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Observation of newborn infants reveals a rather narrow range of emotional behavior. They cry and show distress when pained, lonely, or in need of food and attention. They look attentive and focused on objects and people in their world. They appear to listen to sounds, to look at objects, and to respond to tickle sensations. Moreover, they seem to show positive emotions, such as happiness and contentment. When fed, picked up, or changed, they show relaxed body posture, smile, and appear content. Although they show a wide range of postural and even facial expressions, the set of discrete emotions that they exhibit is rather limited. Yet, in a matter of months and indeed by the end of the third year of life, these same children display a wide range of emotions. In fact, by this age, almost the full range of adult emotions can be said to exist (Lewis, 1992b). In 3 years, the display and range of human emotions go from a few to the highly differentiated many, as well as from action patterns to feelings. In order to understand this rapid development, it is necessary for us to consider the set of issues that will enable a careful articulation of their development. The first issue to be discussed, therefore, is the topic of the topology of emotional features. Embedded within this is a consideration of the development of these features. Finally, the developmental sequence over the first 3 years of life is considered.

THE TOPOLOGY OF EMOTION

In order to talk about developmental issues involved in the study of emotion, it is important that we first make clear what we mean by the term “emotion.” “Emotion,” like the term “cognition,” refers to a class of elicitors, behaviors, states, and experiences. If we do not distinguish among these features of emotion, the study of them and their development becomes difficult. For example, Zajonc (1980)—and, more recently, Barrett (see Lindquist & Barrett, Chapter 34, this volume) and Niedenthal (see Chapter 36, this volume)—argued that emotions can occur without cognitions, while Lazarus (1982) argued that emotions require cognition. Zajonc and Lazarus view the features of emotional life as they could arise at diametrically opposite ends of a spectrum. The reasons for this are not hard to see, one was a model of emotional states, perhaps connected to physiological states, the other was a model of environmental triggers that argued for emotions as states.

Emotional Elicitors

In order for an emotion to be experienced, an elicitor—what I will call an emotion elicitor—must trigger a response from the organism. The state of the organism is a change in idea, or a change in physiological state of the organism. An emotion eliciting event may either represent a change in the state of the organism or a change in the eliciting event itself. For example, an emotional elicitor might be a change in the state of the organism, such as a change in heart rate, or it might be a change in the external world. For example, a change in the state of the external world might be a change in the weather. In this case, it is not surprising that a change in the weather will change the eliciting event and possibly the emotion.

A major problem in defining an emotion elicitor is that not all events are recognized as emotional elicitors. For example, the presence of cold air may cause a shiver and not elicit a shiver response. In general, we use our experience of the world to define an emotion as an event that is experienced as an elicitor event. For example, the approach of a familiar animal to a park may elicit fear, but is used as an example of fear. Events that are familiar to us and that are familiar to all children show fear.

The problem of the development of emotion becomes even more serious when we consider physiological elicitors. For example, the terror of a horror film and the movie...
emotions require cognitions. As we shall see, Zajonc and Lazarus were describing different features of emotional life. Because of this, each could arrive at diametrically opposing positions without endangering his own argument. The reasons for this are quite simple: As we shall see, one was arguing for emotions as states, perhaps connected to action patterns and environmental triggers, whereas the other argued for emotions as experiences.

Emotional Elicitors

In order for an emotion to occur, some stimulus event—what I will call the "emotional elicitor"—must trigger a change in the state of the organism. The state of the organism can be a change in an idea, or it can be a change in the physiological state of the organism. The triggering event may either be an external or internal stimulus. External elicitors may be nonsocial (e.g., loud noise) or social (e.g., separation from a loved one). Internal elicitors may range from changes in specific physiological states to complex cognitive activities. Since it is obviously much harder to identify and manipulate an internal elicitor than an external one, it is not surprising that most research deals with external stimuli; that is, it attempts to determine precisely which features of the elicitor activate the emotion.

A major problem in defining an emotional elicitor is that not all stimuli can be characterized as emotional elicitors. For example, a blast of cold air may cause a drop in body temperature and elicit shivering, but one is reluctant to classify this occurrence as an emotional event. In general, we use our "common sense" to define an event as an emotional elicitor. Thus, for example, the approach of a stranger or experience on a visual cliff apparatus is usually the eliciting event for fear in the very young. The approach of a familiar parent is not used for fear, but is used as an elicitor to measure joy or happiness. Events that we use to elicit particular emotions grow out of our common experiences. Unfortunately, such experiences may not be correct. As we can see in studies on fear, not all children show fear at a stranger's approach (Lewis & Rosenblum, 1974).

The problem of the nature of elicitors becomes even more serious when we try to measure physiological reactions to emotional events. For example, in the presentation of a horror film and the measurement of physiological response to that horror film, one assumes that the elicitor is a fearful one. What physiologically appears is then taken as the response to fear. When subjects are questioned as to the nature of the elicitor and what emotions it produces, it is often the case that (1) they do not produce the emotion believed associated with the elicitor; or (2) they produce a diverse set of emotional reactions. Schwartz and Weinberger (1980), for example, asked subjects what emotions they had to a set of different events and found that they offered a variety of emotions for the same elicitor. Likewise, a colleague and I asked adults to mention the emotions produced by such elicitors as going to the wedding of their child or the death of a parent, and found that they gave a variety of emotions as their responses (Lewis & Michalson, 1983). Such research as this suggests that we have little information, excluding our common experience, in regard to the nature of emotional elicitors.

While from a scientific viewpoint little information about which emotions are elicited by which stimulus events is available, it appears to be the case that within a culture adult individuals seem to possess common knowledge in regard to how they should react emotionally to particular stimulus events. So, for example, at the death of a friend's parent, we know the emotion others either are likely to have or are expected to show. The script learning of appropriate emotions by stimulus conditions, whether these are "true" emotions or simply play-acting, informs us that knowledge about emotional elicitors and appropriate emotional responses is something that is acquired. In reviews of this subject (see Harris, 1989; Lewis, 1989), data on children's acquisition of such knowledge reveal that by the age of 10 years children have a good sense of the appropriate emotions for appropriate stimulus elicitors. The learning of these emotional scripts appears to take place quite early. For example, when children were asked to choose which emotional expression was likely to go with a set of stories that included receiving gifts at a birthday party, being lost from your mother in a grocery store, and falling and hurting yourself, children as young as 3–5 years were already capable of responding appropriately—that is, the way adults would respond to these same emotional scripts (Lewis, 1989). Learning what is appropriate vis-à-vis the culture is important for children, and they acquire such knowledge early.
III. DEVELOPMENTAL CHANCES

Serious child maltreatment results in failures in this domain (Pollak, Cicchetti, Hornung, & Reed, 2000). The acquisition of such knowledge does not necessarily imply that the situations do not produce the emotions that are commonly believed to occur under such conditions. All that needs to be pointed out is the possibility that specific stimulus events are more likely to elicit some emotions rather than others. The emotion elicitors can be a function of what a child has learned in terms of how to behave, as well as a function of some automatic process whereby specific events elicit specific emotions.

Development of Elicitors

The problem of the development of elicitors raises an important issue: Namely, what is the relation between emotions (states, experiences, and expression) and elicitors? Darwin (1872/1965), arguing for the biocultural approach, suggested that emotional behaviors or action patterns are adaptive responses to specific events (or elicitors). Thus one might suggest that anger is the result of a blocked goal, sadness the result of loss, and fear the result of uncertainty or loss of control. Izard's (1977) original differential-emotions theory held to this view, although there may not be as close a one-to-one relation as he proposed. To test this view, my colleagues and I (Bennett, Bendersky, & Lewis, 2005; Lewis, Hitchcock, & Sullivan, 2004; Lewis & Ramsey, 2005; Lewis, Ramsey, & Sullivan, 2006; Sullivan & Lewis, 2003) examined 4-month-old infants' response to frustration. Darwin argued that anger is the action pattern that evolved to enable humans to overcome a barrier to a goal. After the infants in our study were taught to pull a string to get to see a picture, and after they had learned the response to the goal, the pull no longer resulted in the picture's coming on (frustration or goal blockage). Across many studies, we found that the action pattern most frequently associated with this elicitor was an anger-like face, increased pulling, increases in autonomic nervous system (ANS) response, and no increase in stress hormone. Children who showed not anger-like faces but sadness-like faces showed no increases in pulling nor in ANS response, but did show significant increases in stress hormone levels. Such findings support Darwin's idea that emotions—action patterns—evolved as adaptive responses to particular events (elicitors).

Although these studies of anger in response to a blocked goal appear clear in showing a perhaps innate connection between elicitor and action pattern, more work with other elicitors is needed. The difficulty is in the need to specify the elicitor carefully—a problem that is not readily addressed, and one that Gibson (1960) expressed concern about over 45 years ago in his paper on the nature of the stimulus. Unless we can specify the elicitor carefully, much difficulty in understanding emotional behavior and its development will continue.

It would appear, therefore, that there is a class of elicitors that has little developmental history. A blocked goal causes angry action patterns in organisms throughout their lives. The looming of a visual event causes startle and attention, and perhaps fear as well. The sight of food always serves as a positive elicitor, if one is hungry. It would therefore seem possible to imagine a class of events, biologically connected, that would produce a particular emotional state. Even for this class of more automatic-seeming elicitors, the developmental events of the organisms may be such as to inhibit or restrict the elicitors from operating in their natural way.

In the class of elicitors with a developmental course, the structure that supports the elicitor—response connection is likely to undergo change. Within this class are elicitors that are biologically connected to a response, as well as elicitors that are connected to a response through learned associations. For example, infants' fear of strangers may be biologically programmed; over time, stranger fear may decline because the biological structure supporting the elicitor—response connection has broken down or has been altered by experience. Learned associations between elicitors and responses may also be subject to developmental change because new structures are formed or old ones are extinguished; for instance, the formation of new structures can be predicated on cognitive changes. The data from numerous sources suggest that important cognitive factors play a role in mediating the effects of classes of events in the elicitation of fear (see, e.g., Campos & Stenberg, 1981; Feinman & Lewis, 1984). Several of these cognitive processes are considered here, and more could probably be added to the list. These capacities are regarded as critical and serve as examples of the role that cognitive development may play in mediating the development of fear elicitors. First, memory must play an important role.

Children must be able to anticipate past events that are associated with these events and thus acquire their emotional value in terms of cognitive expectancy. A change in the particular emotion that a child expresses whether the organism is the perpetrator or of events that are uncontrollable (e.g., fear) may be as well as sadness. The expression of different emotions, depending on their cognitive capacity. Each emotion is accompanied by their actions against objects that can be associated with achieving a goal; some emotions are associated with the emotion as a concept, whereas others as these alert us to specific elicitors. Specific elicitors may have a logical connection to a particular emotion, whereas others are associated with different emotions; thus the relation between emotional elicitors and emotions changes as the child's cognitive system of a particular emotion.

Emotional States

Emotional states are defined as changes in subjective states, and changes in somatic arousal and activity. Emotional states are also the phenomena of organisms' being able to feel emotions. Individuals can be in a number of emotional states, and particular elicitors are associated with a particular emotion state that they elicit. These emotions may involve changes in autonomic response, hormonal response, and behavioral response, both emotional and motoric.
play an important role in the elicitation of fear. Children must be able to recognize and associate past events that were noxious. The white coats of doctors may be associated with pain and thus acquire the capacity to elicit fear. In terms of cognitive expectancy, violation per se does not seem to be a fear elicitor. In fact, violation of expectancy may be arousing, and the particular emotion produced may depend on whether the organism can assimilate and control the event (Lewis & Goldberg, 1969). Some events that are uncontrollable are likely to elicit fear as well (see Gunnar, 1980).

Tracing the developmental course of elicitors is a difficult task to do. The development of other cognitive processes—categorization, classification, reasoning, and the like—is also likely to influence which elicitors produce what emotional responses; for example, failure in a task produces sadness in children prior to 24 months of age, while failure at a task after 24 months is likely to produce shame or guilt, as well as sadness. The same elicitor produces different emotions, depending upon children's cognitive capacity. Before children can evaluate their actions against some standard, the success at achieving a goal results in happiness. Once children are capable of this evaluation of self, the emotion as a consequence of the success is likely to be pride (Lewis, 1992b). Such findings as these alert us to several problems concerning emotional elicitors. These include (1) that specific elicitors may have an automatic biological adaptive connection to specific emotions, whereas others are connected through learned associations; (2) that individuals may differ in the extent to which the same elicitor produces different emotions; and (3) that the relation between emotional elicitors and emotional outcomes changes as a function of the meaning system of a particular individual.

**Emotional States**

Emotional states are inferred constructs. These states are defined as particular constellations of changes in somatic and/or neurophysiological activity. Emotional states can occur without organisms' being able to perceive these states. Individuals can be angry as a consequence of a particular elicitor and yet not perceive the angry state that they are in. An emotional state may involve changes in neurophysiological and hormonal responses, as well as changes in facial, bodily, and vocal behavior. As Darwin (1872/1965) and more recently I (Lewis, 2005a; Lewis et al., 2006) have discussed, states are considered action patterns that include facial changes and physiological responses.

Two views exist concerning emotional states. According to the first, states are associated with specific receptors; indeed, they constitute the activation of these receptors (Izard, 1977; Tomkins, 1962, 1963). In the second, emotional states are not associated with specific receptors and stimuli and do not exist as specific changes; instead, they are general response tendencies associated with specific cognitions (Mandler, 1975, 1980; Ortony, Clore, & Collins, 1988; Schachter & Singer, 1962).

In the first view, specific emotional states or action patterns are postulated that have concomitant physiological components and that are expressed in specific facial and bodily behaviors. There is a one-to-one correspondence between an emotion, such as anger, fear, sadness, or happiness, and some internal specific state that matches this emotion. This view of specific emotional states has served, since Darwin's (1872/1965) initial formulation, as the basis of what we believe to be the correspondence between the specific emotions we experience and the functions of our bodies (see Niedenthal, Chapter 36, this volume). Except for bodily and facial expressions, no one-to-one correspondence has been found in adults between such inferred physiological changes and emotions. Investigators exploring brain function (Davidson & Fox, 1982; Nelson & Bosquet, 2000; Nelson & Bloom, 1997) and those looking at specific ANS changes (Ekman, 1989) argue for some correspondence between specific internal states and specific emotions. Even so, the evidence for specific states remains lacking.

The nonstate theories, cognitive in nature, argue less for a specific correspondence between an internal state and emotions; rather, cognitive activity is seen as the determinant of specific emotions. Either general arousal models, such as Schachter and Singer's (1962) model, or cognitive theory models have as their basic tenet a denial of the existence of specific states; rather, emotions occur as a consequence of thinking (Elster, 1999; Lazarus, 2001; Ortony et al., 1988).

Specific states, having specific stimuli that elicit them, have been suggested. The theory of innate releasing mechanisms (IRMs) suggests...
that animals will show a fear response, given a particular stimulus event. Thus one argument is that there is a direct correspondence between a specific elicitor and a specific state. Watson (1919) argued that there are specific elicitors in infants; fear is produced by a falling sensation or by loud noises. Likewise, attachment theorists argued that children show joy or attachment to the object that takes care of them (Bowlby, 1969). Anger as a consequence of a blocked goal has been shown in animals and infants.

On the other hand, it is quite clear that certain specific emotions can be produced only through cognitive processes. For example, certain elicitors invoke cognitive processes, which in turn may elicit or produce specific emotional states. In such cases, cognition is necessary for the elicitation of a specific state, but may not be the material of that state. Consider the emotion of shame. One must have certain cognitions for shame to occur. Shame occurs when persons evaluate their behavior against some standard and find that they have failed (Lewis, 1992b and Chapter 46, this volume). Such cognitions can lead to a specific emotional state, which is likely to have specific bodily activity. In these cases cognitions are the elicitors of the emotion, the state being brought into existence by thoughts; thus there are many possibilities:

1. An emotional state or action pattern can be elicited in some automatic fashion by certain stimulus events—for example, the case of fear when an animal sees a predator (IRM).
2. Emotional states can be elicited through cognitive evaluative processes. They may be automatic—that is, may be action patterns to certain thoughts. Darwin believed that the self-conscious emotions are elicited by thoughts about others’ thinking about us. Plutchik (1980) and I (Lewis, 1992b) have argued for distinguishing between different emotional states by using the difference between the levels of cognitive activity involved in their elicitation. Fear of falling is elicited by little cognition, shame by much cognition.
3. Alternatively, there are no specific emotional states or action patterns, but only general arousal, which is interpreted vis-à-vis the events surrounding the arousal (Clore & Ortony, 1991; Schachter & Singer, 1962). In this model, there is an emotional state, but not specific action patterns associated with it.

What is clear is that even if there are specific emotional states, they may bear little correspondence to our emotional lives—either emotional expressions or our experience of emotions. So, for example, it may be quite possible to have a specific emotional state but to be unaware of it, ignore it, or even deny it. Likewise, we may have a specific emotional state but choose not to express it. Thus, for example, I may be angry at my dean for not giving me a raise, but I am not likely to express that anger when I see her. Emotional states, then, are inferred, and whether they are specific, general, or nonexistent awaits further research.

If we hold to the existence of emotional states, then for the most part they must be viewed as transient action patterns that are alterations in ongoing levels of neurophysiological and/or somatic activity. These transient, ongoing changes in our neurophysiological and somatic activity levels imply that there is a constant stream of change. It becomes difficult to imagine, therefore, being awake and not being in some emotional state or some level of arousal. However, since there need not be any correspondence between an emotional state and emotional experience and expression, there is no reason to assume that we are aware of the states that we are in. This does not mean that states are not affecting our ongoing behavior—only that they are not apparent (Lewis, 1991).

Development of Emotional States

In a discussion of the developmental issues pertaining to emotional states, two issues need to be addressed. The first concerns the nature of the different states and how they are derived; the second pertains to the developmental course of states once they emerge. For example, if emotional states are viewed as specific, the question of how specific emotional states develop needs to be addressed. Two general models are possible. According to one model, specific emotional states are derived from developmental processes. Such processes may be purely maturational, or they may be interactive, involving the organism with its environment. The second model does not depict a role for development in the emergence of specific states; rather, discrete emotional states are assumed to be innate.

In the first model, the infant has two basic states or one bipolar state at birth: a negative or distress state and a positive state. Subsequent states emerge as a result of the differentiation of this basic state. Emotion theories focus on the development of the bipolar state into more complex states. Hedonic tone and muscular tensions necessary to maintain emotional states. This idea is discussed by Robinson (1932) and is consistent with the hypothesis. This theorizes, including Spirz and Stroupe (1996).

The way in which emotional states remain and hedonic tone and emotional states remain is determined more by biology factors, the combination of factors, the context of the situation, and the degree of coping, the development of emotional states remains with the individual

A much simpler way of looking at it is that a purely biological model can be implemented. The model is a function of maturational changes (Lewis & Main, 1974; Sandler, 1985). The model of differentiation and emotional states is derived from certain emotional states to other emotional states by means of a common process that is not considered to be automatic. Emotional differentiation is a function of maturational changes in cognitive development and emotional differentiation. This model is consistent with this differentiation, which is a process of maturation in nature.

An alternative view is that emotional states are preprogrammed and may not be fully formed until adolescence. They exist from birth and may not emerge until later. The view is less descriptive of the development of this model in that disc...
Even if there are specific emotional states that may bear little correspondence to our everyday lives—either emotional states that we experience as infants or emotional states that we experience as adults—the existence of emotional states remains speculative. These transient, momentary emotional states, which are not only biologically and neurophysiologically plausible but necessary for survival and the development of cognitions, remain speculative. The question is whether emotional states are preprogrammed and develop as a function of maturation, or whether they emerge through the differentiation of specific emotional states. This idea was proposed by Bridges (1932) and is considered a differentiation hypothesis. This theory has been adopted by others, including Spitz (1965), and more recently Sroufe (1996).

The way in which the interface of arousal and hedonic tone develops into specific emotional states remains speculative. It has been argued that both mother-child interaction and the process of differentiation (Als, 1975; Brazelton, Koshowski, & Main, 1974; Sander, 1977). The regulation of the child's state may be the mechanism leading to differentiation. Although some theorists stress that emotional differentiation is determined by biological factors, such as the interplay of the two factors seems most likely. While such a theory is appealing, the derivation of specific emotional states remains without empirical support.

A much simpler developmental model concerning differentiation can be considered from a purely biological perspective. Such a biological model can be imagined in which undifferentiated emotion becomes differentiated as a function of maturation. According to such a view (see Lewis & Michelson, 1983), the rate of differentiation and the unfolding of differentiated emotional states are programmed according to some physiological timetable. The differentiation from general to specific structures is a common process in morphology; there is no reason not to consider such a possibility in emotional development. The most likely explanation of emotional development is the differentiation of emotion states that occurs as a function of maturation, socialization, and cognitive development. Whatever processes underlie this differentiation, the model is developmental in nature.

An alternative model is that some discrete emotional states are preprogrammed in some sense and need not be further differentiated (Izard, 1978). They exist at birth, though they may not emerge until a later point in development. The view is unlike the differentiation model in that discrete emotional states do not develop from an original undifferentiated state, but are innate at birth in the already differentiated form. In this discrete-systems model, specific emotion states emerge either in some predetermined order or as needed in the life of the infant. They may co-occur with the emergence of other structures, although they are independent of them. The emotional system essentially operates according to biological directives.

These different models address the conceptual difference between experience and structure found in the arguments of Hume and Kant. In one case, experience produces a structure (Hume, 1739/1888). In the other case, experience is assimilated into innate structure (Kant, 1781/1958). In the study of emotional development, the question is whether emotional states are preformed and depend only on the development of cognitions, or whether cognitions themselves produce the emotional states or structures. Such a distinction is rather fine, but has important theoretical implications. Such a distinction can be seen in the study of fear: Is each fear state the same as another fear state, regardless of the circumstances, or do fear states differ as a function of the elicitors? For example, is the fear state produced by a loud noise the same as the fear state produced by the association of a doctor's white coat with the pain of a needle? Are emotional states independent of or dependent on particular cognitions? If emotional states are independent, they need not be created by the cognitions.

The first issue in the development of states concerns the origin of discrete emotional states. The second issue focuses on the developmental changes in emotional states once they have emerged. For example, 8-month-old children may show behaviors reflecting fear at the appearance and approach of strangers, and 2-year-old children may exhibit fear behaviors when they have broken their parents' favorite lamp. Do similar fear states underlie the fear expressions in both cases? Although the elicitors of states and the children's cognitive capacities are different in these two cases, the underlying emotional states may be similar.
II. DEVELOPMENTAL CHANGES

cult to determine. However, there may well be important physiological and neural changes that differentiate young and old organisms. Given that important physiological changes occur over age, the physiological processes associated with emotional states may change over time. If this were the case, then the consistency of an emotion may be a function of our experience of it more than the underlying state. What is clear and what will be shown below is that the appearance of particular emotions may depend on new cognitions, as well as the fact that new cognitions may allow for the development of new emotions. The former case can be seen again in the example of fear. While 1-year-old infants may fear falling off a "visual cliff," they do not fear falling an exam or being caught cheating on their income tax. Such fears in an adult are due to elaborate social and cognitive development. An example of the latter—that is, cognitions producing new emotions—has to do with classes of emotions called "self-conscious evaluative emotions." These emotions, such as pride and shame, cannot occur until elaborate cognitive processes have occurred (see Stipek, Recchia, & McClintic, 1992). Although cognitions are related to new emotions, the materials of these emotional states or action patterns are not likely to be the materials of the emotional states. As such, it is hard to believe that experiences or even cognitions (thoughts) create the states. If that is the case, then states are a feature of human life having an evolutionary developmental history.

Emotional Expressions

Emotional expressions are those potentially observable surface changes in face, voice, body, and activity level. Emotional expressions are seen by some as the manifestations of internal emotional states (Ekman & Friesen, 1974; Levenson, Ekman, & Friesen, 1990). In fact, no single measure of emotional states or action patterns is more differentiating than emotional expressions. The problem with emotional expressions is that they are soon capable of being masked, disguised, and in general controlled by an individual (Saarni, 1999). Moreover, emotional expressions are subject to wide cultural and socialization experiences. Thus the relationship between expressions and states remains somewhat vague (Lewis & Saarni, 1993). The measurement of emotional expression is reviewed in detail in other chapters, so I spend little time on the definition of emotional expression except to make several points.

First, emotional expressions tend to be studied in terms of facial expression, and while body postures have been studied (see, e.g., Argyle, 1975), the study of children's emotional expressiveness in terms of body postures and activity has received little attention. Vocalizations are one of the least understood aspects of emotional expression, although they seem to be important conveyors of emotional states. Indeed, vocal expressions are extremely powerful and may have the ability to elicit similar emotional states in others. Vocalizations may be much more contagious than facial or bodily expressions. For example, movies are much funnier when seen with others who laugh out loud than when seen by oneself. Because of the contagious nature of vocalization, vocal expression may be the target of early socialization efforts. Crying is a case in point. Crying behavior is quickly brought under control as parents socialize their children not to cry when distressed or in need. Locomotion may be another mode of expressing emotions. For example, moving away from and moving toward an object are physical responses associated with different emotional states (Schneirla, 1959). Indeed, an infant's movement away from an unfamiliar toy or person, independent of facial expression, is often used to reference fear (Schafer, Greenwood, & Parry, 1972). Interestingly, movement toward can be part of two different action patterns: It can reflect either joy or distress.

Although there are some data on emotional expressions in each of these four modalities (facial, postural, vocal, and locomotor), the relations among them have received almost no attention. It seems reasonable to assume that sobbing, crying, and running away form a coherent response that reflects the emotional state of fear. The particular modality used to express an emotion may be a function of specific rules of socialization or of a response hierarchy in which one modality has precedence over another. Such a hierarchy may be determined either by a set of biological imperatives or by a set of socialization rules. The use of one or more channels to express a particular emotion may be determined by a complex set of interactions. One issue of particular interest is the effect on some expressions when one modality is inhibited. Inhibition in a particular modality can be experimentally produced, for example, by preventing a child from moving about. For instance, if children are pre-
vented from running to a stranger because they are in a chair, they may express distress intensely through the changes in facial movements. The use of different emotions occurs in the same way. For example, found that mothers of babies in distress when pain experimentally likely to show large vocalizations (Suomi, 1991) and have found that mothers of children in distress express much more adrenocortical responding among modalities than do the mothers. Emotional expressions are present in them.

Development of Emotional Expressions

The question concerning the development of emotional expressions is foremost that of the development of a set of primitive postural movements—appearing in the most primitive developmental course (see Chapter 17, this volume)—and then modified for their appropriate function in the evolutionary history of species (Camras, Lambrecht, & Green, 2005) have shown that these emotional expressions are expressed before neuromuscular maturation. Controversy is all to the widespread belief in a critical period during which the neuromuscular system is most sensitive to the influence of some environmental factors. Data on how environment affects these simple movements, although important, do not suggest that environmental factors play a role in facial expression development. There is no evidence that the neonate can interact with the environment and there is no evidence that the neonate can influence the neonate. In any case, the belief in a critical period for emotional expression development is not supported by adaptive evolution.
18. The Emergence of Human Emotions

Defining emotional expression at this early age is difficult. Emotions tend to be studied in dogs, and while they are studied, it is not entirely clear which aspects of facial expressions are used. Vocalization of emotions at an early stage is understood as a way to communicate feelings. Although they seem to be used for conveying emotions, vocalizations may be used as a means to elicit similar emotional responses in children. Vocalizations may be a way to elicit distress in a child who is not able to express it through crying. Children who laugh out loud may be expressing joy because of the connection between vocal expression and emotional expression.

Development of Emotional Expressions

The question concerning the development of emotional expressions takes many forms. First and foremost is the question of whether a particular emotional expression—the synchronization of a set of particular facial musculature movements—appears de novo or has a developmental course from Camras & Fatani, Chapter 17, this volume). Izard (1977) argued that children are part of the adaptive evolutionary history of humans, while others (Camras, Lambrecht, & Michel, 1996; Oster, 2005) have shown changes in the facial neuromusculature synchronization. This controversy is all the more interesting, given that there are no theories suggesting how the synchronization takes place except for proposals of some environmental organizer. There are no data on how environments organize these muscle movements, although there is a suggestion that environments affect individual differences in facial expressions—that in the likelihood of an expression, given the same elicit. For example, some infants show more joy than others at the approach of their mothers, and this difference may be a function of the infants’ interaction with their environments. Even so, there is no evidence for environments organizing the neuromusculature. Alternatively, the belief in a connection between elicitors and specific action patterns leads to the belief that the action pattern itself is a given, established by adaptive evolutionary processes.

Another issue related to the facial musculature question is the nature of the association among facial, vocal, and physiological behaviors that make up an action pattern. As described earlier, my colleagues and I have shown that an anger-like face, increased action toward a goal, lower stress response, and greater ANS organization appear to be such an action pattern evolved as an adaptive emotional response to the blockage of a goal. How does the organization of multiplicity of modalities come about? The full developmental course of emotional expressions, then, is uncharted.

We are much more inclined to believe that particular emotional expressions reflect a specific underlying state in infants and young children when we see particular faces in particular contexts. Thus, for example, when children show wary or fearful faces at the approach of a stranger, we are more apt to credit those faces as meaning that the children are in a fear state than if the children show those same faces toward their mothers, who are sitting next to them. Faces, expressed in the context of particular situations, lend validating meaning to the connection between facial expression and internal state. Nevertheless, the question of whether a facial expression truly reflects an emotional state cannot be readily answered, except by phenomenological report.

Emotional Experiences

Emotional experiences are the interpretations and evaluations by individuals of their perceived situations, emotional states, and expressions. Emotional experiences require that individuals attend to their emotional states (i.e., changes in their neurophysiological behavior), as well as the situations in which the changes occur, the behaviors of others, and their own expressions. Attending to these stimuli is neither automatic nor necessarily conscious. An emotional experience may not occur because of competing stimuli to which the organism’s attention is drawn. For example, consider the following scenario: The car a woman is driving suddenly has a blowout in the front tire; the car skids across the road, but the woman succeeds in bringing it under control and stopping the car on the shoulder. Her physiological state as well as her facial expression may indicate that while she is bringing the car under control, her predominant emotional state is fear. Because her attention is directed toward controlling the
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car, however, she is not aware of her internal state or of her expressions. She only experiences fear after she gets out of the car to examine the tire. Emotional experiences thus require people to attend to a select set of stimuli. Without attention, emotional experiences may not occur, even though an emotional state may exist. Many other examples are possible. From the clinical literature, a patient may be in a particular emotional state (e.g., depression), but may attend to select features of that state (e.g., fatigue), and so may only experience tiredness.

Or a patient may not experience pain at the dentist when distraction is provided through the use of earphones and loud music.

An emotional experience may not necessarily be conscious, either. If one is willing to distinguish between explicit and implicit experiences, emotional experiences may occur at different levels of consciousness. Such an analysis forms the basis of much psychoanalytic thought. For example, individuals may be in an emotional state of anger. That is, with proper measurement techniques, one would find a pattern of internal physiological responses indicative of anger. Moreover, these persons may act toward those objects that persons who have made them angry in a way that suggests they are intentionally behaving in response to an internal state of anger. Nonetheless, the persons may deny that they feel anger or are acting in an angry fashion. Within the therapeutic situation, such people might be shown that (1) they are angry and (2) they are responding intentionally as a consequence of that anger. The therapeutic process may further reveal that unconscious processes are operating in a fashion parallel to conscious ones. Defense mechanisms, for example, function to separate levels of awareness. Although awareness may not be at a conscious level, unconscious awareness may still exert powerful effects. Slips of the tongue, accidents, and classes of unintentional conscious behavior may all be manifesting intentional unconscious awareness (Freud, 1901/1960). Thus people may experience their internal states and expressions and be aware of this experience, or they may experience them in an unconscious mode in which the conscious perception of the experience is unavailable.

Up until this point, we have assumed that there exists an internal state that is experienced. As some have argued, the experiencing of an emotion does not have to rely upon any internal state at all. In fact, no internal state may exist. For those who do not believe in the construct of a unique set of variables marking a specific state (Clote & Ortony, 1991; Ortony et al., 1988), the experience of the state is nothing more than a cognitive construction, utilizing such perceptions as the nature of the experience, past history, the responses of others, and so on. Under such a view, emotional experiences are the unique and specific states themselves. From a cognitive-constructivist perspective, such a view of emotions is quite reasonable. In fact, data on patients with spinal injuries suggest that emotional experiences can occur without specific physiological states. For example, patients with such injuries who are incapable of receiving neural messages from below the waist report sexually orgasmic experiences, even though no state information is available to them. They construct the experience from previous knowledge and not from any change in their neurophysiological state.

Emotional experiences occur through the interpretation and evaluation of states, expressions, situations, behaviors of others, and beliefs about what ought to be happening. Emotional experiences therefore depend on cognitive processes. Cognitive processes involving interpretation and evaluation are enormously complex and involve various perceptual, memory, and elaborating processes. Evaluation and interpretation not only involve cognitive processes that enable organisms to act on information, but are very much dependent on socialization to provide the content of the emotional experience. The particular socialization rules are little studied and not well understood (Lewis & Saarni, 1985; Saarni, 1999).

Not all theories of emotional experience need to be tied to the context, nor do all suggest that there is an underlying emotional state. However, all emotional experience does involve an evaluative interpretive process, including the interpretation of internal states, context, behavior of others, and meaning given by the culture.

Development of Emotional Experiences

The development of emotional experiences is one of the least understood aspects of emotion. Emotional experiences require an organism to possess some fundamental cognitive abilities, including the ability to perceive and discriminate, recall, associate, and compare. Emotional experiences also require a certain degree of self-awareness and the ability—that is, the ability to reflect upon oneself. Emotional expressions in the form "I am frightened" are only self-referential in all cases, the subject is not referring to oneself, but to the state that is, oneself. Until age 2 or 3, children cannot use the objective self-awareness (Ward, 1972), the ability to reflect on oneself. Emotional experiences depend on cognitive capacities—self-awareness, consciousness below—and the specific self-referential behavior referred to as "controlling" (Lewis & Newcomb, 2003b).

General cognitive development of organisms to perceive their environment is another aspect of particular behavior that is either internal or external to the organism. Emotional expressions such as smiling and crying have a developmental sequence. Infants younger than 12 months are not able to discriminate their own smiling and crying and do so on the basis of social cues (Caron, Caron, et al., 1974) demonstrating that they are not capable of making a distinction. As infants develop, they become capable of expressing their own emotions. Social experience is not necessary to associate emotions with behaviors, but, rather, the infant has to develop the ability to distinguish and internalize the emotional expressions of another person.

The development of emotional experiences is also a part of the context. In addition, the development of emotional experiences depends on changes in bodily changes and in the organism's environment. The first stage, the development of emotional experiences, addresses the differentiation of one's emotional expression. If an individual perceives an emotional event, and then can differentiate between the event and the emotional experience, then it is possible to experience the event as an emotion. If, however, we develop a one-to-one correspondence between an event and experience, then there is an extended development of unperceived internalization.
experiences also require a particular cognitive ability—that is, the development of a concept of self. Emotional experiences take the linguistic form "I am frightened" or "I am happy." In all cases, the subject and object are the same: that is, oneself. Until an organism is capable of objective self-awareness (Duval & Wicklund, 1972), the ability to experience may be lacking. Emotional experience requires both general cognitive capacities—something I touch upon below—and the specific cognitive capacity of self-referential behavior, or what I have referred to as "consciousness" (Lewis, 1992b, 2003b).

General cognitive processes necessary for organisms to perceive and discriminate elicitors of particular behaviors (whether these be internal or external to them), as well as overt emotional expressions of themselves and of others, have a developmental course. For example, infants younger than 6 months are generally unable to discriminate between facial patterns and do so on the basis of discrete features (Caron, Caron, & Myers, 1982). Schaffer (1974) demonstrated that children cannot make simultaneous comparisons prior to 7 or 8 months of age. This would suggest that infants are not capable of experiencing emotions prior to this point. Moreover, some emotional experiences may require a higher level of cognitive processing than others, and some are likely to develop earlier than others. For example, fear probably emerges earlier than shame, since the former requires less cognitive and evaluative processing than the latter (Lewis, 1992b).

If emotional experience is the consequence of an evaluation of one's bodily changes, and also of the context and the behaviors of others, then two processes are necessary for most emotional experiences: (1) the knowledge that the bodily changes are uniquely different from other changes (i.e., they are internal rather than external), and (2) the evaluation of these changes. The internal-external distinction for emotional development is important, because it addresses the differences between experience and expression. If we believe that facial expression is equivalent to an emotional state or experience, then it is possible to infer an internal event by examining its external manifestation. If, however, we do not subscribe to the view of a one-to-one correspondence between expression and experience, then all we can say is that there is an external manifestation of some unperceived internal event. Emotional experiences, by nature, are internal events. Moreover, the internal and external distinction can only be carried out by a self capable of making the distinction between the self and the other. Such evaluation may involve the process of self-awareness.

Self-awareness is an information-processing and decision-making event related to internal stimuli. It logically requires an organism to possess the notion of agency (Lewis, 2003a). The term "agency" refers to that aspect of action that makes reference to the cause of the action—not only who or what is causing the stimulus to change, but who is evaluating it. The stimulus change itself may have the effect of altering the organism and forcing it to make some type of evaluation. Emotional experience requires that the organism be capable of attending to itself. Thus the statement "I am happy" implies two things: first, that I have an internal state called happiness, and second, that I perceive that internal state of myself. Until organisms are capable of this cognitive capacity, they should not be capable of emotional experiences (Lewis, 2003b, 2005b; Lewis & Brooks-Gunn, 1978, 1979). This does not mean that infants, prior to acquiring an objective self or consciousness of the self, do not have unique emotional states; they do. What seems reasonable to postulate is that an individual can be in a particular emotional state and yet not experience it. Just as we have seen in the example of the woman whose car slides off the road, an emotional state can exist without experience, so we can imagine an infant's having an emotional state without being able to experience it. This leads to the rather peculiar proposition that a child can be in a state of pain or can be in a state of fear, yet not experience that state, if by "experiencing it" we mean being able to make reference to the self as having that state. In a series of studies, my collaborators and I have demonstrated that the emergence of this self-conscious process does not occur prior to 15 months of age, and that it seems to emerge mostly as a function of maturation in the second half of the second year of life. It is only then that children can be both in a particular emotional state and can be said to experience that state. Moreover, the production of certain states requires self-awareness; therefore, certain emotions are unlikely to occur until this cognitive process emerges (Lewis, Sullivan, Stanger, & Weiss, 1989).
Once the basic cognitive processes that allow for objective self-awareness or consciousness occur, organisms are capable of experiencing emotions. As I have pointed out, they may be capable of experiencing existing emotional states as well as capable of experiencing emotions that have no internal state, either because internal emotional states do not exist or because the organisms are experiencing a different emotional state from that which exists. The rules that govern how we experience our emotional states or how we create emotional experiences themselves are complex and varied. Clearly, socialization rules are involved, on a cultural as well as on a familiar or individual level. For example, in cultures that do not tolerate interpersonal aggression—Japan, for example—the experiencing of anger is culturally inappropriate. It may be the case that Japanese children or adults may act in an angry way and may even have an emotional state of anger. However, because having such a state is inappropriate, they are not likely to have the emotional experience of anger. Exactly how the socialization process proceeds so as to influence, modify, alter, or accent emotional experiences is little understood. Clearly, the topic of the socialization of emotions involves the socialization of all four features of emotional expression discussed here. It affects the meaning of stimuli and what we allow events to do in terms of acting as elicitors of particular emotions. It affects the emotional expressiveness dimension of emotion, and, finally, it affects the emotional experience.

From an interpersonal and intrapersonal point of view, the socialization rules that act on the experiencing of emotion are somewhat better articulated. Freud's theory of the unconscious and of defense mechanisms addresses this point. Defense mechanisms have as their chief function preventing individuals from experiencing emotions or, alternatively, from having emotions that they do not like to have. For example, denial and repression serve the function of preventing people from having particular emotional experiences that they deem unacceptable. They prevent it by not allowing them to become conscious or self-aware. Projection, on the other hand, allows for the experiencing of the emotion—not as the self's experiencing itself, however, but as the self's experiencing it in another. As we can see in each defense mechanism, the major function is to provide means for altering emotional experience.

A MODEL OF EMOTIONAL DEVELOPMENT

In what follows, I present a model of the emergence of different emotions over the first 3 years of life. I choose this period because it represents the major developmental leap of the majority of adult emotions in emotional development. This is not to say that past 3 years of age other emotions do not emerge, or that the emotions that have emerged are not elaborated more fully. I suspect that both are the case.

One problem with articulating a model of the emergence of emotional life has to do with the appropriate labels for the emotions. Are we making references to emotional expressions, or are we making references to emotional states or experiences? The two are quite different than observe the emotional expression or experiment is needed, but behaviorism is not capable of all that is possible. We also need to distinguish between emotional experiences, we need to make a distinction between the period the language of experience is first introduced in the study of emotions. Likewise, the study of emotional development is difficult because the evidence of success to date in the study of the development of emotional expressions has been minimal. Children and infants.

What we are left with is our best effort in interpreting a behavior or emotional expression of a behavior that is literally stolen. From the adult means of describing the child's expression. Observation of facial expressions, gestures, tone of voice, or other aspects of expression can help us to accept that an emotional expression exists. With these limitations in mind, following discussion about emotional development can take place.

Following Bridger's (1977) classification, we assume that at the level of emotional life, there are four general categories of emotional life: general distress manifestation, emotional interaction, and emotional experience. At the level of emotional interaction, the environment appears to be more important. We assume that we can place children into the environment, and we choose, we can consider the situation. This is having a trip in which children's distress behavior at the interface with the environment and the rate dimension (Lewis, 1984).

By 3 months, infants start to prefer the smile and appear to be happy when they are presented with a familiar face, such as the face of a familiar person or familiar faces. All infants respond to positive stimuli, especially those that are attractive or positive. Children show sadness when they are interacting with their mothers or when they are interacting with others in a more primitive form. The distress behavior of young infants in the mouth. Thus by 3 months, infants are showing interest,
the appropriate markers for the emotions. Are we making reference solely to emotional expressions, or are we talking about emotional states or experiences? The ability to do more than observe the emitted behaviors of the child is needed, but behavioral observation is often all that is possible. In order to get at emotional experiences, we need language in the form of “I am sad” or “I am ashamed.” Since during this period the language of the child is quite limited, the study of emotional experience is difficult. Likewise, the study of emotional-state development is difficult because there has been little success to date in finding unique configurations of neurophysiological measures that mark unique emotions in adults, let alone children and infants.

What we are left observing are emotional expressions and behaviors in context. Observation of a behavior in context allows us, at least from the adult meaning system, to assume that the child’s expression reflects an emotion. Observation of fear over the approach of a stranger, or joy when a mother appears, allows us to accept that an internal state of fear or joy exists. With these limitations in mind, the following discussion and mapping of emotional development can take place.

Following Bridges (1932), as well as others, we assume that at birth the child shows a bipolar emotional life. On the one hand, there is general distress marked by crying and irritability. On the other hand, there is pleasure marked by satiation, attention, and responsivity to the environment. Attention to/interest in the environment appears from the beginning of life, and we can place this in the positive pole; or, if we choose, we can separate this, thus suggesting a tripartite division with pleasure at one end, distress at the other, and interest as a separate dimension (Lewis & Michelson, 1983; see Figure 18.1).

By 3 months, joy emerges. Infants start to smile and appear to show excitement/happiness when confronted with familiar events, such as faces of people they know or even unfamiliar faces. Also by 3 months, sadness emerges, especially around the withdrawal of positive stimulus events. Three-month-old children show sadness when their mothers stop interacting with them. Disgust also appears in its primitive form—a spitting out and getting rid of unpleasant-tasting objects placed in the mouth. Thus by 3 months children are already showing interest, joy, sadness, and disgust, and exhibiting these expressions in appropriate contexts.

Anger has been reported to emerge between 4 and 6 months (Stenberg, Campos, & Emde, 1983). Anger is manifested when children are frustrated—in particular, when their hands and arms are pinned down and they are prevented from moving. However, we (Lewis et al., 1990) have shown anger in 2-month-old infants when a learned instrumental act was removed. This study demonstrates the earliest known emergence of anger. Anger is a particularly interesting emotion, since, from Darwin (1872/1965) on, it has been associated with unique cognitive capacity. Anger is thought to be both a facial and motor/body response designed to overcome an obstacle. Notice that in this definition of anger the organism must have some knowledge regarding the instrumental activity toward a goal. For anger to be adaptive, it must be a response that attempts to overcome a barrier blocking a goal. In some sense, then, means–ends knowledge must be available, and the demonstration of anger at this early point in life reflects the child’s early knowledge acquisition relative to this ability (Lewis, 1991).

Fearfulness seems to emerge still later. Again, fearfulness reflects further cognitive development. Schaffer (1974) has shown that in order for children to show fear, they must be capable of comparing the event that frightens them with some other event; for instance, in stranger fear, infants have to compare the face of a stranger to their internal representation or memory of faces. Fear occurs when the face is found to be discrepant or unfamiliar relative to all other faces that the child remembers. Children’s ability to show fearfulness, therefore, does not seem to emerge until this comparison ability emerges. Children begin to show this behavior at about 7–8 months, although it has been reported by some to occur even earlier, especially in children who seem to be precocious. In the first 8–9 months of life, children’s emotional behavior reflects the emergence of the six early emotions, called by some “primary emotions” or “basic emotions” (see, e.g., Izard, 1978; Tomkins, 1962).

Surprise also appears in the first 6 months of life. Children show surprise when there are violations of expected events; for example, when infants see a midget (a small adult) walking toward them, they are reported to show interest and surprise rather than fear or joy (Brooks & Lewis, 1976). Surprise can be seen either when
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### PRIMARY EMOTIONS

<table>
<thead>
<tr>
<th>Contentment</th>
<th>Interest</th>
<th>Distress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joy</td>
<td>Surprise</td>
<td>Sadness, disgust</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anger, fear</td>
</tr>
</tbody>
</table>

#### Time
- First 6 months
- Second half of second year
- From 2½ to 3 years

#### Consciousness, as in self-referential behavior
- Embarrassment
- Envy
- Empathy

#### Acquisition and retention of standards and rules

FIGURE 18.1. Development of emotions over the first 3 years of life.

There is violation of expectancy or as a response to discovery, as in an “Aha!” experience. We (Lewis, Sullivan, & Michelson, 1984) showed that when children were taught an instrumental arm-pulling response, they showed surprise at the point when they discovered that the arm pull could turn on a slide. Surprise can reflect either a violation or a confirmation of expectancy. Cognitive processes play an important role in the emergence of these early emotions, even though the cognitive processes are limited; this is not so for the next class of emotions.

Figure 18.1 indicates that a new cognitive capacity emerges somewhere in the second half of the second year of life. The emergence of consciousness or objective self-awareness (self-referential behavior) gives rise to a new class of emotions. These have been called “self-conscious emotions” and include embarrassment, empathy, and envy. Although little work exists in the development of these emotions, several studies support the emergence of embarrassment at this point in development. We (Lewis et al., 1989) have shown that the emergence of embarrassment only takes place after consciousness or self-recognition occurs. Empathy, too, emerges in relation to self-recognition (Bischof-Köhler, 1991).

Two points are to be noticed about this class of emotions. First, the observation of these emotions requires measuring not only facial expressions, but also bodily and vocal behaviors. Whereas the earlier emotions can be observed readily in specific facial configurations, these new emotions require measurement of bodily behaviors. Embarrassment, for example, is best measured by nervous touching, smiling, gaze aversion, and return behaviors. The second important point related to the emergence of these emotions is that while they reflect self-consciousness, they do not require self-evaluation. The emergence of these self-conscious emotions marks a new cognitive milestone in the child’s development. This topic is treated in another chapter (see also volume).

Figure 18.1 also shows a new milestone, which could be called the 2nd and 3rd years of age, when the emergence is marked by children’s capacity to evaluate behavior against a standard—here, an internal standard, as opposed to an external, as in teacher sanction or other child’s standards. This capacity to evaluate behavior in relation to standards is present in the third year of life. These later-developing emotions require the child to reflect on self and be capable of comparing behavior against standards or standards à-vis the standard, as in pride, shame, guilt, or regret. If we were to feel pride (Lewis et al., 1989), we would note that pride arises in part from happiness and self-satisfaction. We can win a lottery or win the game and feel pride, because we have done something, but if we would not feel shame or guilt, social-evaluative emotions, like pride, would not exist.

Thus, by 3 years of age, a child has become capable of understanding the original tripartite structure of emotions within 3 years, and complex emotional life develops. The emotional life of the 2nd and 3rd years is elaborated and will require the integration of emotions as they are formed. Not only will meaning and mood be integrated in the child’s emotional life, but their unfolding will all serve to construct the child’s emotional self-image. By the age of 3, the child also begins to understand that Darwin (1872) and Piaget (1970) were not unique to our species, and that self-consciousness, with its self-reflection, is a new milestone in the child’s development.
The emergence of human consciousness in development. We have known that the emergence of consciousness occurs after 2 years of age (Carr & Gopnik, 1991). However, it is only with the development of certain self-conscious emotions that these social behaviors become understanding within the self.

Conscious emotions are related uniquely to the cognitive milestone of paying attention to the self. This topic is taken up in more detail in another chapter (see Lewis, Chapter 46, this volume).

Figure 18.1 also shows a second cognitive milestone, which occurs sometime between 2 and 3 years of age. This ability is characterized by children’s capacity to evaluate their behavior against a standard; the standard can be either external, as in the case of parental or teacher sanction or praise, or internal, as in the case of children’s developing their own standards. This capacity to evaluate personal behavior in relation to a standard develops in the third year of life, and it gives rise to another set of emotions. We have called these “self-conscious evaluative emotions”; they include pride, shame, and guilt, among others. These emotions require that children have a sense of self and be capable of comparing their own behavior against standards. If children fall short of the standard, they are likely to feel shame, guilt, or regret. If they succeed, they are likely to feel pride (Lewis, 1992a). It is important to note that pride and shame are quite different from happiness and sadness. For example, we can win a lottery and feel quite happy about winning the money; however, we would not feel pride, because we would not view the winning of the lottery as having anything to do with our behavior. The same is true for failure; we might feel sad if we were not able to do something, but if it was not our fault, then we would not feel shame or guilt. These complex social-evaluative emotions make their appearance at about 3 years of age (see Lewis, 1992b; Stipck et al., 1992).

Thus, by 3 years of age, the emotional life of a child has become highly differentiated. From the original tripartite set of emotions, the child comes within 3 years to possess an elaborate and complex emotional system. While the emotional life of the 3-year-old will continue to be elaborated and will expand, the basic structures necessary for this expansion have already been formed. New experiences, additional meaning, and more elaborate cognitive capacities will still serve to enhance and elaborate the child’s emotional life. However, by 3 years of age, the child already shows those emotions that Darwin (1872/1965) characterized as unique to our species—the emotions of self-consciousness. With these, the major developmental activity has been achieved.

REFERENCES


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