to use distraction, reappraisal, and soothing strategies when children were sad, whereas they were more likely to apply response modulation strategies when children were angry (Silkenbeumer et al., 2022). Second, the findings suggest that children were more likely to carry out a specific strategy successfully when this strategy was prompted by their caregiver and, for older children, when caregivers used metacognitive prompts (Silkenbeumer et al., 2018, 2022).

For parents, converging evidence from correlational studies (for a meta-analysis, see Zinsser et al., 2021), intervention studies (for a review, see England-Mason & Gonzalez, 2020) and experimental studies (e.g. Loop & Roskam, 2016) indicates that parents' coregulation can be improved and has immediate and long-term effects on children's effective emotion regulation.

7.3 Outlook

The aim of this chapter was to embed the development of emotion and emotion regulation in a broader sociocultural context by emphasizing the constitutive role of culturally saturated social interaction between caregivers and their children. At the same time, the proposed models are normative in that they clearly focus on children's explicit emotional awareness and reflective, rational forms of emotion regulation, which is a specific approach to emotion regulation that characterizes Western cultures (Kärtner et al., 2013; Keller & Kärtner, 2013). As outlined in this chapter, becoming aware of feelings is fostered through specific parenting strategies in the coregulation of children's emotions, especially affect mirroring, modeling, labeling, and validating children's emotions. Later in development, caregivers help children to build an increasingly complex repertoire of regulation strategies by supporting emotion regulation at different levels through the provision of specific and, when appropriate, metacognitive prompts. Most of the recent parental intervention

programs mentioned here consider one or more of these prerequisites. Based on this framework, we highlight three important directions for future research.

7.3.1 Developing Measures of Emerging Emotional Awareness

Although the theories on the early emergence of emotional awareness are well established, direct measures of emotional awareness mainly rely on self-report, that is, the labeling by the subject of their own emotions, or emotional awareness is inferred indirectly from the labeling of others' emotions (which similarly depends on advanced language development) or from other downstream developmental attainments such as successful emotion regulation. In order to better document the developmental emergence of emotional awareness and to test the relation between emotional awareness and emotion regulation more directly, the construction of methods beyond verbal self-reports is needed to assess emotional awareness in young children. One promising approach is measures that are based on the action readiness of the elicited emotion. For instance, in the study by Kortas-Hartmann (2013), children's feelings of pride that prototypically lead to a stretching of the body with raised arms were translated into an upward movement of a marker on a vertical scale (in the study, a 1 m scale was used). The more intense the child's sensation of stretching and raising arms, the higher up the scale the marker moved. The opposite movement was used for signaling the intensity of disappointment, corresponding to a collapsing of the body and a downward movement of the marker on the vertical one-meter scale. These nonverbal measures correlated with the valence and intensity of a pride elicitor resulting in an upward movement of the marker and of a disappointment elicitor resulting in a downward movement of the marker, as well as with the intensity of displayed expressions (Kortas-Hartmann, 2013).

7.3.2 Probing the Function of Affect Mirroring across Childhood

Although affect mirroring is a key concept of emotion development during infancy, its role during childhood needs to be further analyzed. Although most concepts and programs (e.g. the emotion coaching of Gottman et al., 1997 or Havighurst et al., 2009) mainly rely on labeling, exploring, and validating children's emotions, we propose that mirroring children's affect retains an important function beyond infancy, and maybe even beyond childhood: it creates a closer connection with others, signals acceptance, and catalyzes awareness of others' emotions. First evidence for such a function is provided by Silkenbeumer et al. (2022), showing that preschool teachers' initial mirroring of their children's emotion helps them to show self-regulation in emotionally challenging

episodes that occur during natural observation. Beyond replication, it would be promising to provide experimental support for the function of affect mirroring for children's emotion regulation.

7.3.3 Complementing Reflective Emotion Regulation with Regulation by Moral Emotions

The first two perspectives for future research are situated within the framework elaborated here; the third perspective aims at complementing the ideal of reflective emotion regulation with other mechanisms supporting socially appropriate experience and behavior. Although reflective forms of emotion regulation are often emphasized in parental training programs as the "royal road" to regulating inappropriate emotional reactions, inappropriate reactions can also be regulated by moral emotions such as shame or guilt. These emotions can be elicited through reappraisal strategies. In fact, these coregulation strategies occur across cultures, but are evaluated very differently: although they are typically associated with an emotion-dismissive meta-emotion philosophy in Western culture, they are evaluated very positively in other cultures (Quinn, 2005; Röttger-Rössler et al., 2013, 2015). The framework elaborated here clearly leans toward a normative perspective on the self (i.e. mirroring and validating disruptive emotions such as anger as well as self-enhancing emotions such as pride, but minimizing emotions that may harm children's self-esteem such as shame; see, for instance, Miller et al., 1997). However, an interesting perspective lies in synthesizing these approaches and elaborating the healthy function of regulating moral emotions (e.g. guilt and shame) within this framework.

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