CHAPTER 18

Understanding Emotion

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AWARENESS OF EMOTION

According to both orthodox Freudian theory and contemporary neuropsychological approaches to emotion, our ability to know and report on the emotions that we feel is limited. This argument implies that a scientific study of emotion should not be restricted to those aspects of our emotional lives that are accessible to awareness. It should include emotional processes that may escape our awareness, but reveal themselves nonetheless via telltale facial expressions or various psychophysiological indices. Although the strength of this argument is undeniable, it is important to remember that human beings do have some access, however partial, to their emotional experience. We shall not fully understand human emotions unless we take that capacity for awareness and reflection seriously. Our ability to report on and anticipate our emotional state critically turns on the extent to which we are aware of, and understand, the way that we feel. Moreover, it is likely that our awareness of emotion, however partial, can change and improve. Indeed, it is part of the Freudian legacy that it is possible to develop such insight into our own emotional lives. Change and improvement is also possible with respect to our understanding of other people. At first we may rely on an immediate attunement to the way they express their emotions. However, our full understanding may depend on a less immediate and more reflective meditation on their history and their subjective appraisal of events.

In this chapter, I focus on those aspects of our awareness and understanding of emotion that are not special attainments, nurtured in the therapeutic environment, but rather ordinary and natural attainments of child development. I first describe children's ability to report on emotion, and review intriguing evidence that family conversation about emotion may promote the accuracy and completeness with which children make such reports. I then consider in more detail the way in which children's understanding of emotion changes with development. I argue that children cannot rely on a script-based conceptualization, but must attend to the relation between appraisal processes and ensuing emotion. Next, I consider the repercussions that children's understanding of emotion may have, once they move outside the family and start to build relationships with their peers. Finally, I describe recent research on children's understanding of the intertwining of emotion, thinking, and memory.

TALKING ABOUT EMOTION

Children's Reports of Emotion

Recent theories of emotion are rightly preoccupied by the continuities that Darwin (1872/1998) emphasized between human beings and nonhuman primates with respect to both the function and the communication of emotions. It is worth emphasizing, however, that human be-

ings, unlike other primates, can put their emotions into words. Arguably, this capacity only amplifies a preexisting mode of nonverbal communication. However, my guess is that it produces a psychological revolution. It allows human beings to communicate what they feel not just about ongoing situations, but about past, future, recurrent or hypothetical situations. More succinctly, it allows humans not just to express emotion but to report on emotion, current as well as noncurrent. These reports provide an opportunity to share and explain emotional experience that is found in no other species.

To document young children's emerging ability to talk about emotion, Wellman, Harris, Banerjee, and Sinclair (1995) examined language production in a small group of children recorded in an intensive longitudinal study from 2 to 5 years of age. Wellman et al. (1995) concentrated on all those utterances in which children referred either to an emotion or, for comparison purposes, to an inner state that is not an emotion (namely, pain). The findings revealed that even 2-year-olds can talk systematically about emotion. They refer to a small set of emotional states—both positive (feeling happy or good; laughing; and feeling love or loving) and negative (feeling angry or mad; feeling frightened, scared, or afraid; and feeling sad or crying). Although children talk most often about their own feelings, they also talk about the feelings of other people. Moreover, children's attributions of emotion are not triggered simply by the recognition of animate, expressive displays, because they readily attribute various emotions to dolls, stuffed animals, and made-up characters. In sum, almost as soon as they are able to talk, children begin to report on their own feelings and on those of other people, and they project such feelings onto nonhumans.

Despite this emerging communicative capacity, it is possible to insist that when children start to put their own feelings into words, they are not engaged in any self-conscious reporting of their experience. Thus Wittgenstein (1958) suggested that early emotion utterances should be seen not as reports of emotion, but as vocal expressions of emotion, on a par with exclamations such as "Ouch!" or "Ow!" A close examination of 2-year-olds' utterances shows that this proposal is ill founded. If children's references to emotion were simply supplements to, or substitutes for, the ordinary facial and behavioral indices of emotion, we would expect them to be

triggered by ongoing or current emotions. However, about half of 2-year-olds' references to emotion are concerned with past, future, and recurrent feelings, and this pattern continues among 3- and 4-year-olds.

This stable pattern shows that from their earliest emergence, we can think of children's utterances about emotion as referential reports, and not as lexical substitutes for scowls and smiles. Indeed, Wittgenstein's analysis does a poor job even with respect to children's pain utterances. Here too, children talk not only about current feelings. They also refer to pains that they might experience in the future or have experienced in the past. More generally, analysis of children's references to emotion shows that they can be mainly categorized as descriptive statements even if they are sometimes used in an instrumental fashion—to obtain sympathy, or to influence the emotional state of another person (Dunn, Brown, & Beardsall, 1991; Wellman et al., 1995). Indeed, this bias toward commentary is evident below 2 years of age. Dunn, Bretherton, and Munn (1987) found that children between 18 and 24 months old used conversation about feelings primarily to comment on their own feelings or those of another person, even though their mothers—to whom most of these comments were directed—used such conversations in a more didactic or pragmatic fashion.

To what extent are children able to offer not just a report but an accurate report of emotion? Naturalistic observation provides some encouraging evidence. Preschool children were observed in their day care centers as they engaged in free play (Fabes, Eisenberg, Nyman, & Michaelieu, 1991). When one of the children was seen to express an emotion—of happiness, sadness, distress, or anger—a child standing close by, who had witnessed the incident but not actually caused it, was approached and asked to say what had happened. Even 3-year-olds, the youngest group questioned, gave an account of what the target child was feeling and of what had provoked the emotion that corresponded with the adult observers' own observations about two-thirds of the time. Among 5-year-olds, agreement with the adult observers occurred more than three-quarters of the time. In future research, it will be interesting to investigate whether children offer more accurate reports when they are bystanders to an emotion or experiencers of an emotion. It would be reasonable to expect the latter, because children

talk about their own emotions more than those of others. However, it is possible that the very experience of emotion may sometimes distort or block accurate report and analysis as it does among children dealing with a highly charged experience, such being hospitalized (Harris, 1989, Ch. 8; Harris & Lipian, 1989).

Family Discussion of Emotion

Families vary in the linguistic environment that they offer to children for the interpretation and regulation of emotion. Consider a child with a parent who frequently discusses emotion—by drawing out the child's own feelings, by calling attention to the way that his or her actions may have emotional implications for other members of the family, or by elaborating on the feelings of story characters. Consider, on the other hand, a parent who is more constrained in talking about emotion, whether with respect to the child or to other people. These two different types of conversation partners may have an impact on the extent to which a child understands how an emotion comes about, or is prepared to talk about emotion, or both.

Recent research has established that there is indeed marked variation among families in the frequency with which emotions are discussed. Thus Dunn, Brown, and Beardsall (1991) found that some children never made any mention of emotion during an hour-long home visit, whereas others made more than 25 such references; variation among the mothers was equally great. Accumulating evidence also indicates that the frequency with which preschool children engage in family discussion about emotions and their causes is correlated with their later ability to identify how someone feels. The link has been found both over a relatively short period straddling the third birthday (i.e., from 33 to 40 months; Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991), as well as over a more extended period from 3 to 6 years (Dunn, Brown, & Beardsall, 1991; Brown & Dunn, 1996).

Such correlational data are, of course, open to various interpretations. One possibility is that the correlation reflects some stable attribute of a child that manifests itself both in psychological talk and in sensitivity to emotion. For example, some children may be naturally empathic—they may seek out and engage in more conversations about emotion, and may also display a keen ability to assess how other

people feel, as measured by standard tests of emotion understanding. However, it is also plausible to suppose that the correlation reflects the didactic role that conversation can play for children. Frequent family discussion may prompt children to talk about emotion and increase their understanding and perspective taking. One piece of evidence that fits this second proposal has been reported by Garner, Carlson-Jones, Gaddy and Rennie (1997): They found that children's perspective taking is likely to be correlated with family discussion of emotion that focuses not simply on what a person feels, but rather on *why* someone feels a given emotion. Still, this line of interpretation leaves open various ways in which that didactic benefit may come about. Conversation about emotionally charged episodes may alter the format in which children encode such episodes. Alternatively, conversation about emotion, especially when it is conducted by a primary caretaker, may form part of a sensitive acknowledgment of the child's own emotional life—an acknowledgment that the child eventually comes to share. I consider these two possibilities in turn.

A Narrative Format for Emotion?

Conversation can provide children with a narrative format for organizing the episodes of everyday life, and this format is likely to embrace episodes that are emotionally charged. A coherent, causally connected, narrative representation may help children to think through the emotional implications of a given episode. The age period from 2 to 5 years is when children become increasingly proficient at recalling episodes from their past. According to Nelson (1993), this is because they begin to participate in joint recollection of past episodes with adults who prompt them to organize such episodes into coherent narratives. Eventually, children start to impose a narrative structure on ongoing events even in the absence of a conversation partner. The extent to which children do this successfully appears to depend in part on the conversational style of their parents (Reese & Fivush, 1993; Reese, Haden, & Fivush, 1993). Some parents—so-called "high-elaborative" parents—talk about past events in rich detail with their children. They use adjectives and modifiers to indicate the interest, importance, and emotional content of an event, and they situate it in its spatial and temporal context. They make efforts to develop the conversation by

posing questions that include fresh informa-
tion, and they offer a coherent narrative rather
than citing unrelated aspects of an episode. By
contrast, "low-elaborative" parents pose simple
questions requiring factual responses (such as a
place name or object label), provide little new
information through their questions, and fre-
quently move to a different topic with each
question. If this proposal is applied to emotion-
ally charged episodes, children who are often
prompted to recall such episodes in the context
of conversation with parents who adopt a high-
elaborative style may end up better able to con-
struct a coherent encoding of an ongoing
episode for themselves and more likely to en-
code its emotional implications.

Dunn (1996) highlights two pieces of evi-
dence consistent with this emphasis on recall
and encoding. First, emotionally charged
episodes are frequently the subjects of sharing
and recall. Thus, when young children talk
about past episodes with family members, they
often focus on events that have provoked nega-
tive or positive emotion (Brown, 1993). Simi-
larly, adolescents and adults who have under-
gone an emotionally charged experience are
prone to share that experience repeatedly with
other people; indeed, the more intense the emo-
tion, the more the experience giving rise to it is
likely to be shared, and shared over a longer in-
terval (Rimé, 1995). Thus, throughout the life-
span, emotionally charged episodes are strong
candidates for sharing, joint recall, and narra-
tive restructuring. Second, young children are
indeed better able to work out the psychological
implications of an episode if they have encoded
it in a coherent fashion. Three-year-olds who
normally do poorly on a standard test of psy-
chological understanding—the so-called "false-
belief" task—perform better if they are
prompted to structure the events leading to the
false belief into a coherent narrative (Lewis,
1994).

ACCEPTING EMOTION?

The proposal above emphasizes the cognitive
skills that conversation may nurture with re-
spect to the encoding and recall of emotionally
charged episodes. A different proposal has
emerged in the context of attachment theory.
Talk about emotion, especially on the part of
the caretaker, may index a more wide-ranging
acceptance of the child's own emotions, be they

positive or negative—an acceptance that facili-
tates the child's open expression, communica-
tion, and acknowledgment of emotion. In this
view, parental attitudes and conversation have
their primary impact on the child's own emo-
tional life, which has in turn a beneficial effect
on the child's acknowledgment and understand-
ing of emotion.

Recent evidence gathered in the context of
attachment theory provides some support for
this line of thinking. Steele, Steele, Croft, and
Fonagy (1999) interviewed prospective mothers
about their attachment to their own parents, us-
ing the Adult Attachment Interview (George,
Kaplan, & Main, 1985). These reports were rat-
ed for their coherence, and for the extent to
which interviewees provided a realistic ac-
knowledgment of negative as well as positive
feelings. Several years later, when the children
subsequently born to these mothers had
reached the ages of 5 and 6 years, the children
were tested on their understanding of the extent
to which a given situation can provoke a mix-
ture of positive and negative feelings. An inter-
esting relationship emerged between the parent
and child measures. Specifically, the coherence
and the degree of reflection with which a
child's mother talked about her own attachment
was a predictor of later performance by her
child on the assessment of emotion understand-
ing—over and above any contribution made by
the child's age.

Given the lengthy temporal lag between the
interview with the mother and the assessment
of the child, and the clear independence of
these two measures from one another, the rela-
tionship between them is intriguing and
provocative. How should it be interpreted? In
line with attachment theory, Steele et al. (1999)
propose a two-step model: The mother's emo-
tional sensitivity and coherence (as indexed by
the Adult Attachment Interview during preg-
nancy) fosters a secure attachment with her
child, and this secure attachment in turn pro-
motes the child's acceptance and understanding
of emotion.

This interpretation is plausible, and it is con-
sistent with attachment theory. Nevertheless, it
is worth emphasizing that the alternative pro-
posal considered earlier can also explain the re-
sults. A mother who is able to produce a coher-
ent and reflective narrative about her
relationship to her own parents is likely to en-
gage in coherent and informative discourse
about a variety of emotionally charged past

episodes when talking to her child. As described earlier, this elaborative style may in turn help the child to encode such episodes in a more coherent fashion. This account makes a straightforward prediction that can easily be checked with existing research tools. The way that mothers respond in the Adult Attachment Interview should be closely related to their conversational style as assessed by memory researchers. More specifically, mothers who obtain high scores for coherence in the Adult Attachment Interview should display a high-elaborative style when discussing past episodes with their children. In short, if this speculation is correct, children's understanding of emotion is promoted in a relatively direct fashion by the conversational style of their parents, especially the recall style. Although this recall style may indeed have additional and independent effects on a child's attachment status, there is no need—according to this model—to assume that the child's attachment status serves as the proximal determinant of his or her understanding of emotion.

In the next few years, we may expect to see much more research on the question of how children come to vary in their understanding of emotion, and the part that family talk may play in promoting that variation. In this regard, we can anticipate an increasing confluence of findings from research on (1) early attachment; (2) children's developing capacity for recall of past events, especially emotionally charged events; and (3) individual differences in children's understanding of mind and emotion. For the most part, these topics have been studied independently of one another, but this is likely to change. Such a confluence is likely to yield practical as well as theoretical benefits. If we know more about how children's understanding of emotion can be facilitated in the context of the family, we should be able to reproduce some of those beneficial effects through deliberate and systematic therapeutic intervention.

BEYOND SCRIPTS: DESIRES, BELIEFS, AND EMOTION

In the preceding section, I have talked in global terms about the child's ability to report on and to understand emotion. In this section, I consider in more detail the nature of this understanding and the way that it changes in the course of development. One simple and attractive proposal is that children develop an increasingly elaborate set of scripts for various emotions. Thus they identify the type of situations that elicit various emotions—fear, sadness, happiness, guilt, and so forth (Barden, Zelko, Duncan, & Masters, 1980; Harris, Olthof, Meerum Terwogt, & Hardman, 1987)—and they identify the typical actions and expressions that accompany a particular emotional state (Trabasso, Stein, & Johnson, 1981). This notion of script-based knowledge has several advantages. It assimilates children's understanding of emotion to a wider body of research on children's recall and understanding of sequentially organized events (cf. Nelson & Gruendel, 1979). It highlights the fact that an understanding of emotion calls for a causal understanding of the connections among its sequential components. It is sufficiently flexible to be of service if we look outside the Western world to children's understanding of emotion in cultures where different emotional themes are prominent; for example, Lutz (1987) has used this approach in her analysis of the emotion concepts of children on the island of Ifaluk in the Western Pacific. Finally, the notion of an emotion script fits comfortably with a possibility raised in the preceding section—that children's understanding may be elaborated not just in the context of emotionally charged encounters, but in the context of family discussions in which past episodes are rehearsed and organized into a causally coherent narrative sequence.

However, closer scrutiny of the script concept reveals a conceptual difficulty: The same situation can elicit different emotions, depending on the appraisal that the actor makes of the situation. This means that if the child attempts to store a list of scripts for emotion, it will be necessary to store different scripts for different people. An alternative and more economical solution is to define the eliciting situation in more abstract terms. For example, it is possible to define situations that provoke happiness as "situations that are judged by an actor to bring about the fulfillment of his or her goals." A move in this direction, however, tacitly acknowledges that emotions are very special kinds of scripts. They do not begin with the kind of objective event that we normally associate with scripts (e.g., the action of sitting down at a table can be seen as the first move in the dinner script). Rather, they begin with an event that is inherently psychological (namely, a person appraising a situation). A more fruitful approach to

children's understanding of emotion, therefore, is to acknowledge that children may indeed construct scripts for given emotions—but that key elements of these scripts will include a diagnosis not of the objective situation that faces the actor, but rather an analysis of how the actor appraises that situation. To make the same point differently, it is not just psychologists who have to recognize the role of appraisal processes in emotion. Young children must do the same.

The limitations of the script-based approach can be highlighted in another way. Children with autism are often good at remembering recurrent sequences of events. Indeed, part of the clinical picture of autism is a disposition to become upset at an unexpected departure from a routine sequence. Their script-sensitive memory appears to serve children with autism quite well with respect to emotion. Thus, they readily judge that certain situations (getting nice things to eat, birthday parties) make people happy, whereas other situations (having to go to bed early, falling over) make people unhappy (Baron-Cohen, 1991; Tan & Harris, 1991). Using a different technique, Ozonoff, Pennington, and Rogers (1990) showed that autistic children could select the appropriate facial expression to go with various emotionally charged pictures. For example, they chose a sad face for a picture of a child looking at a broken toy, and an angry face for a picture of two children fighting. Despite this apparent familiarity with routine emotions scripts, children with autism perform poorly in comparison to nonautistic controls when a correct attribution of emotion requires then to go beyond the objective situation and consider how a protagonist's beliefs influence his or her appraisal of that objective situation (Baron-Cohen, 1991; Harris, 1991). The clear implication is that normal children do go beyond a script-based analysis and take into account the protagonist's appraisal of the situation.

If we accept this argument, we can ask in more detail how children make sense of the process of appraisal. Recent research increasingly points to a two-stage development. First, 2- and 3-year-olds appreciate the role that desires or goals play in determining a protagonist's appraisal and ensuing emotion. For example, they understand that an elephant may feel happy to be given milk if she wants milk, whereas another animal may feel upset if he prefers juice instead (Harris, Johnson, Hutton, Andrews, & Cooke, 1989; Yuill, 1984). By 4

and 5 years of age, this simple desire-based concept of emotion is elaborated to include beliefs and expectations. Children realize that it is not the match between desire and actual outcome that triggers emotion, but the match between desire and expected outcome. Suppose, for example, that the elephant wants some milk and is about to get it, so that if the match between desire and actual outcome is the only factor taken into consideration, she should feel happy. Suppose further, however, that the elephant wrongly expects to get something other than milk. In that case, 4- and 5-year-olds realize that the elephant will feel upset rather than happy (Harris et al., 1989). They appreciate that her appraisal of the situation, and her ensuing emotion, are based on the mismatch between her desire and the expected outcome, even when the expectation is ill founded.

The shift from a desire to a belief–desire conception of mind and emotion is now well established. Emotion judgment tasks, such as the one just described, are a useful source of evidence because whether children are asked to take only desires into account or beliefs and desires, they can still be asked to make the same simple binary judgment—namely, whether the animal is happy rather than sad. Another important source of evidence is children's spontaneous talk about psychological states. In the preceding section, I have described the way that children report on emotional states (Wellman et al., 1995). Using a similar database, Bartsch and Wellman (1995) have examined children's references to other mental states. Their analysis reveals that children talk systematically about desires and goals throughout most of the third year, chiefly using the term "want." Then, starting at about the third birthday, children also begin to make reference to beliefs, mainly using the terms "know" or "think." Eventually, at about the fifth birthday, talk about beliefs becomes as frequent as talk about desires.

This developmental pattern is probably universal. Tardif and Wellman (in press) report that children learning to speak Cantonese and Mandarin display a similar progression: Talk about goals and desires emerges early; talk about beliefs and expectations shows a later increment. These data help to rule out various possible interpretations of the lag between talk about desires and talk about knowledge and belief. For example, it might be argued that it arises because in English the predicate complement structure is simpler for the verb "want" than for

the verbs "think" and "know." However, in Mandarin and Cantonese, the predicate complement structure is relatively simple across references to both desires and thoughts. Indeed, it is worth noting that in both Mandarin and Cantonese some polysemous mental verbs can be used to indicate either desire or thought. Yet, despite the availability of the same lexical item for both meanings, the lag between references to desire and thought still emerges. In sum, whether we focus on children's emotion judgments by using experimental tasks involving a simple binary judgment, or on children's spontaneous references to mental processes in the course of their everyday conversation (be it in English, in Mandarin, or in Cantonese), the evidence is robust that children focus initially on an agent's goals, but increasingly take into account his or her thoughts and beliefs.

How should we explain this pattern of development? Most commentators acknowledge that it reflects a developing appreciation of the way that an agent entertains an attitude to a given target—for example, an attitude of liking or fearing—and also construes that target in a particular way, whether the construal is accurate or not. To that extent, most commentators see the child as becoming increasingly sensitive to the role of various appraisal processes. Nevertheless, beyond this consensus, there is a healthy disagreement about how that increased sensitivity comes about. Some have argued that a key development is children's developing understanding of the way that the appraisal of a target comes to include a mental representation of that target (Bartsch & Wellman, 1995; Flavell, 1988; Astington & Gopnik, 1988; Perner, 1991). Others have argued that children may get better not at understanding the representational nature of appraisal processes, but rather at simulating or mimicking the appraisal that someone else may make of a target, given partial or biased information about it (Gordon, 1986; Harris, 1989). Whatever the merits of these two ideas, they both remain regrettably silent about the kind of experiences that might stimulate children to make progress. Here we can reflect once again on the role that language may play, especially sustained and intimate conversation within the family. To make this point, I need to backtrack briefly to examine the recent spate of research on the child's so-called "theory of mind."

We can often work out people's mental state without talking to them. Thus, we often infer what other people think, know, or feel by keeping track of their movements, and by taking note of what they did or did not witness. For example, knowing that two colleagues have missed a college committee meeting, I will infer their state of ignorance and duly update them about any decisions reached. The past decade of research on children's understanding of beliefs and emotions has mainly probed children's developing facility at this type of observational inference (Astington, Harris, & Olson, 1988; Flavell & Miller, 1998). However, we also often learn what other people think or feel not by tracking where they were at what time, but by listening to what they say. Indeed, it is possible to argue that children's developing appreciation of the way that people vary in their thoughts and attitudes is fueled by their increasing involvement in conversation (Harris, 1996). For example, in the course of conversation, children can realize that their conversation partners may know or believe something that they do not, and vice versa. In fact, successful conversation involves a moment-to-moment acknowledgment of such variation in information. To the extent that conversation stimulates children to reflect on the thoughts and beliefs of their conversation partners, we would expect those children with limited access to conversation to be delayed in their understanding of thoughts and beliefs.

However, conversation goes beyond the exchange of information; it involves the sharing and comparing of attitudes, especially emotional attitudes. Thus, in discussing their experience with a conversation partner, children will often learn that an episode that made them giggle or cry can provoke a very different reaction in a sibling or caretaker. Conversation is likely to highlight and clarify the way that emotional reactions vary from one person to another, depending on their appraisal of the episode in question. Arguably, the more children engage in conversation about emotion, the more they become alert to its subjectivity, particularly if the conversation provides a way to make sense of the appraisal processes that underpin it. This proposal leads to an interesting prediction. Recent research with deaf children, especially deaf children raised in nonsigning families, has shown that they perform poorly on theory-of-mind tasks (Peterson & Siegal, 1995, 1997). Until now this research has focused primarily on their understanding of belief, especially false belief. However, if the analysis above is

correct. we would expect deaf children raised in nonsigning families to show parallel difficulties in the understanding of emotion–especially if the emotional reaction has to be understood not in terms of the objective situation, but rather in terms of the way that the situation is appraised.

UNDERSTANDING EMOTION AND PEER RELATIONS

Hitherto, I have discussed ways in which experiences within the family may influence children's understanding of emotion. We may now consider possible consequences of that developing understanding. In particular, we may ask whether children's understanding of emotion has an impact on their social relationships when they move outside the family and start to form relationships with peers. Three recent studies have explored this possibility. Denham, McKinley, Couchoud, and Holt (1990) tested preschoolers (mean age = 44 months) for their emotion knowledge: Children had to identify a puppet's emotion (of happiness, sadness, anger, or fear), both when it exhibited a prototypical reaction (e.g., fear during a nightmare) and an atypical reaction (e.g., sadness at going to preschool). In addition, a sociometric measure was used to assess children for their acceptance as playmates among their peers. Children with higher scores on the emotion test proved to be more popular among their peers, even when the contributions of age and gender were removed. Cassidy, Parke, Butkovsky, and Braungart (1992) obtained very similar results with first-grade children. Children's overall score in an interview about the causes, consequences, and associated expression of emotion was correlated with popularity. Finally, in a longitudinal study of 4- and 5-year-olds, Edwards, Manstead and MacDonald (1984) found that children who were accurate at identifying facial expressions of emotion proved to be more popular 1–2 years later (even when their initial popularity was taken into account). The consistency among these three studies is striking. At the same time, caution is again needed in interpreting the findings (Manstead, 1995). Acceptance by peers may increase children's opportunities for learning about emotion. Alternatively, a third variable such as intelligence or verbal ability may underpin both emotion understanding and popularity. Nevertheless, a plausible in-terpretation is that children's understanding of emotion helps them to handle peer interaction in a more sensitive fashion, and that this makes them more popular.

However, even if we accept this conclusion for the moment, further research is needed to clarify just how that sensitivity should be construed. We may consider two possible interpretations: one framed in terms of social cognition, the other framed in terms of nonverbal discrimination. First, in line with the discussion so far, it is possible to argue that children differ primarily in the extent to which they build up a coherent understanding of key emotions—an understanding that specifies the relevant appraisal processes, experiential states, and behavioral and psychological consequences. In this view, children with greater expertise in the domain of emotion are essentially more knowledgeable, and it is this knowledge that helps them in dealing with their peers. An alternative possibility is that children differ primarily in their sensitivity to subtle nonverbal signals of emotion. For example, they may be more sensitive to the difference between a forced and a genuine smile, or between a look of fear and a look of surprise. In this view, children with greater expertise in the domain of emotion are chiefly distinguished by their more nuanced reading of the subtle indices of emotion displayed by their peers.

The obvious way to investigate this question is to dissect the concept of emotion understanding in a more analytic fashion. For example, it is possible to devise tests of understanding that bypass any presentation of non-erbal expressive cues. Conversely, it is possible to devise tests that focus directly on nonverbal discrimination, without requiring children to articulate any wider understanding of the situational antecedents or consequences of even the names of particular emotions. If the same group of children were given tests of both types, we could assess which displays a stronger relation to peer acceptance.

In carrying out such a study, it would be worth keeping in mind the following intriguing possibility. Consider briefly an apparently unrelated field, but one that has made a major contribution to our understanding of domain-specific expertise: research on chess players pioneered by De Groot (1965) in Amsterdam. He discovered, not surprisingly, that grand masters know more about chess than weaker players do. They have a huge library of remembered games that they can exploit in thinking through any

particular game. In addition, however, their superior chess knowledge infuses the way that they perceive the board. If they glance for a few seconds at an incomplete game, they can accurately remember the disposition of the pieces (Chase & Simon, 1973). The implication of this research is that expertise consists not only of greater knowledge, but of more accurate and rapid encoding of meaningful patterns. To return to the domain of emotion, then, we should be prepared to find that children who perform well on tests of knowledge also do well on tests of nonverbal discrimination.

THOUGHTS, MEMORIES, AND FEELINGS

One obvious feature of our experience of emotion is that most intense emotions subside over time. If children are able to report on their experience of emotion—and, as we have seen, their early talk about emotion suggests exactly this—then we might expect them to be aware of this relationship between time and emotion. Several studies have shown that young children are quite sensitive to that relationship. Children were told about various emotionally charged episodes that befell a story character just before school started. For example, they might be told that the character had lost a fight with the school bully. Children were then asked to say how the character would feel at various points during the day, and the following morning (Harris, 1983; Harris, Guz, Lipian, & Man-Shu, 1985; Taylor & Harris, 1983). The results showed that even 4-year-olds appreciate that an intense emotional reaction will wane over time. They make that judgment whether the initial emotion is positive or negative, and they make it about their own emotional experience as well as that of story characters. Moreover, the judgment is one that children make in quite different cultures—for example, whether they are growing up in the West or in China. A plausible conclusion from these orderly data is that the waning of intense emotion is a universal experience, acknowledged and understood by young children everywhere.

However, as adults, we also acknowledge that our emotions do not always dissipate in a steady and gradual fashion. We realize that we are prey to flashbacks and reminders that override, however temporarily, the underlying pattern of dissipation. To what extent do young children understand this intrusive and regenerative influence of memory? In an initial investigation of this question, children were asked about a story character who woke up on the day after an emotionally charged experience, and either started thinking about the experience again, or alternatively had forgotten about it (Harris et al., 1985). By 6 years of age, children realized the likely impact on emotion: They claimed that the character would feel happier thinking about a positive experience than forgetting about it, but would feel happier forgetting about a negative experience than thinking about it. Four-year-olds were less systematic, but they did reach conclusions similar to the 6-year-olds' for the positive experience.

In a more extensive investigation of the same issue, Lagattuta, Wellman, and Flavell (1997) tested children ranging from 3 to 6 years of age for their understanding of the impact of reminding on felt emotion. Children listened to stories in which the protagonist experienced a sad event and later encountered a reminder. Children were told that the story character felt sad in the presence of a reminder, and were scored for the extent to which they were able to explain that the reminder made the protagonist think back to the earlier sad event. The majority of 5- and 6-year-olds were able to articulate such explanations, whereas this was rare among 4-year-olds. Nonetheless, in a follow-up study in which the cues were identical to (and not just associated with) items involved in the initial event, some 3-year-olds also provided such explanations, especially after they were explicitly asked whether the character was thinking back to the past event.

To summarize these findings, there is ample evidence that children understand the way that an emotional reaction is often dictated by the immediate situation. At the same time, young children also show some understanding that people's emotional lives are not simply a function of the current situation. An emotional reaction does not instantly cease once a person leaves the situation that gave rise to it. The emotion lingers on or recurs, albeit with a waning intensity. Young children can also increasingly articulate the contexts in which reactivation, however partial, of the original emotion can take place. They realize that a further encounter with some component of the earlier episode triggers thoughts and associated feelings about that episode. Indeed, it is possible that emotionally infused memories and

thoughts are an especially salient context for children to discover important features of our mental life. Flavell, Green, and Flavell (1995) found that young children were especially alert to the likelihood that someone in an emotionally charged situation (waiting for an inoculation) would be engaged in mental activity, notably thinking; they often ignored that possibility when the person was engaged in more neutral situations (e.g., reading or talking). Rumination that is emotionally charged may be especially salient to young children (1) because it is frequently linked not to the actual situation, but to some past or future situation; and (2) because such thoughts have an involuntary, intrusive quality that is less evident for more neutral thoughts.

CONCLUSIONS

In this chapter, I have examined several interrelated aspects of children's understanding of emotion: their ability to report emotion in words; their sensitivity to key components of the appraisal processes that modulate a person's emotional response to a given situation (namely, the person's desires and beliefs); the link between emotion understanding and peer relations; and, finally, children's developing appreciation of the way that emotions are sustained or dissipated, not simply because the eliciting situation recedes in time and space, but rather because the process of rumination and recollection that an emotionally charged situation sets in motion gradually subsides.

At various points, I have touched on a larger and more complex theme that deserves more attention in future research. Arguably, children's developing understanding of emotion is simply an epiphenomenon of the underlying process of emotion. Understanding may operate at a "meta" level, sealed off from the underlying emotional process that is its subject matter. To take a concrete example, it is possible to assert that a child functions at two separate levels: On one level, there is the child's experience and display of sadness; at a separate level, there is the child's capacity for reporting on and ruminating about that experience. Increased sophistication at the latter level may have few or no repercussions for processing at the former level.

Such a stark separation between levels may simplify our scientific analysis, but it probably distorts or ignores some important features of human emotion. It predicts that a disruption or delay in the development of an understanding of emotion need have no repercussions for the basic emotional processes themselves. There are several reasons for thinking that such repercussions do exist, however. First, there is a therapeutic tradition suggesting that intense emotional experiences that are reworked in the context of communication and rumination have different sequelae from those that are not. Such reworking need not be in the context of discussion with a trained therapist; it can also occur in the context of a privately written narrative (Pennebaker, 1996). One plausible extrapolation of these findings is that the emotional lives of children who grow up in homes where there is open discussion of emotionally charged encounters will be different from those of children from homes where such discussion does not occur.

Second, this capacity for communication and rumination dramatically alters the contexts in which children can seek support and reassurance. Attachment theorists have emphasized the way that a caretaker may or may not provide reassurance at moments of distress. Typically, they have focused on those moments when the precipitating factor is fairly easy for the caretaker to discern: The child is unnerved by a stranger, or distressed by the caretaker's recent absence, or fretful about the caretaker's imminent departure. However, the emotional horizon of the older child is much larger; he or she can be distressed or fearful of events that might happen in the future or that happened in the more distant past. In such contexts, children who can report on their feelings and discuss their causes are clearly better placed to receive reassurance.

Finally, it is likely that children's ability to understand and predict their own emotions has an effect on their decision making about what course of action to take. In its turn, that chosen course of action will lead to—or enable children to avoid—certain emotional consequences. For example, recent evidence shows that the ability to anticipate guilt can serve as a brake or warning signal when a guilt-inducing transgression is contemplated (Lake, Lane, & Harris, 1995). That warning signal is sufficient to help children to inhibit the transgression and to avoid any subsequent guilt. Stated in more general terms, children's insight into their emotional lives does not simply permit the children

to expect the inevitable; it allows the children to make choices about what their emotional lives should be like.

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