Chapter 7: Emotional and Social Development in Infancy and Toddlerhood

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# Chapter Overview

This chapter divides into two broad sections that spotlight infants’ emerging skills in emotional and social domains. Students will come to appreciate the building blocks to people’s understanding and expression of emotions in self and other and the critical role of infants’ attachments and emerging self-identity for current and later social relationships. The section on emotional development begins with a theoretical overview on the evolutionary adaptiveness of emotions, followed by coverage on infant emotion understanding, emotion expression, emotion regulation, and the role of temperament in emotion behaviors. It closes with a review of social and cultural influences, framed around the concept of goodness of fit. The section on social development begins with theory and research on infant attachment, followed by research on early peer relationships, the infants’ emerging sense of self, and the early foundations to morality. The closing section on *Developmental Cascades* illustrates how individual differences in infants’ emotional and social development and experiences reverberate across domains such as language, preschool learning, and later social connection with others.

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# Learning Objectives

LEARNING OBJECTIVE 7.1 Discuss evidence suggesting that humans are hardwired for basic emotions and what indicates that these emotions are universal.

LEARNING OBJECTIVE 7.2 Describe the two vital functions that emotions serve.

LEARNING OBJECTIVE 7.3 Describe developments in infant smiling across the first year of life.

LEARNING OBJECTIVE 7.4 Explain alternative interpretations of infant distress around the emotions of anger and fear.

LEARNING OBJECTIVE 7.5 Define emotion discrimination and discuss how it is demonstrated by infants.

LEARNING OBJECTIVE 7.6 Describe evidence suggesting that infants attach meaning to the emotions they observe in other people.

LEARNING OBJECTIVE 7.7 Describe the development of emotion regulation in the first years of life.

LEARNING OBJECTIVE 7.8 Explain the attentional and behavioral components involved in infants’ effortful control.

LEARNING OBJECTIVE 7.9 Discuss how the work of Thomas and Chess advanced an understanding of temperament.

LEARNING OBJECTIVE 7.10 Summarize how the research of Rothbart and Bates contributed to the current conceptualization of temperament.

LEARNING OBJECTIVE 7.11 State evidence for the stability of temperament.

LEARNING OBJECTIVE 7.12 Explain the concept of goodness of fit and why an infant’s temperament should be studied in the context of social and cultural influences.

LEARNING OBJECTIVE 7.13 Identify aspects of parenting that influence infants’ emotional development.

LEARNING OBJECTIVE 7.14 Discuss aspects of cultural context that might affect infants’ emotional development.

LEARNING OBJECTIVE 7.15 Analyze how the research of Bowlby and Harlow lent support to an evolutionary view of attachment.

LEARNING OBJECTIVE 7.16 Summarize Mary Ainsworth’s contributions to the field of attachment research.

LEARNING OBJECTIVE 7.17 Identify the features of high-quality parent-infant interactions that relate to infant attachment.

LEARNING OBJECTIVE 7.18 Relate the ways that infants’ attachment with caregivers is similar and different across cultural communities.

LEARNING OBJECTIVE 7.19 Identify prosocial behaviors exhibited by infants.

LEARNING OBJECTIVE 7.20 Evaluate features of morality and early forms of aggression, and the ways they change in infancy and toddlerhood.

LEARNING OBJECTIVE 7.21 Distinguish among the different selves in one’s identity.

LEARNING OBJECTIVE 7.22 Describe the methods that researchers use to study infants’ ecological and interpersonal selves, and what they reveal.

LEARNING OBJECTIVE 7.23 Discuss evidence for infants’ understanding of an objective self.

LEARNING OBJECTIVE 7.24 List the ways that parents socialize gender in infants and toddlers.

LEARNING OBJECTIVE 7.25 Consider ways that cultural context might influence gender socialization.

# Video Materials & Activities

*Various videos and activities enhance student learning of key concepts and facilitate classroom participation and discussion. These include participatory classroom activities; videos on key chapter concepts; videos of the author discussing context, culture, and cascades; videos that highlight research methods and findings described in the chapter; and a list of optional/supplementary videos on relevant topics.*

## Concepts in Action Participatory Classroom Activities

Activities at the classroom level will stimulate student participation in real time and facilitate group discussion. Some questions are knowledge and understanding checks, in which professors will be able to use identifiers to track student responses to questions and project responses to facilitate discussions. Other exercises encourage students to “participate” in certain studies to better understand the research material in chapters (available in interactive PPTs).

### Activity: Identifying and Expressing Emotions

Students will be presented with pictures of faces. They will press an option for which emotion they are viewing (e.g., A=fear, B=anger, C=joy, D=excitement). Students will then view pictures of faces conveying different emotions (joy, anger, sadness, frustration), and then hear an audio track of a person whose voice tone expresses anger, joy, or sadness. The content of the utterance will be identical (What did you do?), but the tone will change. They will be asked to click on the face that matches the tone, thus highlighting the concept of sensory integration in the domain of emotions.

### Activity: Identifying Moral Goodness, Evaluation, and Retribution

Students will view videos or pictures conveying the three ideas or types of moral foundations (goodness, evaluation, retribution) as described in the chapter. For each clip, they will be asked to determine if the clip depicted moral goodness, evaluation or retribution. For example, one clip will show a toddler helping another toddler who dropped a toy by picking it up (moral goodness); or a clip of a toddler comforting another toddler who is crying (moral goodness). Another clip will show toddler #1 watching another toddler #2 sharing a toy with toddler #3, versus a toddler #4 pulling a toy away from toddler #3. Then the toddler #1 chooses to play with toddler #2 rather than #4 (moral evaluation). In the final video clip (order of clips can be counterbalanced), the toddler views the same situation as above (one toddler sharing a toy; the other taking the toy away. The toddler is shown punishing the antisocial toddler by taking treats away from the toddler who took the toy away; but not taking any treats away from the prosocial toddler (moral retribution).

## Concepts in Action Videos

*Concepts in Action Videos complement participatory classroom activities to highlight important concepts raised in the activity. Additionally, the videos can serve as stand-alone resources. Students will be able to view the videos on their own in Oxford Insight, and instructors can play the videos following the participatory classroom activities to underscore key points.*

### Concepts in Action Video: Identifying and Expressing Emotions

This video recaps the ease with which many people can identify an emotion based on the expression on a person or animal’s face and then discusses some key points about the research of Charles Darwin on the adaptability of emotions and Dr. Paul Ekman on the universality of emotions.

### Concepts in Action Video: Identifying Moral Goodness, Evaluation, and Retribution

This video recaps the concepts of moral goodness, moral evaluation, and moral retribution, and details how researchers use helper-hinderer studies to assess infants’ moral understanding and evaluation.

## Author Videos on Context, Culture, & Cascades

*Context videos feature the author discussing key topics drawn from select “Contexts” and “Culture” sections. Cascades videos feature the author providing select examples of developmental cascades drawn from the end-of-chapter section. Both types of videos are available in Oxford Insight and are approximately 2-5 minutes in length.*

### Author Video Topic: Contexts of Infant Attachment

Tamis-LeMonda discusses the evolutionary perspective on attachment, and contexts that support infants’ secure attachment, including parenting sensitivity, caregiving context (e.g., multiple caregivers), and cultural context (e.g., cultural views and practices that shape what attachment looks like across different communities).

### Author Video Topic: Cascading Influences from Infant Emotion Regulation

Tamis-LeMonda discusses how differences among infants in negative reactivity can cascade to behaviors in areas of language development, school readiness, and later relationships.

## Research in Action Videos: Developmental Methods and Research

*These short videos explore classic research, current research, and important concepts in child development, bringing methods and concepts to life. They are available for students in Oxford Insight and accompanied by multiple choice questions that can be assigned (~2-5 minutes in length, although some may be longer).*

### Video Topic: Social Smiles (2:33 min)

Parents and babies smile, laugh and coo at each other, but scientists still have a lot of questions about how these interactions help infants develop. In this clip, Miami psychology professor Daniel Messinger explains what he and his colleagues are doing to study social smiles and early child development in the University’s Early Play and Development Lab.

### Video Topic: The Impact of Early Emotional Neglect (2:35 min)

This clip looks at one of the most famous experiments in the history of psychology, The Still Face Experiment, devised by Professor Ed Tronick—which gives us an insight into the vulnerability of, and need for love in young children.

### Video Topic: Harlow’s Monkeys (1:51 min)

This clip begins by looking at how animals were used in psychological research, looking particularly at Harlow's experiments isolating rhesus monkeys in what he himself described as 'the pit of despair.'

### Video Topic: Mary Ainsworth and the Strange Situation (3:53 min)

Mary Ainsworth looked at the nature of attachment and famously documented different types of attachment. This clip looks at her classic strange situation with film of the experiments and expert commentary from three psychologists.

### Video Topic: Moral Development (2:41 min)

In children, there are stages of moral development. This clip discusses the early stages of moral development from infancy to about two years old.

## Suggested Supplementary Videos

*These are other recommended videos from the author available on Third Party sites such as YouTube. We cannot guarantee accessibility compliance for third party videos.*

### Video Topic: Harry Harlow’s monkeys

Original footage from Harlow’s research with monkeys. Raises issues around the ethical treatment of animals, while also viewing the research that underpinned Harlow’s findings and theory.

[*Youtube Video: “Harlow’s monkeys”*](https://www.youtube.com/watch?v=OrNBEhzjg8I&t=185s) *(6:07 min)*(Video URL: <https://www.youtube.com/watch?v=OrNBEhzjg8I&t=185s>)

### Video Topic: Ainsworth Strange Situation

Footage from classic strange-situation study, showing infant distress at mothers’ departure and other segments of the experiment that address attachment behaviors.

[*Youtube Video: The Strange Situation—Mary Ainsworth*](https://www.youtube.com/watch?v=QTsewNrHUHU) *(3:14 min)*
(Video URL: <https://www.youtube.com/watch?v=QTsewNrHUHU>)

### Video Topic: Infants’ sensitivity to Social Interactions and the still face-paradigm

Researcher Ed Tronick discusses infants’ exquisite sensitivity to social interactions, and shows how infants become upset when their caregivers show a lack of responding and still face.

[*Youtube Video: Still-face experiment—Dr. Edward Tronick*](https://www.youtube.com/watch?v=apzXGEbZht0) *(2:48 min)*(Video URL: <https://www.youtube.com/watch?v=apzXGEbZht0>)

### Video Topic: Is fear of certain stimuli hardwired?

This clip shows how adults fear things like snakes, and how researchers aim to test whether infants also have such fears as something “hardwired”. Students should be asked to connect the video to what they read in the chapter about fear, and critique alternatives to the idea that infants are innately born to fear certain things and that “fear is hardwired”.

[*National Geographic Clip: Babies Confirm: Fear of spiders is hardwired*](https://www.nationalgeographic.com/news/2017/10/infant-fear-phobia-science-snakes-video-spd/) *(1:21 min).* (Video URL: <https://www.nationalgeographic.com/news/2017/10/infant-fear-phobia-science-snakes-video-spd/>)

### Video Topic: Do infants have a moral sense?

This clip illustrates “Helper-hinderer” studies conducted with infants, with narration by developmental scientist Kiley Hamlin. Students can write a reaction piece to the research, highlighting its strengths and limitations.

[*Youtube Video: Helper Hinderer studies*](https://www.youtube.com/watch?v=anCaGBsBOxM)(Video URL: <https://www.youtube.com/watch?v=anCaGBsBOxM>)

# Active Learning Resources for Students

*Various resources facilitate student learning through active engagement with questions, exercises, and assignments. These resources include Data in Action exercises and assessment, in which students manipulate independent and dependent variables and observe changing associations in real time; high-level questions that encourage students to “Think Like a Developmentalist” as they solve problems, design studies, and generate new ideas by integrating material across chapter sections; hands-on activities in which students apply what they’ve learned in observations and research-based assignments; and traditional check-your-understanding questions that test students’ knowledge of chapter material at different levels of difficulty. A final chapter summary presents key take-home messages organized around each chapter subheading.*

## Data in Action Exercises and Assessment

*These interactive graphs enable students to manipulate variables to see the effects on key developmental metrics. They will be accompanied by multiple choice questions that can be assigned (in select chapters where relevant).*

### Correlates of Infant Emotion Regulation

This exercise visually depicts how different variables relate to infant emotion regulation. Emotion regulation will serve as the dependent variable, depicted on the Y axis as a continuous variable ranging from low emotion regulation to high emotion regulation. Students will then enter independent variables (X axis) to see associations to regulation in how dots on the scatterplot (representing “infants”) shift in their arrangement. Independent variables include: (a) infant temperament of negative reactivity (negative association to emotion regulation); (b) interaction synchrony and parental warmth (positive association to emotion regulation); (c) abilities in inhibitory control (positive association); (d) parental anxiety and depression (negative association).

## Thinking Like a Developmentalist Questions

 *“Thinking Like a Developmentalist” questions appear at the end of each chapter. These questions require students to synthesize knowledge across different sections of the chapter, for example by designing experiments, studies, interventions, or workshops that draw from multiple measures or concepts presented throughout the chapter.*

### Design a Study: Emotion Understanding & Moral understanding

You wish to examine whether infants’ understanding of emotions might explain developmental changes in moral understanding. You reason that babies must be able to first understand others’ positive and negative emotions if they are to distinguish helping from hindering behaviors. How might you investigate this question?

### Design a Study: Attachment & Moral Understanding

You wonder if infant attachment is associated with a baby’s moral understanding. You hypothesize that securely attached babies might be more likely to display moral understanding and moral goodness compared to insecurely attached babies. How might you test this hypothesis?

### Design a Study: Multiple Attachments and Prosocial Behavior

In many cultural communities, several family members, such as mothers, grandparents, siblings, and other relatives share the responsibility of childrearing. You wish to investigate: (1) Whether infants with multiple caregivers display the same or different attachment statuses across their different caregivers, and (2) Whether a measure of infants’ *multiple attachments* would be a stronger predictor of their later prosocial behaviors toward peers than would a measure of infants’ attachment to mother only. What experiment might be performed to answer these questions?

### Design a Study: Gender Identity and Toddler Toy Preferences

You are an entrepreneur in the toy industry. There are lots of gendered toys for boys and girls on the market. But your company plans to develop some new, gender-neutral toys. However, the owner of the company is concerned that children’s gender identity development might negatively influence how much they like the new gender-neutral toys you wish to market, and that gender identity would be associated with a preference for gendered toys. What would you do to test the influence of gender identity on children’s toy preferences for gendered versus gender-neutral toys?

## Observational Assignments and Activities

*These optional activities may be assigned, depending on local rules surrounding child observation. They ask students to go into the real world and observe or interview children or adolescents and then think critically and analytically about what they have observed or learned.*

### Assignment Topic: Thinking about Temperament and Personality

Take the [Big-Five Personality test](https://openpsychometrics.org/tests/IPIP-BFFM/1.php) (<https://openpsychometrics.org/tests/IPIP-BFFM/1.php>). Consider what the questionnaire revealed about your personality, and speculate about the type of infant temperament characteristics that would relate to the personality traits that were identified (under the assumption that aspects of temperament are stable into later years).

### Assignment Topic: Observing the Social and Emotional Development of Infants and Toddlers

Watch an infant or toddler in a setting of your choice (e.g., park, grocery store, subway, friend’s home). Discuss the infant’s/toddler’s behaviors in the domain of social and emotional development. What sorts of social behaviors did the infant display (such as indicators of an attachment or connection to caregiver, siblings, other infants/toddlers, etc.)? Did the infant display any instances of emotional distress, such as crying, whining, apparent anger? What instigated these emotions? How did the caregiver respond? How did the episode end? Prepare a 1-page summary of your observations with connection to key topics discussed in class.

### Assignemnt Topic: Workshop for Parents of Toddlers

Imagine you are giving a workshop to parents who tell you they are struggling with the “terrible twos” and their newly independent toddlers. Write up a list of “5” lessons (1 sentence each lesson) on what is known about parenting infants and toddlers, and how caregivers should respond based on your readings. (Select students will be asked to present their lessons to the class).

### Assignment Topic: Evaluating Whether Infant Toys are Gendered

Students will be asked to go to various websites that sell toys and write a reflection piece on the toys they viewed. Were the toys labelled for girls or boys? Were there distinguishing characteristics of the toys for girls versus those for boys? How did your analysis of websites align with what you learned in the chapter?

## Check Your Understanding Questions/Answers

*What follows are suggested answers to the “Check Your Understanding” questions at the end of major subsections.*

### Check Your Understanding 7.1

1. *List the basic emotions.*

1. Darwin proposed six basic emotions that can already be observed in infants—anger, fear, surprise, disgust, happiness, and sadness.

2. *What evidence supports the proposition that humans are hardwired for basic emotions?*

2. Evidence is as follows:

* Ekman asked adults from the United States, Japan, Brazil, Argentina, Chile, and a preliterate community in New Guinea to identify emotions of characters in a story by pointing to one of several photos of facial expressions. Adults across the different cultural communities generally interpreted the facial expressions in the same way.
* Also, studies show that the facial expressions of infants from Chinese, Japanese, and European American families reveal the early and universal existence of basic emotions. For instance, the cries and smiles of infants across the world appear to look the same, similar to the emotions expressed by adults.

**Check Your Understanding 7.2**

1. *What are some regulatory and social functions of emotions? Give an example of each function.*

1. *Regulatory functions of emotions*: preparing individuals to respond to threats in the environment and to survival, resulting in fear or in the fight-or-flight response. Example: If an individual is walking on a sidewalk when a car quickly and unexpectedly swerves toward the walking individual, fear enables the individual to escape, creating heavy breathing and blood redistribution to allow for quick awareness and rapid movement away from the threat.

*Social functions of emotions*: communicating meaningful social information with the face, voice, and body, to understand how a person feels and how other persons should respond. Example: A toddler sees a dog in the park. The toddler looks to an older sibling to see how that person reacts to the dog. The toddler sees the older sibling smiling and reaching out to pet the dog. The toddler may react to the dog in a similar way after observing the older sibling’s body language and behavior.

**Check Your Understanding 7.3**

1. *Approximately when do different types of smiles typically occur in developmental time?*

1. Newborn infants: brief smiles that do not carry the same meaning of happiness in the smiles at older ages and that even occur during both daytime and sleep. Between the third and eighth week : infants increasingly smile in response to external stimuli in their environment but do not smile yet to engage others in social interactions. Between the sixth week and three months old: “Social smiles” develop—these smiles with cheek raising are directed towards individuals (namely primary caregivers). At about four months of age: infants display smiles in response to those of their caregivers and other familiar individuals in their lives—these persons then respond back to them with smiles. By the end of the first year: infants show different smiles across different settings and people (e.g., broad smiles with belly laughs while playing with their caregivers).

**Check Your Understanding 7.4**

1. *How might researchers determine which negative emotion(s) underlie an infant’s cry?*

1. As infants cannot tell researchers which emotions they are feeling, researchers try to set up experiments to better understand negative emotions infants may express in specific situations. For example, to examine anger, researchers have engaged infants in “arm restraint” lab tasks as the mothers gently hold down the infants’ arms for two minutes as researchers observe infants’ display of anger. As another example, to examine fear, researchers have used images of both threatening (a snake) and nonthreatening (a frog) stimuli to compare infants’ responses to each. Additionally, researchers may show infants a picture of something “fearful” (such as a toy spider) and observe infant responses (both behavioral and physiological).

2. *When do babies begin to show self-conscious emotions? Give an example.*

2. Toddlers start to show self-conscious emotions, such as pride, embarrassment, shame, and guilt (which relate to a sense of self and a sense of other), during their second and third years. One specific example is when a toddler scribbles on every page of an older sibling’s book. The toddler may hide the book, avoid the sibling (showing shame), and then even try to take the scribbling off (showing guilt).

**Check Your Understanding 7.5**

1. *What evidence suggests that newborns and very young infants can distinguish among different types of emotional expressions and gradations of emotional expressions?*

1. Newborns display rudimentary capacities to discriminate among emotions: They open their eyes more often when presented with happy speech than when presented with sad, angry, and neutral speech.

To test very young infants’ abilities to distinguish among gradations of emotion expressions, researchers presented three-month-old infants with a series of pictures demonstrating gradations of smiles (subtle smile to a full-blown smile). Infants looked longer at a picture of a smile of a different intensity after being habituated to a slightly larger or smaller smile, showing they discriminated among the strengths of smiles, even if from the same woman.

**Check Your Understanding 7.6**

1. *What is social referencing and why is it considered adaptive?*

1. Social referencing is the seeking and use of social information in uncertain situations. It is adaptive because as infants learn to use social information and emotional cues in their environment, they become more skilled at understanding the world around them. Through social referencing, infants begin to understand connections among emotional expressions, causes, and behavioral responses.

2. *What methods have developmental researchers use to examine infant social referencing?*

2. The visual cliff experiment observes infants’ decisions in crossing the cliff as they look to their mothers for social–emotional cues. For example, when mothers express joy from the other side of the cliff, infants tend to cross the visual cliff. As another example, in an examination of the behaviors of 10-month-old infants and 12-month-old infants after they watch researchers’ different reactions to new objects, 12-month-olds avoided objects to which the researchers displayed a negative reaction (whereas 10-month-olds did not avoid these objects). These methods tap into infants’ developing social-referencing capacities in interactions with others.

**Check Your Understanding 7.7**

1. *What are some strategies that older infants and toddlers might use to regulate their emotions?*

1. Looking away from an event that is unpleasant; asking for help from parents/caregivers by using gestures and vocalizations; singing as a distraction; and playing finger games to divert attention from something that causes anxiety or fear.

**Check Your Understanding 7.8**

1. *What is effortful control?*

1. A child’s capacity to regulate attention and behaviors voluntarily in response to situations that are emotionally challenging.

2. *What is the connection between emotion regulation and inhibitory control?*

2. The attentional and behavioral components of effortful control require inhibitory control, which refers to the infants’ ability to suppress a dominant, unfavorable response for a more adaptive response. As children grow in inhibitory control, they likewise can control their emotions, such as by inhibiting the dominant or desired response of throwing a toy in frustration.

**Check Your Understanding 7.9**

1. *Describe “easy babies,” “difficult babies,” and “slow-to-warm-up babies” as identified by Thomas and Chess.*

1. *Easy babies*: Infants with regular eating and sleeping patterns, who adapt to the environment easily, who show positive emotions, and who approach new stimuli in their environment

*Difficult babies*: Infants with irregular eating and sleeping patterns, who take a rather long time to adapt to the environment, who cry frequently, and who tend to withdraw from novel situations

*Slow-to-warm-up babies*: Infants with low activity and intensity, who are slow to adapt to new situations, and who tend to withdraw from novel situations

**Check Your Understanding 7.10**

1. *What are the six dimensions of temperament identified by Mary Rothbart and Jack Bates?*

1. Activity (gross motor activity level); positive affect (expressions of happiness); fear (intensity of reaction to stimuli); distress to limitations (distress related to goals); soothability (reduction of crying, fussiness, and distress when being soothed); and attention (vocalizations and looking at an object for some time).

2. *How do these six dimensions relate to the temperament components of surgency, negative reactivity, and orienting regulation?*

2. Mary Rothbart and colleagues studied the six dimensions of temperament listed above and determined three essential components of temperament—surgency (measure of an infant’s activity level and intensity of pleasure), negative reactivity (index of fear, frustration, sadness, and low soothability), and orienting regulation (ability to regulate attention towards goals). Characteristics of temperament are classified into one of the three components.

**Check Your Understanding 7.11**

1.*What evidence suggests that temperament is stable?*

1. Studies that follow children longitudinally to track their temperament characteristics reveal stability. For example, Thomas and Chess determined that “slow-to-warm-up babies” were very fearful and cautious in novel situations during preschool and in the school years. Also, Mary Rothbart observed similarities between infant and toddler temperaments and later adult personality traits as characterized in the “Big five of personality”: openness, conscientiousness, extraversion, neuroticism, and agreeableness.

2. *Provide an example of how biological factors may interact with experience to influence temperament over time.*

2. Evocative effects are a form of gene–environment association. A child’s inherited characteristics elicit strong responses from other individuals that actually strengthens the child’s inherited characteristics. For instance, if an infant continuously becomes very distressed from loud noises or meeting new people, caregivers may have a hard time reacting calmly every time the scenario occurs. Thus, biological factors may dispose infants toward negativity reactivity, which then heightens over time through environmental inputs.

**Check Your Understanding 7.12**

1. *What is goodness of fit?*

1. The extent to which a person’s temperament matches the requirements, expectations, and opportunities of the environment.

2. *How do social experiences contribute to changes in temperament, in line with the notion of “goodness of fit”?*

2. Social experiences in daily life include parents’ behaviors, which may or may not show a goodness of fit with their infant’s temperament. A goodness of fit example would be if an infant with high negativity to novel situations is given time by the parents to adapt to a new situation and become more comfortable with the surroundings, the infant may be calmer and more positive in engaging with others. The infant learns from the parents that things will be okay.

**Check Your Understanding 7.13**

1. *List three aspects of parenting related to individual differences in emotional development among infants.*

1. Parental emotional expressivity (how caregivers express their emotions in different situations), parental depression and anxiety (anxious parents display heightened reactions and depressed parents may be flat or unresponsive to their infants), and parental sensitivity and synchrony (the importance of interaction synchrony, displaying mirroring behaviors).

2. *Why do you think that cell phone use by parents harms infants’ emotional functioning?*

2. If parents frequently attend to their phones, they may be missing their infants’ cues for engagement and interaction and therefore may be presenting challenges to infants’ emotional development. When on a phone, parents may show less sensitivity and synchrony to infant emotional displays (which relates to infant emotional development).

**Check Your Understanding 7.14**

1. *How do cultural values and expectations affect emotional development? Give an example.*

1. Cultures offer infants lessons about emotional expressions, level of intensity of emotions, and acceptable/unacceptable emotions. Infants growing up in cultures that are a fit with their own temperament characteristics tend to be better adjusted than infants without this fit or match. An example of cultural values and expectations affecting emotional development is found in observations of infants who may or may not be perceived as “difficult.” In Kenya, infants were perceived as difficult if they were distressed at going with other caregivers (since shared caregiving was considered a typical practice), whereas in communities where only one caregiver was typical, it was expected that infants would become distressed when being given to other caregivers.

**Check Your Understanding 7.15**

1. *What is Bowlby’s ethological theory of attachment?*

1. According to John Bowlby, “attachment is an evolved response that aids the baby’s survival” (from text). Bowlby’s research was aligned to the bird and mammal work of Konrad Lorenz, who posited the notion of imprinting. Bowlby believed that infants were born with an array of behaviors that became focused on the primary caregiver (mother). Attachments are then formed with other important people in the child’s life.

2. *How did Harlow’s monkey study support Bowlby’s theory?*

2. Harry Harlow’s study of infant rhesus monkeys showed that attachment to a primary caregiver was created through “proximity to and close bodily contact with an ‘attachment figure,’ rather than the provision of food or oral gratification alone” (from text). Harlow’s study emphasized the biological value of attachment, as seen when he placed infant monkeys away from their mothers and in a cage with a “surrogate”—a wire monkey that gave milk or a cloth monkey that gave warmth. The monkeys spent more time clinging to the cloth “mother” than the wire “mother,” highlighting the importance of proximity, closeness, and warmth as integral to attachment.

**Check Your Understanding 7.16**

1.*What four attachment styles/categories do researchers identify from the Strange Situation?*

1. From the glossary:

*secure attachment*: An attachment status initially identified by Mary Ainsworth in which infants display a strong connection or bond with their caregiver(s) and use their caregivers as a safe base from which to explore their environment; securely attached infants become upset when their caregivers leave the room, are happy when their caregivers return, and seek comfort from their caregivers

*insecure resistant*: An attachment status (also called ambivalent), initially identified by Mary Ainsworth that is characterized by infants who become very upset and anxious when the caregiver leaves the room and are not easily comforted on caregiver return

*insecure avoidant*: An attachment status initially identified by Mary Ainsworth that is characterized by infants who do not become distressed by the caregiver’s departure, freely explore the room, are easily comforted by the stranger, and show indifference during reunion with the caregiver

*disorganized*: An infant attachment style characterized by an infant’s contradictory emotions and behavior and disorganized movements, freezing, and apprehension toward caregiver

**Check Your Understanding 7.17**

1. *How does the quality of parent-infant interaction shape infants’ attachment development?*

1. In particular, sensitive parenting affects infants’ attachment development. Sensitive parenting is related to an infant’s strong, secure attachment. Research by Ainsworth demonstrates that prompt, consistent responses to an infant’s cries and needs nurture a secure attachment.

2. *What can caregivers do to foster secure attachment in their infants?*

2. Caregivers can respond sensitively to their infants’ cues, vocalizations, and behaviors, promptly pick up their crying infants, hold infants for the time they need to be soothed, and remain calm behaviorally and physiologically when infants become upset and distressed.

**Check Your Understanding 7.18**

1. *How might infants’ cultural and social experiences affect their behaviors in the Strange Situation?*

1. Ainsworth’s and Robin Harwood’s cross-cultural attachment work demonstrated how infants’ attachment to their primary caregivers (mothers) were reflections of their culture’s own ideas and practices around childrearing and child development, including parental perceptions and expectations of their children. As one example of differing cultural practices and observations of infant attachment, Ainsworth found that U.S. infants protested less when separated from their mothers in the Strange Situation when compared to infants from Uganda, highlighting the cultural differences between the two communities, with U.S. infants tending to have more out-of-home experiences and Ugandan infants tending to remain in or close to home.

2. *What conclusions can be drawn about infants’ attachments to multiple caregivers beyond the mother? Provide evidence to support your conclusion.*

2. Studies have shown that infants who are growing up in communities with multiple caregivers (not just a primary one) form attachment relationships with multiple nonparent caregivers and tend to display less stranger anxiety. A meta-analysis offers support for this finding/conclusion. In a study of about 3,000 children between birth to three years old, children were likely to form secure attachments to nonparental care providers with high sensitivity, while simultaneously having a secure attachment with their parents. Hence, the study illustrated that positive attachment relationships may be formed between the infant and multiple caregivers who are warm, sensitive, and contingent.

**Check Your Understanding 7.19**

1. *How do researchers assess infants’ prosocial behaviors, such as helping and sharing?*

1. Researchers put infants in situations where they elicit prosocial behaviors and then observe infants’ reactions to the distress displayed. For example, researchers have commonly pretended to be in distress. In one study, children between 14 and 18 months of age helped a researcher pick up toys that were out of reach (helping). In another study, toddlers shared their food with a researcher who did not have a snack (sharing).

**Check Your Understanding 7.20**

1. *Define (a) moral goodness; (b) moral understanding and evaluation; and (c) moral retribution.*

1. *moral goodness*: Feelings of concern for others and attempts to help those who are in need (e.g., infants’ empathetic response to others’ distress)

*moral understanding and evaluation*: Identifying and liking individuals who are helpful and empathetic and not liking individuals who are unhelpful

 *moral retribution*: The tendency to punish an individual who misbehaves or acts immorally toward others

2. *What developmental changes are seen in moral retribution across the first three years of life?*

2. Helper-hinderer studies examine infants’ understanding of moral retribution. Infants observed puppets who helped or hindered another puppet who was attempting to achieve a goal. They were then introduced to new characters who either took a dropped ball away from or gave the ball back to the prosocial helper or antisocial hinderer. Five-month old infants preferred the character who gave the ball to the prosocial helper but did not yet show understanding of retribution. However, eight-month-olds preferred the agent who took the ball away from the antisocial hinderer, suggesting they recognized and supported the idea of punishing antisocial agents (Hamlin et al., 2011). By around two years of age, children *consistently* show moral retribution, for example by taking treats away from a hinderer (i.e., to punish antisocial behavior).

3. *Define two types of aggression that toddlers display.*

3. From the glossary:

*physical aggression***:** Behavior causing physical harm to others, such as hitting, pushing, kicking, and biting

*relational aggression*: A type of nonphysical aggression in which harm is caused by hurting someone’s relationships or social status, such as by threatening to withdraw a friendship, withdrawing a friendship, ignoring a peer, or excluding a peer

**Check Your Understanding 7.21**

1.*Define and give examples for the (a) conceptual self; (b) subjective self; (c) ecological self; and (d) interpersonal self.*

1. From the glossary:

*conceptual self*: The characteristics a person uses to describe oneself, also referred to as the “me” or “objective self” (example: you are aware of yourself as a human being, “me”)

*subjective self*: The characteristics a person uses to describe oneself, also referred to as the “I” of the self; a person’s sense of acting in the environment as a unique entity (example: the “I” that is experienced in the moment)

*ecological self*: The perception of one’s body in relation to the physical environment (example: you feel yourself move your legs as you take a walk in the park; you feel your fingers move as you type)

*interpersonal self*:The perception of oneself in relation to other people, including experiences with eye-contact and back-and-forth exchanges with others (example: you expect your conversational partner to listen to you and respond to your talk and you know to engage in the same responsive behaviors as well)

**Check Your Understanding 7.22**

1. *Explain the single-touch and double-touch experiment. What does it reveal about infant understanding of self?*

1. The single- and double-touch experiment is an experiment to test infant self-awareness. A researcher asks whether very young infants (newborns, four-week-olds) can distinguish between an experimenter touching the infant’s cheek (single-touch; other-stimulation) and the infant’s own touch of the cheek (double-touch; self-stimulation). Infants in the experiment were more likely to turn their heads and to open their mouths in other-stimulation than in self-stimulation. This result suggests infants’ earliest understanding of self from other, stemming from these sensory experiences of touch.

2. *Explain contingency experiments and what they tell us about infant understanding of the interpersonal self.*

2. Through contingency experiences and experiments, infants recognize that environmental effects are caused by their own actions (understanding of ecological self). As one example, if infants realize kicking their legs causes a mobile to move, they will continue to do so. This understanding is extended to the interpersonal self, as shown in contingency experiments with parent–child interactions. Specifically, infants in a control group communicated with their mothers in real time with a closed-circuit television. Infants in an experimental group viewed prerecorded videos of their mothers. Infants in the experimental group became very distressed by the videos of their mothers, whereas infants in the control group were enjoying their “live” interactions with the mother, indicating understanding of infants’ interpersonal self in connection with others.

**Check Your Understanding 7.23**

1. *Give an example of how a toddler’s understanding of gender affects their behaviors.*

1. Toddlers generally form a basic gender identity, or knowing that one is a boy or a girl. Achieving gender identity may result in toddlers engaging in stereotyped behaviors, including playing with toys that are “for girls” (such as dolls) or toys that are “for boys” (such as trucks) in line with their birth sex.

**Check Your Understanding 7.24**

1.*What are some ways that parents socialize gendered behaviors in their infant boys and girls?*

1. Through the provision of specific toys for their boys and girls—“gender divide of toy play” (from text); typically, parents buy their girls such toys as dolls and tea sets and their boys such toys as cars and tools. Also, through their perceptions of girls’ and boys’ abilities, such as underestimating girls’ crawling ability and being more accurate with respect to their boys’ crawling ability (as one study of infant motor skill found).

**Check Your Understanding 7.25**

1. *Describe Margaret Mead’s observations of cultural differences in gender roles.*

1. Margaret Mead observed males and females in the communities of the Arapesh, Mundugumor, and Tchambuli. In the Arapesh society, males and females were both gentle and responsive. In the Mundugumor society, both males and females were aggressive and violent. In the Tchambuli society, females were dominant and males were less responsible. This study showed the social constructions of gender roles in different cultural communities.

## Chapter Summary

*What follows is the bulleted chapter summary from the text.*

Evolutionary Theory and the Functions of Emotions

• Emotions have adaptive functions of organizing and regulating people’s behaviors, including preparing them for action, and communicating relevant social information to other people.

• Three key areas of infant emotional development are: emotion understanding, emotion expression, and emotion regulation.

Expressing Emotions

• Infants develop abilities to discriminate among different emotions, connect emotional expressions to meaning, and seek and use emotional information from other people.

• The spontaneous smiles of newborns do not contain the social meaning seen in later social smiles, which emerge between 6 weeks and 3 months of age, that are socially motivated and increasingly selective in the persons to whom they are directed.

• Generalized distress is infants’ first negative emotion, which is expressed across a variety of situations. Over development, generalized distress differentiates into emotions of anger, fear, and sadness in reaction to specific events.

Understanding Emotions

• In the second year, toddlers’ emotional expressions become increasingly differentiated, and they begin to display self-conscious emotions, such as embarrassment, pride, guilt, and shame.

Regulating Emotions

• Infants get better at controlling emotions as they grow older. In the first months of life, infants primarily rely on parents to regulate emotion.

• Over time, infants engage in strategies to regulate their emotions, such as self-comforting behaviors and looking away from temptations.

Temperament

• Alexander Thomas and Stella Chess were the first to document individual differences in infant temperament, and classified infants as easy, difficult, and slow-to warm- up babies.

• Mary Rothbart identified six dimensions of temperament: activity, positive affect, fear, distress, soothability, and attention and three components of temperament: surgency, negative reactivity, and orienting regulation. In toddlers, the component of orienting regulation is referred to as effortful control.

• “Goodness of fit” refers to the fit between a baby’s temperament and the demands of the environment, including parenting behaviors.

Social and Cultural Contexts of Emotional Development

and Temperament

• Individual differences in infant temperament and emotion regulation can be explained by aspects of family context, including genetics, infant heart rate changes, and brain activation patterns, as well as family context, including parents’ emotional expressions and their responses to and support of children’s emotional experiences and expressions.

• Infant temperament, emotion understanding, and expressions differ across cultural communities, which may depend on cultural differences in emotional expressions, values, and practices.

Attachment

• In his ethological theory of attachment John Bowlby asserted that infant proximity-seeking behaviors of crying, sucking, smiling, clinging, and following are biologically based and adaptive to survival. Harry Harlow’s studies of rhesus monkeys further supported this idea.

• The Strange Situation developed by Mary Ainsworth assesses infant attachment, and classifies infants as secure, insecure resistant, and insecure avoidant attachment. Main and Solomon added the category of disorganized attachment.

Contexts of Attachment

• The quality of caregiver-infant interactions, including sensitivity, acceptance, attunement to infant needs, and emotional accessibility predict infant attachment statuses.

• The Strange Situation has been criticized as being culturally biased. Most attachment studies focus on infant mother attachment, leaving out other notable caregivers (such as fathers) or multiple caregivers.

• Longitudinal studies indicate that infant attachment status predicts attachment and social relationships in childhood and even adulthood. These long-term stabilities may be explained by internal working models.

Peer Relations and the Origins of Morality

• Beyond caregivers, toddlers develop positive relationships with peers. They display prosocial behaviors of helping, cooperating, sharing, and comforting.

• Nativists emphasize three main features of infants’ “innate moral sense”: moral goodness, moral understanding and evaluation, and moral retribution.

• Aggression toward peers emerges in the second year, with most aggressive actions being physical. Conflict between toddlers might offer opportunities for toddlers to learn the perspectives of others and problem resolution.

Self-Identity

• Infants’ understanding of the self divides into two broad types: the subjective (or ecological) self and the objective self.

• The ecological self (infants’ awareness of their own actions and bodies in relation to the physical world) and the interpersonal self (infants’ sensitivity to the reciprocal nature of social interactions) are two aspects of the subjective self— the “I” of the self.

• Infants’ understanding of the ecological self is demonstrated in double-touch experiments and studies that test infants’ awareness of the connections between self-action and environmental response.

• Infants’ understanding of the interpersonal self is demonstrated in their distress when normally occurring contingencies in social interactions are disrupted, such as an infant not receiving feedback in response to their social behaviors.

• Gender is an early-emerging component of the objective self. In the second year, infants label themselves as boy or girl, and this awareness of one’s gender is associated with toddlers’ gender-stereotyped play.

Contexts of Self-Identity

• Infants’ early gender identity may be influenced by family and cultural context, such as the extent to which parents display gendered expectations and behaviors.

Developmental Cascades

• Infants’ ability to regulate their emotions and attention facilitates language development, because infants can learn the words to which they are exposed without negative affect or inattention getting in the way.

• Emotion regulation in infancy relates to later emotion regulation in preschool, which can cascade to academic performance in future years.

• Poor emotion regulation in infancy, especially high negative reactivity, can hinder peer relationships and lead to later anxiety, mood disorders, and withdrawal from social interactions in childhood, adolescence, and even adulthood.

• Lack of social connection, abandonment, and the deprivation of a loving relationship—all associated with problems of attachment, such as seen in orphaned infants—can harm brain structural development and functioning. Even in less extreme cases, insecure attachment with caregivers has the potential to harm later relationships as toddlers and children develop internal working models of themselves as unlovable and others as untrustworthy.