

CHAPTER 3 SELF-DEVELOPMENT

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CHAPTER 3

SELF-DEVELOPMENT

If you've ever held a newborn, you may have found yourself wondering what the infant is thinking and feeling. Is she aware of her surroundings? Can she recognize her caretakers? Does she, as [William James \(1890\)](#) suggested, experience the world as "one, blooming, buzzing confusion," or does she detect coherence and regularities? Many prominent psychologists have sought answers to these questions, but no one can yet say for sure what it's like to be an infant. One thing is clear, however: From the moment we are born, we embark on a lifelong journey of self-awareness and self-understanding.

In this chapter you will learn about the emergence and development of the self. We will begin by exploring the roots of self-development. Here you will learn that even newborns can differentiate themselves from other people and objects, and can detect their ability to control environmental events.

The second section of this chapter explores [Mead's \(1934\)](#) theory of self-development. This theory maintains that the self arises when people develop the capacity to look back at themselves from another person's perspective. Although not all aspects of the theory have been supported, it has proven to be very influential and has spawned a good deal of research.

The third section considers developmental changes in the self-concept, with a particular emphasis on adolescence as a key period of life. During adolescence, individuals must find ways to connect their earlier (childhood self) with an emerging adult self, and this connection often entails a period of turmoil, known as the adolescent identity crisis.

Finally, we will examine the perceived unity of the self. Despite undergoing a great deal of growth from childhood to adulthood, most people perceive a stable self that endures and unifies their various experiences. For centuries, philosophers, theologians, and psychologists have wondered whether there is some aspect of self that accounts for this perceived unity of psychological life. The final section of this chapter covers a variety of opinions on the matter, ranging from the historical to the modern.

One more word before we begin. Throughout this chapter, we will consider the development of the **I** and the **ME**. As first discussed in Chapter 1, the **I** refers to our awareness that we are a distinct and unified entity, continuous over time, and capable of willful action. The **ME** refers to our more specific ideas about what we are like. These ideas include beliefs about our physical appearance, social roles and relationships, tastes, habits, values, and personality characteristics. The development of the **I** precedes the development of the **ME**. Before we can know what we are like, we first need to know that we exist. To illustrate, imagine that someone has suddenly become aware of their own existence. If at this very moment we were to ask the person, "What are you like?" the person would say "I don't yet know what I am like; I have only at this very instant become aware that I am." This is what we mean when we say that the development of the **I** precedes the development of the **ME**.

I. **Self-Awareness in Infancy**

Throughout psychology's history, many of its best-known theorists, including James,

Freud, and Piaget, have assumed that self-awareness is absent at birth and gradually emerges only after a good deal of cognitive growth and social interaction. There is now reason to question this assumption. Although it continues to develop throughout infancy, some forms of self-awareness seem to be present from the moment of birth (for reviews, see [Butterworth, 1992](#); [Meltzoff, 1990](#); [Neisser, 1988, 1997](#); [Rochat, 2003](#)).

A. ***The Roots of Self-Awareness***

1. ***Sensory Feedback and Self-Awareness***

Consider, for example, research by [Rochat and Hespos \(1997\)](#). These investigators examined a well-established phenomenon known as “rooting behavior.” During the first few weeks of life, neonates orient their head toward an external stimulus that brushes their face. This reflexive behavior helps the infant find food, as it typically occurs when the breast is brought to the infant’s mouth. Rochat and Hespos tested whether newborns (less than 18 hours old) exhibit rooting behavior when their own hand brushes their face. Compared to external stimulation, the newborns rooted nearly three times less often in response to their own touch. These findings provide evidence that infants can distinguish self from “not self” during the first few hours of life.

Similar findings have been reported with an auditory stimulus. [Simner \(1971\)](#) had four-day old infants listen to another infant crying or a tape-recorded version of their own cry. The infants tended to cry harder and displayed faster heartbeats when hearing their own cry, suggesting that they were capable of distinguishing self from other.

Vision yields another source of self-knowledge. As [Gibson \(1979\)](#) noted, every act of perception provides information about the self. To gaze upon an object is to learn not only about the object’s features, but to also learn about oneself as a perceiver in relation to that object. Building on this idea, [Neisser \(1988, 1997\)](#) has proposed that newborns possess an ecological self—an awareness of their body and its relation to their immediate physical environment. In support of this conjecture, research shows that the seated posture of infants is affected by optical illusions, indicating that they rely on external (visual) cues to orient their bodies and coordinate their movements ([Bahrick, 1995](#); [Bertenthal & Bai, 1989](#); [Rochat, 2003](#)).

2. ***Contingency Cues and Self-Awareness***

Infants also learn to detect the contingency between their actions and consequent environmental events. For example, one study found that 2-month old infants increase their rate of leg-kicking when it moves a mobile, but not when it does not ([Watson, 1972](#)). Moreover, infants smile and coo more when viewing a mobile they control, suggesting not only that they are able to detect contingencies, but also that they enjoy the ability to control objects in their environment.

In consideration of these and other findings, [Gergely and Watson \(1999\)](#); see also, [Gergely, 2001](#)) have proposed that humans are born with a “contingency detection module” that analyzes the contingency between their actions and environmental events. Initially, the module is geared toward identifying self-initiated actions that produce perfectly contingent outcomes. Presumably, this preference helps the infant develop a representation of the self as distinct from the physical environment. At approximately

three-months of age, this preference shifts toward identifying near-perfect contingencies. This shift is thought to orient the infant away from the physical world and toward the social world of responsive, but imperfectly contingent, caregivers.

3. **Social Interaction**

Social interaction fosters further self-development. Newborns show a particular interest in human faces, and begin to smile and engage their caregivers in social interaction within their first weeks of life. These exchanges become regulated and coordinated, providing important information about the self in relation to others. Before too long, a synchrony develops between infants and caregivers as they engage in mutually reciprocal interactions characterized by socially-shared emotions and movements (Feldman, 2006; Markova & Legerstee, 2006; Neisser, 1997).

Imitation may provide the earliest information about the self in relation to others. Meltzoff and Moore (1977) studied facial imitation in infants who were 12 to 21 days old. An infant and an adult were brought together, and the adult made various faces (e.g., stuck his tongue out, pursed his lips together) while the infant watched. The infant's facial behavior was then recorded, and observers unaware of the adult's facial expression coded the infant's expression. The results showed that infants imitated the adult's facial expressions. Facial imitation has subsequently been observed among infants less than one hour old, suggesting it is an innate, unlearned behavior (Meltzoff & Moore, 1993).

Two processes can explain infant imitation. One possibility is that the adult's facial expression automatically triggers a matching facial expression in the infant. This account assumes that infant imitation is a reflexive behavior, void of any higher-order processes, including ones involving self-awareness. A second possibility is that newborns are able to deliberately mimic the expressions they see. According to this account, infants see the adult's expression and are able to intentionally translate what they have seen into an expression of their own.

In a follow-up experiment, Meltzoff and Moore (1977) used delayed imitation to test these competing hypotheses in a group of newborns (ages 16 and 21 days). During the initial stages of this study, a pacifier was placed in the infant's mouth while an adult modeled two different facial expressions. Afterward, the pacifier was removed and the infant's behavior was recorded. Even though the pacifier had prevented the infant from reflexively imitating the adult's behavior as it was presented, infants imitated the behavior when the pacifier was removed. Follow-up research showed that 6 week old infants are capable of imitating behaviors even after a 24 hour delay, providing further evidence that reflexes alone cannot explain infant imitation (Meltzoff & Moore, 1994).

Along with other research, these findings have led Meltzoff and colleagues to conclude that infants are born with three self-relevant capacities: (a) an awareness of their body and its location and position; (b) the ability to intentionally alter their body's position, including their facial expressions; and (c) the capacity for sensory modality matching, in which information from one sensory modality (e.g., sight) is integrated with information from another sensory modality (e.g., body position) (Gallagher & Meltzoff, 1996; Meltzoff & Decety, 2003).

B. **Visual Self-Recognition**

To this point we have seen that neonates can distinguish self from not self, recognize their control over environmental events, and imitate others. These achievements set the stage for another milestone in self-development: Visual self-recognition. By three months of age, infants seem to be familiar with their own facial image. [Bahrick, Moss, and Fadil \(1996\)](#) had infants of various ages view a prerecorded film of their own face alongside that of a peer. Even three month old infants looked longer at the peer's face, presumably because infants prefer novelty and they were already familiar with their own appearance (see also, [Legerstee, Anderson, & Schaffer, 1998](#)). By five months of age, infants show the same preference when viewing photographs.

The fact that infants can distinguish their facial image from someone else's does not, in and of itself, establish that infants are aware that the image they see in a mirror or photograph is themselves. After all, they may simply be differentiating a familiar stimulus (themselves) from an unfamiliar one (a peer). [Lewis and Brooks-Gunn \(1979\)](#) conducted a program of research to more thoroughly assess the emergence of self-recognition. The participants in Lewis and Brooks-Gunn's research were 9- to 36-month old infants and self-recognition was assessed in multiple ways. In some studies, the researchers measured whether infants could recognize themselves in a mirror. Mirror recognition provides two clues to self-awareness: Contingency cues (when "I" move, the person in the mirror also moves) and featural cues (the person in the mirror looks like "me"). Other studies assessed whether infants can recognize themselves in a photograph, a stimulus which provides only featural cues. Additional studies used a procedure known as the "facial mark test." In these studies, a colorful mark is surreptitiously placed on the infant's nose or forehead, and the researcher notes whether the infant touches the spot when looking in the mirror. Finally, self-awareness was assessed not only with visual self-recognition, but also with verbal pronouncements (referring to oneself with a proper noun or a personal pronoun) and self-conscious emotions (responding with embarrassment when viewing oneself but not when viewing others).

Using these various methods, Lewis and Brooks-Gunn (1979) found evidence for the following pattern of development (see also, [Courage, Edison, & Howe, 2004](#); [Nielsen, Suddendorf, & Slaughter, 2006](#)).

- From 9 to 12 months of age, infants show evidence of visual self-recognition with contingent stimuli. While looking into a mirror, they attend to their image intently, touch their bodies, and show signs of self-conscious emotions (e.g., embarrassment). At this point, however, there is only limited and variable recognition of self with noncontingent stimuli (e.g., photographs), suggesting that contingency cues are necessary for self-recognition at this stage of development.
- At 15 to 18 months of age, most infants pass the facial mark test. When presented with their mirror image, they respond by pointing to the appropriate spot on their face where a mark has been applied. Many 15- to 18-month old infants are also able to distinguish themselves from others in photographs and to point to themselves in pictures. These findings suggest that contingency cues are no longer needed for self-recognition at this age.

- These abilities continue to develop between 18 and 21 months of age. By this time, nearly all normally developed children are able to recognize themselves with contingent stimuli, and over 3/4 show evidence of self-recognition with noncontingent stimuli. Two-thirds of infants at this age also begin using personal pronouns when viewing photographs of themselves. By 24 months of age, visual self-recognition is well established.

C. ***Autobiographical Memory and Infantile Amnesia***

Visual self-recognition at age two is not an isolated event in self-development. Age two also marks the end of a phenomenon known as infantile amnesia. This term refers to the fact that most adults cannot remember specific events from their first two years of life, but many can remember events occurring during the third year of life (Usher & Neisser, 1990). Although some theorists have speculated that infantile amnesia occurs because an infant's memory system is too immature to store long-term memories, Howe and Courage (1993, 1997) have argued that self-development better explains this effect. Prior to age two, children don't possess a well-developed self around which memories can be organized. Consequently, life events cannot be recalled. Once the self develops, it provides a memory structure (or schema) that facilitates the storage and retrieval of memory, as the events of one's life become commonly coded as "occurring to me."

D. ***Summary***

Table 3.1 summarizes many of the topics we have covered in this section. The table shows that the roots of self-awareness begin early in life and progress through increasingly sophisticated stages of development.

Table 3.1. Milestones in Self-Development during the first 2 years of life

Approximate Age	Self-Relevant Ability Infants Can Display
Newborns (first few days of life)	Discriminate their own touch from external touch Imitate other people's facial expressions
By 2 months	Detect contingencies between their own actions and environmental events, and show delight in their ability to control events Engage in coordinated and synchronized social interactions with caregivers, characterized by turn-taking and shared emotion
By 3 months	Are attentive to their mirror image and express delight and other positive emotions when encountering themselves in a mirror Visually discriminate self from others with moving, contingent cues
By 5 months	Visually discriminate self from others with static, featural cues
By 9 months	Recognize themselves with contingency cues
By 15-18 months	Pass the facial mark test and exhibit self-conscious emotions
18-24 months	Recognize themselves in a photograph and use personal pronouns to refer to themselves
24 months	The end of infantile amnesia

Does this mean that 2 year olds are in complete possession of a self-concept? Certainly not. Young children are aware of their existence, but they have only limited knowledge of what they are like as a person and do not understand that they have a continuous existence over time (Povinelli & Simon, 1998). In the next section, we will discuss a theory that tackles these more advanced aspects of self-understanding.

II. **Mead's Theory of Self-Development**

There is a thing that happens with children: If no one is watching them, nothing is really happening to them. It is not some philosophical conundrum like the one about the tree falling in the forest and no one hearing it: that is a puzzler for college freshman. No. If you are very small, you actually understand that there is no point in jumping into the swimming pool unless *they* see you do it. The child crying, "Watch me, watch me," is not begging for attention; he is pleading for existence itself. (M. R. Montgomery, 1989, *Saying goodbye: A memoir for two fathers*)

Many parents notice a change in their child's behavior at 2 years of age. At this point, children begin to act in ways that suggest they are aware of how they are seen by others. According to George Herbert Mead (1934), this awareness is a key element in self-development. Mead was an American sociologist, interested in the socialization process.

How is culture acquired and perpetuated? How do people come to adopt the values, standards, and norms of the society in which they are born? In short, how are individuals transformed from asocial creatures at birth into socialized beings? These are the sorts of questions that interested Mead.

A. **Theoretical Assumptions**

1. **Perspective Taking, Socialization, and the Emergence of Self**

Mead (1934) believed that individuals become socialized when they adopt the perspective of others and imagine how they appear from another person's point of view. For Mead, this perspective-taking ability is synonymous with the acquisition of self. To illustrate, imagine an infant is scribbling on the walls with a crayon. Because the infant is not yet able to ask, "I wonder what Dad would think of my behavior?" the infant is not taking the perspective of another and is not acting in a self-referential way. As the infant matures, this ability to adopt the perspective of others toward the self develops ("I bet Dad wouldn't be happy with what I'm doing to the wall."). According to Mead, this capacity to imagine how we appear in the eyes of others heralds the emergence of self. When we are further able to modify our behavior to conform to the perceived wishes of others, we are socialized beings.

2. **Symbolic Communication and Self-Development**

Mead also speculated about how this perspective-taking ability develops. "How can an individual get outside himself," he asked, "... in such a way as to become an object to himself?" (1934, p. 138). Mead believed that interpersonal communication provided the key to understanding this "essential problem of selfhood."

Mead based his analysis on Darwin's theory of the evolution of emotional expressions. In his book *Expression of the Emotions in Man and Animals*, Darwin (1872) asserted that certain emotional states are associated with specific bodily and facial expressions. For example, anger is associated with a baring of the teeth. Darwin believed that these facial expressions reveal something about the inner state of the animal: They serve as a sign of what the animal is feeling and indicate what the animal is likely to do. In this sense, these gestures (as Mead called them) constitute a primitive form of communication.

Communication in lower animals is largely instinctive. An angry wolf doesn't ask itself, "How can I let this other wolf know I'm angry?" It instinctively bares its teeth and communicates the internal state. Humans also communicate through instinctive facial expressions (Ekman, 1993), but these displays represent only a small portion of human communication. More commonly, people communicate symbolically, using significant gestures. (In this context, the word significant means "having the qualities of a sign.") In order to do so, Mead argued, we must adopt the perspective of the other person toward ourselves and imagine how our gestures will be regarded by that person. For Mead, this perspective-taking ability is synonymous with the acquisition of self.

To illustrate, imagine I want you to know you are welcome in my home. How can I communicate this information to you? According to Mead, I need to put myself in your shoes and ask myself "What behavior or gesture on my part would let you know you are

welcome here?" After engaging in this process, I might conclude that opening up my arms in the form of a hug would do the trick. This gesture would signify (have the qualities of a sign) that you are welcome. In this fashion, the need to adopt the perspective of others in order to communicate with symbols creates the self in Mead's theory.

3. ***The Need for Social Interaction***

It is important to note the strong emphasis that Mead gives to social interaction in his analysis of the development of self. Without social interaction, symbolic communication would be unnecessary and the self would not develop through the perspective-taking process Mead describes. For Mead, then, social interaction is essential to self-development.

Once the self has developed, however, it continues to exist even when others are not around. This is the case because people can mentally represent others and imagine how their behavior would appear in another person's eyes. Most people, for example, do not steal items from a store even when no one is around to watch them. One explanation is that they mentally represent how others would react to their behavior if they were present, and behave accordingly. In more general terms, we can say that once people acquire a self and are socialized, they internalize the anticipated reactions of others and continue to act in a socialized manner even when they are alone. But they would not develop this capacity, Mead argued, if they were not raised in social surroundings.

The self, as that which can be an object to itself, is essentially a social structure, and it arises in social experience. After a self has arisen, it in a certain sense provides for itself its social experiences and we can conceive of an absolutely solitary self. But it is impossible to conceive of a self arising outside of social experience. (Mead, 1934, p. 140)

This doesn't mean that people are always acting in a self-conscious and socialized fashion. Sometimes people act without reference to self, without looking back on themselves from the (imagined) perspective of others. If, for example, we are walking along, mindlessly humming a tune, we are not, in Mead's scheme, acting with reference to self. Only when something happens that causes us to become the object of our own attention (e.g., someone calls our name) are we swept out of our unsocialized reverie back into the self-conscious state that is socialized behavior.

4. ***The Generalized Other***

To this point, we have been concerned with the individual's ability to adopt the perspective of another person toward the self. When this capacity emerges, the self develops. Ultimately, Mead argued, socialization requires more than the ability to adopt the perspective of a particular other toward the self; to be truly socialized, people must come to adopt the perspective of society at large. We must view ourselves through the eyes of an abstract, generalized other that represents the broader society and culture into which we are born.

Mead believed the foundation for this ability could be found in the type of games children play. Initially, young children play in an asocial manner. Their play is entirely autonomous and does not involve others. In time, children play with particular others. Sometimes these are imaginary playmates who take turns "speaking to one another." Mead

believed this form of play was very important for the development of self, as it requires adopting the perspective of a particular other and seeing yourself from the other person's point of view. Role-playing is also characteristic of children at this stage. For example, a child may play "firefighter" and mimic the behaviors and language of a firefighter. This also involves the ability to adopt the perspective of a particular other and lays the groundwork for the development of self.

The game stage is the next stage in Mead's analysis. In the game stage, there are multiple others and the individual must simultaneously be aware of many people's perspectives. Mead used the game of baseball to illustrate this stage.

The child who plays in a game must be ready to take the attitude of everyone else involved in that game. ... If he gets in a [baseball game] he must have the responses of each position involved in his own position. He must know what everyone else is going to do in order to carry out his own play. He has to take all of these roles. They do not all have to be present in consciousness at the same time, but at some moments he has to have three or four individuals present in his own attitude, such as the one who is going to throw the ball, the one who is going to catch it, and so on. (Mead, 1934, p. 151).

The key difference, then, between play and the game is that in the former the child adopts only the attitudes of one other person, but in the latter the child adopts the attitudes of many other people.

Ultimately, the ability to adopt multiple perspectives toward the self prepares the individual to adopt the perspective of an abstract, generalized other that represents the society at large. When this occurs, (i.e., when the individual is able to imagine how he or she appears from the standpoint of an abstract, generalized other that represents the values and standards of the general culture), the self is said to be fully developed and socialization is complete.

If the given human individual is to develop a self in the fullest sense, it is not sufficient for him merely to take the attitudes of other human individuals toward himself ...; he must also ... take the attitude of the generalized other toward himself. Only insofar as he takes the attitudes of the organized social attitudes of the given social group or community to which he belongs, does he develop a complete self. (paraphrased from Mead, 1934, pp. 155-156)

B. ***Empirical Research***

Mead's theory is broad and far-ranging, but it doesn't readily lend itself to direct empirical testing. The theory did, however, inspire several important research areas regarding the nature and course of self-development.

1. ***Visual Self-Recognition in Nonhumans***

Mead believed that self-awareness was unique to humans and that this capacity constitutes the most important difference between humans and other animals.

Man's behavior is such in his social group that he is able to become an object to himself, a fact which constitutes him a more advanced product of evolutionary development than are the lower animals. Fundamentally, it is this social fact—and not his alleged possession of a soul or mind with which he, as an individual, has been mysteriously and supernaturally endowed, and

with which the lower animals have not been endowed—that differentiates him from them. (Mead, 1934, p. 137)

In an ingenious series of experiments, [Gallup \(1977\)](#) tested whether animals other than humans are able to take themselves as an object of their own attention. Gallup's experiments used a mirror-recognition task, in which an animal's ability to recognize itself in a mirror was assessed. As noted earlier, mirror recognition implies the existence of a rudimentary self-concept, as it requires knowing that you and the image in the mirror are one and the same.

In an initial investigation, Gallup exposed chimpanzees to a full-length mirror and unobtrusively recorded their behavior over a 10 day period. At first, Gallup noted, the animals respond to the mirror image as if it were another chimpanzee. Gradually, this behavior is replaced by activities of a distinctively self-directed nature. For example, while looking into the mirror, the animals groomed parts of the body that could not be seen directly and picked material out of their teeth. Gallup argued that this switch in behavior meant that the chimpanzees had come to recognize that the animal in the mirror was their own reflection.

In a follow-up study, Gallup (1977) anesthetized each chimpanzee and, while they were unconscious, painted the uppermost portion of their eyebrow with a tasteless, odorless, red dye. The dye was applied so that it was visible to the chimpanzees only when they viewed themselves in a mirror. Upon awakening, the animals were again exposed to their mirror image, and the number of behaviors they directed to the spot where the dye had been applied was recorded. In comparison with their earlier behavior, Gallup found that the chimpanzees were over 25 times more likely to touch the spot where the dye had been applied when they saw their reflection in the mirror. Moreover, this increased activity did not occur among a control group of chimpanzees who were not given prior exposure to their mirror image. These findings imply that the experimental group had earlier learned to recognize themselves in a mirror and were aware that the red-stained image in the mirror was indeed themselves.

A number of investigations have now replicated Gallup's basic results and have tested whether other animals show signs of self-recognition. This research has found that orangutans, dolphins, and elephants are also capable of self-recognition ([Marino, Reiss, & Gallup, 1994](#); [Meddin, 1979](#); [Plotnik, de Waal, & Reiss, 2006](#); [Povinelli, Rulf, Landau, & Bierschwale, 1993](#); [Reiss & Marino, 2001](#)). For reasons not yet known, gorillas do not pass the mirror-recognition test, even though they are more genetically similar to humans than are orangutans, dolphins, and elephants.

2. ***The Social Bases of Self-Recognition***

If we grant that self-recognition implies a concept of self (see [Heyes, 1994](#); [Swartz, 1997](#) for critical discussions of this issue), Gallup's findings challenge Mead's assertion that self-awareness is a uniquely human capacity. But what of Mead's more specific claim that self-awareness arises only in the context of social interaction? Must one have the opportunity to view oneself from the perspective of another before one can develop a concept of self?

Gallup (1977) conducted additional research to test this idea. He repeated his

earlier experiments using chimpanzees who had been reared in isolation, without ever having seen another chimpanzee. If, as Mead claimed, social interaction is necessary to the development of self, chimpanzees who have never had the opportunity to view themselves through the “eyes of others” should fail to recognize themselves in the mirror. This is precisely what occurred. The chimpanzees reared in isolation showed no indication of knowing that they were the object in the mirror. Only after three months of social interaction did they begin to show signs of self-recognition. Although alternative explanations for these results can be generated (e.g., being reared in isolation may have created a general cognitive deficit), the data are in accordance with Mead’s claim that the opportunity to adopt the perspective of others is critical to the development of self.

3. **Summary**

Gallup’s test of Mead’s theory suggests that animals other than humans can recognize themselves in a mirror, provided that they have had experience in social situations. Although this is an important finding, it does not mean that chimpanzees, orangutans, and dolphins possess a self-concept similar to the one humans possess. As we have seen, mirror recognition with contingent cues is generally achieved by humans in the first year of life, yet these infants are incapable of recognizing themselves in a photograph or thinking of themselves as having a continuous existence over time. This suggests that whatever self-concept nonhumans possess, it is unlikely to include any information about “what one is like.” Said differently, although other animals may be aware of their physical existence, they are unaware of their psychological qualities and attributes.

C. **Theory of Mind**

Another area of research influenced by Mead’s theory is known as “Theory of Mind” (Gallagher & Frith, 2003). The term refers to a tendency to predict and explain other people’s behavior by attributing to them various psychological qualities, such as intention, desire, emotion, and belief. For example, instead of simply describing behavior in narrow, concrete terms (“Erin moved her hand toward the milk”), people tend to use broader, more abstract descriptions (“Erin wanted a drink because she was thirsty”) Our ability to infer psychological states in others and to believe these states motivate behavior requires that we first put ourselves in the another person’s shoes and see the world from the person’s perspective. As this perspective-taking ability is an integral part of Mead’s theory, theory of mind research is relevant to Mead’s work.

Experiments show that infants as young as 3 months of age can adopt the visual perspective of another person by following the person’s gaze or by looking where the person is pointing (D’Entremont, Hains, & Muir, 1997); by 12 months of age, infants will point to an object another person is looking for (Liszkowski, Carpenter, Striano, & Tomasello, 2006; Tomasello, Carpenter, Call, Behne, & Moll, 2005). This latter finding is particularly impressive, as it suggests that infants can infer another person’s desires during the first year of life.

During the second year of life, infants are capable of inferring even more complex psychological states. Consider an experiment by Meltzoff (1995). Extending his earlier work on infant imitation, Meltzoff assessed whether infants can recognize and reproduce an adult’s intention rather than the adult’s actual behavior. To test this idea, Meltzoff had

18-month old children watch an adult play with a toy dumbbell that could be pulled apart. In one condition, the adult successfully pulled the toy apart; in another condition, the adult tried to pull the toy apart but failed. A third group of children were in a control condition and never saw an adult handle the toy at all. Finally, the infants were given the toy to play with, and Meltzoff noted whether they successfully pulled the toy apart. Figure 3.1 shows that very few children in the control condition pulled the toy apart, but the vast majority of those in the experimental conditions did. Moreover, there were no differences between the two experimental conditions, indicating that children in the unsuccessful condition imitated the adult's *intended* behavior rather than the behavior itself. A follow-up study found that this did not occur when infants saw a robot-like machine attempt to pull the toy apart. Apparently, infants are not only capable of inferring intention from other people's behavior, but are also aware that machines do not exhibit intentional behavior (see also [Legerstee, Barna, & DiAdamo, 2000](#); but see [Luo & Baillargeon, 2005](#)).

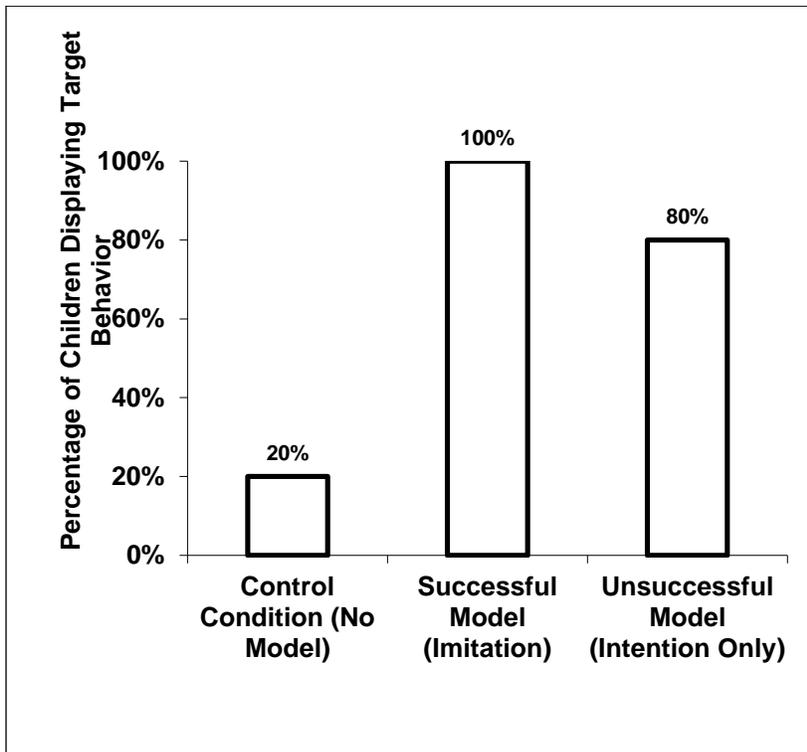


Figure 3.1. Children's Understanding of Intention. In the two experimental conditions, 18 month old children watched an adult play with a toy. In one condition, the adult successfully took the toy apart; in the other condition, the adult tried to take the toy apart but failed. When children were given the toy to play with, children in the two experimental conditions were more likely to take the toy apart, regardless of whether they had seen the model successfully do so. These findings suggest that children as young as 18 months of age are capable of discerning another person's intention. (Source: Meltzoff, 1995, *Developmental Psychology*, 31, 838-850)

Research using the so-called "false belief test" provides additional evidence that children are able to adopt the perspective of another person ([Wimmer & Perner, 1983](#)). With this procedure, children predict whether a person will act on the basis of the person's

beliefs, even when those beliefs contradict reality. For example, a child might be shown a cartoon in which a boy places a cookie in a jar. When the boy leaves, an adult enters and moves the cookie to a cupboard. Finally, the boy returns and the child is asked to predict where the boy will look for the cookie. Even though they know the cookie is in the cupboard, children as young as three years of age predict the boy will look in the jar because they understand that is where the boy expects to find the cookie (Wellman, Cross, & Watson, 2001). Interestingly, this ability is impaired among children with autism, suggesting that the ability to adopt another person's perspective is an element of healthy self-development (Baron-Cohen, Leslie, & Frith, 1985).

D. ***Developmental Sequence: Which Comes First, Self or Other?***

Mead argued that the self emerges when individuals look back on themselves from another person's point of view. In this developmental scheme, knowledge of others precedes self-development. Meltzoff and colleagues have challenged this developmental sequence, arguing that self-development and knowledge of others are inherently reciprocal (for reviews, see Meltzoff, 2005, 2006, 2007). According to this "like me" hypothesis, infants are born with the capacity to recognize the equivalence between themselves and others. Facial imitation provides the first manifestation of this capacity, as even newborns are able to imitate another person's facial display. Later, when infants mature and begin to identify and comprehend their own psychological states (e.g., desires, emotions, intentions), they use their "others are like me" knowledge to infer that other people possess these qualities as well. From this perspective, self-understanding and an understanding of others form a two-way street: Infants use themselves as a framework for understanding others and use knowledge of others to understand themselves.

III. **Self-Development Across the Life Span**

A. ***Developmental Changes in Self-Descriptions***

To this point we have been concerned with the development of the infant's awareness that it is a distinct and continuous entity. In this sense, we have been reviewing evidence pertinent to the development of the **I**. We have yet to consider, however, the development of the **ME**. A focus on the **ME** would lead us to ask: How do people's thoughts about themselves change with age? For example, do 6-year olds think of themselves differently than 16-year olds? Research in this area suggests the following developmental trends (Damon & Hart, 1988; Harter, 1983; Lewis & Brooks-Gunn, 1979).

1. ***Early childhood (ages 2-6)***

Gender and age appear to be the first characteristics applied to the self. By age two, most children correctly identify themselves as a boy or a girl, although they may not be fully aware that gender is constant until several years later. At this age, children also tend to describe themselves in terms of concrete, observable characteristics (e.g., I have brown hair; I have an older brother) and typical behaviors and activities (e.g., I play games; I like soccer). In short, young children tend to think of themselves in terms of their observable, verifiable characteristics.

2. **Middle childhood (ages 7-11)**

Several changes in self-descriptions occur during middle childhood. First, self-descriptions become more general. For example, instead of thinking of themselves in terms of specific activities (I like soccer; I like skating), children start applying broader labels to themselves (I like sports). Children at this age also begin defining themselves (and others) in psychological terms, such as traits and abilities. Many of these qualities refer to important social characteristics (e.g., nice, likable, or friendly).

Children at this age also become more adept at taking the perspective of the generalized other (in the manner specified by Mead) and to see themselves from other people's point of view. Social comparison processes also become more influential at this stage of life (Ruble, 1983). Children compare themselves with others and draw inferences about themselves on the basis of what these comparisons show ("Jimmy has more trouble solving problems than I do, so I must be smart").

3. **Adolescence (ages 12-18)**

Adolescence brings another shift in self-understanding. Adolescents define themselves in abstract qualities that emphasize their perceived emotions and psychological characteristics. For example, an adolescent might be inclined to say he is moody or insecure. These assessments reflect a more sophisticated, analytical approach to self-definition, one that emphasizes private qualities not necessarily known to others.

Adolescents' ability to think of themselves in abstract terms may help them achieve psychological unity. Harter and Monsour (1992) asked 7th, 9th, and 11th graders to describe themselves in various situations (e.g., in the classroom, with friends), and then indicate which traits created conflict. Figure 3.2 shows that the percentage of traits that created conflict rose steeply from 7th to 9th grade, but declined from 9th to 11th grade. Harter and Monsour speculated that the rise in conflict experienced between 7th and 9th grade reflected young adolescents' increased participation in multiple roles, and the decline in conflict experienced between 9th and 11th grade represented the older adolescents' ability to come to terms with conflicting identities in different situations. To illustrate, whereas a 9th grader might be puzzled by the fact that he's carefree with friends but sullen with his parents, an 11th grader would reconcile this inconsistency by saying "I'm just a moody person" (see also Harter, Bresnick, Bouchey, & Whitesell, 1997).

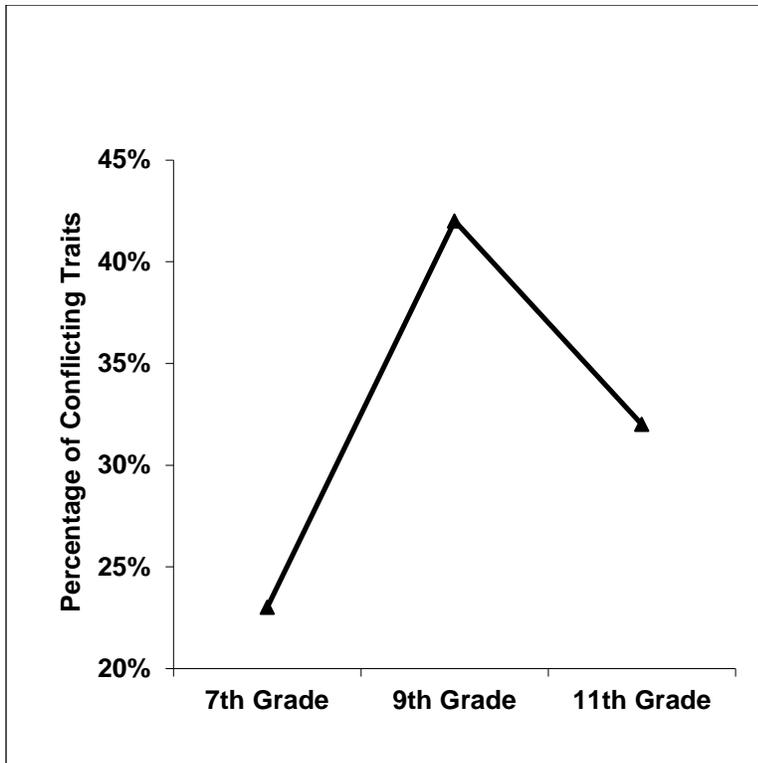


Figure 3.2. Percentage of Conflicting Traits Experienced By Three Groups of Adolescents. **Seventh graders experienced very little conflict, 9th grades experienced a lot of conflict, and 11th grades experienced an intermediate level of conflict.** These data suggest that the ability to think in abstract psychological terms may help older adolescents reconcile psychological inconsistency. (Source: Harter & Monsour, 1992, *Developmental Psychology*, 28, 251-260)

4. **Summary**

Table 3.2 summarizes the many of the developmental trends in self-description we've been discussing. The table shows that very young children describe themselves in terms of their observable characteristics, demographic variables, and specific interests and activities. In middle childhood, they aggregate their interests to form a more general category, compare themselves with others, and emphasize interpersonal qualities and attributes. Finally, adolescence tend to describe themselves using hidden, abstract psychological qualities.

Table 3.2. Developmental Changes in the Self-Concept

Stage of Development	Dominant Self-Descriptions	Examples
Early childhood (approximate ages: 2-6)	Observable characteristics Demographic variables Specific interests and activities	I am a girl. I have brown hair. I have a younger brother. I like playing soccer.
Middle childhood (approximate ages: 7-11)	General interests Use of social comparison Interpersonal qualities	I like sports. I'm smarter than Meredith. I am nice.
Adolescence (approximate ages: 12-18)	Hidden, abstract psychological qualities	I am moody. I am self-conscious.

B. ***Developmental Changes in Self-Feelings***

In Chapter 2, we noted that William James believed self-feelings were primary emotions, experienced by people the world over (James, 1890). This doesn't mean these emotions are present at birth, however. It simply means that once people develop self-awareness, they also develop the capacity to feel good or bad about themselves.

Embarrassment appears to be the first self-feeling to develop, emerging at the same time infants begin to recognize themselves in a mirror (18-24 months of age) (Lewis, 1995). Embarrassment can arise from the simple perception that one is being observed or watched by others, and does not require knowledge of any social conventions, values, or standards.

Self-evaluative emotions, such as pride, shame, and guilt, emerge later, around three years of age. These emotions require not only the capacity to take the perspective of another toward the self (as Mead suggested), but also the ability to compare one's behavior with a relevant standard. Mascolo and Fisher (1995) note that the appearance of self-evaluative emotions is a gradual one. A child doesn't suddenly acquire the capacity to experience pride; instead, pride steadily emerges from more primitive feelings of joy and happiness. Table 3.3 shows a possible developmental sequence. Notice that not only does pride emerge gradually, but also that the actions thought to produce pride become increasingly complex and abstract. The final stage occurs when we feel proud of the accomplishments of others or take pride in our collective identities (e.g., one is proud to be an American). Mascolo and Fisher have applied a similar analysis to the developmental course of shame and guilt.

Table 3.3. Developmental Changes in Joy and Pride

	Description	Age of emergence	Example
Stage 1	Joy at producing a simple action-outcome contingency	4 months	Smile when rolling a ball
Stage 2	Joy at producing a complex action-outcome contingency	11-13 months	Beam with joy when throwing a ball and knocking down other objects
Stage 3	Joy/Pride in recognizing self-initiated action	18-24 months	Squeal with delight when saying “I throw it” when throwing a ball
Stage 4	Pride in performing an action well	2-3 years	Swell with pride when believing that one is good at throwing a ball
Stage 5a	Pride in making a positive comparative evaluation	4-5	Experience pride at throwing a ball farther than other kids
Stage 5b	Pride in ownership of a valued trait	4-5	Experience pride when referring to oneself as “Good at ball throwing”
Stage 6	Pride in ownership of a comparative, concrete trait	6-8 years	Proud to be better at sports than other kids
Stage 7	Pride in ownership of a socially valued personality characteristic	10-12	Proud of one’s athletic ability or intelligence
Stage 8	Pride in ownership of collective identity	14-17	Proud to be an American

C. ***The Adolescent Identity Crisis***

Across cultures, adolescence is routinely regarded as an important turning point in life. In many cases, it can also be a period of soul-searching and conflict. The Pulitzer Prize winning author, Erik [Erikson \(1956, 1963, 1968\)](#), coined the term “identity crisis” to describe the situation many adolescents face. Erikson noted that many of the changes that accompany adolescence are abrupt and discontinuous, rather than smooth and gradual. This disjunction can create confusion and instability in the self-concept. Adolescents can become “unsure of who they are.” To resolve this crisis, adolescents must find a way to establish continuity between their prepubertal self and the way they look, think, and feel about themselves now. They must also integrate the various ideas they have about themselves (including those involving new social roles and obligations) into a unified self-concept. In other words, adolescents must fashion a stable and integrated identity.

The young person, in order to experience wholeness, must feel a progressive continuity between that which he has come to be during the long years of childhood and that which he promises to become in the anticipated future; between that which he conceives himself to be and that which he perceives others to see in him and to expect of him. (Erikson, 1968, p. 87)

It’s important to notice that Erikson emphasized the important role of social

consensus in identity development. Building on Mead's (1934) model, Erikson argued that adolescents must integrate their self-perception with the perceptions and expectancies of society at large if they are to create a fully functioning identity. Erikson also noted that although cultures differ with respect to when adolescence ends and adulthood begins, most have rules regarding the transition and rituals that help the adolescent become an adult. For example, Jewish children have a Bar or Bat Mitzvah, and some Native American youths spend time alone in the wilderness in search of spiritual guidance.

Finally, Erikson believed the adolescent identity crisis was ultimately resolved when adolescents make commitments in three broad areas: (a) occupation (i.e., choose a profession); (b) ideology (i.e., establish a religious preference, political affiliation, and general world view); and (c) sexual orientation (i.e., define their sexual orientation and adopt age-appropriate sex-role behavior). Historically, these commitments were not difficult to make (Baumeister & Tice, 1986). Before the industrial revolution, adolescents worked on the family farm or served an apprenticeship that prepared them to assume the family business. They also tended to adopt their parents' religious and political beliefs, and very often allowed their parents to determine whom and when they married. This is much less true today. At least in contemporary Western societies, adolescents are free to choose their occupation, ideology, and marriage partners. This freedom has obvious advantages, but it is not without costs. Today, adolescents must decide who they are and what they will be, leading to the type of identity crisis Erikson depicted.

1. ***Identity Status in Adolescence***

Having the freedom (and responsibility) to forge an identity suggests that adolescents will differ with respect to how far along they are in creating their identities. Marcia (1966) considered this issue and identified four categories of identity status, distinguished by the degree of exploration the adolescent has undertaken and whether or not the adolescent has made identity commitments. Table 3.4 shows the four-fold classification Marcia developed, as well as items from a self-report questionnaire designed to measure these categories (Adams, Shea, & Fitch, 1979). As can be seen, individuals who have successfully weathered an identity crisis and have made the occupational, ideological, and sexual commitments Erikson described are classified as being "identity achieved." In effect, these individuals have "found themselves" after a period of searching. Those who are actively working toward resolving their crisis but have yet to do so successfully are characterized as being in a moratorium. Individuals who are mired in an identity crisis and are not making any discernible progress toward resolving it are classified as identity diffused. Finally, individuals who have made commitments in the absence of any crisis are labeled identity foreclosed. Typically, these individuals have accepted the commitments of their parents without attempting to define these commitments for themselves. Although many exceptions occur, individuals who have successfully weathered an identity crisis (i.e., those who are identity achieved) are better able to handle stressful life events than are individuals in the other three categories (Marcia, 1993).

Table 3.4. Marcia’s (1966) Four-Stage Model of Identity Status Development

Identity Status	Exploration and Commitment	Description	Sample Items Used to Measure Identity Status
Identity Achieved	Exploration—Yes Commitment—Yes	Individual has resolved an identity crisis by making identity commitments.	It took me awhile to figure it out, but now I really know what I want for a career. I’ve gone through a period of serious questioning about faith and can now say I understand what I believe in as an individual.
Moratorium	Exploration—Yes Commitment—No	Individual is actively working toward making identity commitments	I’m not so sure what religion means to me. I’d like to make up my mind but I’m not done looking yet. I’m not sure about my political beliefs, but I’m trying to figure out what I can truly believe in.
Identity Diffused	Exploration—No Commitment—No	Individual is making no attempt to create an identity	I haven’t really considered politics. They just don’t excite me much. I’m sure it will be pretty easy for me to change my occupational goals when something better comes along.
Foreclosed	Exploration—No Commitment—Yes	Individual has made identity commitments in the absence of exploration.	I guess I’m pretty much like my folks when it comes to politics. I follow what they do in terms of voting and such. I’ve never really questioned my religion. If it’s right for my parents it must be right for me.

2. Self-Awareness In Adolescence

In addition to being a time of identity confusion, adolescence is also a time of increased self-consciousness. This heightened self-awareness takes two forms. The first is a private preoccupation with oneself, epitomized by the soul-searching Erikson described. The second is an excessive (some would say obsessive) concern with how one appears to others. Adolescents are notorious for believing that others are scrutinizing them, talking about them, and evaluating them (Elkind, 1967). These feelings appear to be particularly

acute during early adolescence (Rosenberg, 1979) and decline as adolescents begin to make their identity commitments (Adams, Abraham, & Markstrom, 1987; Ryan & Kuczkowski, 1994).

3. ***Is Adolescence Invariably Stressful?***

Adolescence is clearly a psychologically rich period of life. The dramatic physical, cognitive, and social changes that occur can have many negative consequences, as evidenced by the disproportionately high rates of substance abuse, accidents related to high-risk behavior, and suicides among this demographic group (Eaton et al., 2005). But is adolescence invariably stressful? The answer appears to be “no.” Although many adolescents confront the sorts of issues Erikson and others have spoken of and experience temporary disturbances in the self-concept, these changes are rarely extreme or long-lasting. Moreover, many positive changes occur in adolescence as well, including strong ties to peer groups and a new sense of freedom and control. For these reasons, the majority of adolescents do not experience the kind of anguish and turmoil that the term “identity crisis” implies (Petersen, Compas, Brooks-Gunn, Stemmler, Ey, & Grant, 1993).

D. ***Self-Conceptions in Adulthood***

And the years are rolling by me, they are rocking evenly,
I am older than I once was, and younger than I'll be, that's not unusual.
No it isn't strange, after changes upon changes we are more or less the same.
After changes we are more or less the same. (P. Simon, *The Boxer*)

Adolescence is not the only period of life characterized by transition and change. In adulthood, people get married, begin careers, have children, relocate to new cities, and so forth. Despite these many changes, the adult personality is remarkably stable (Roberts, Robins, Trzesniewski, & Caspi, 2003; Terracciano, Costa, & McCrae, 2006). This is especially true when we look at rank-order stability. Although some personality traits shift over time (e.g., people generally become more conscientious with age), the rank-ordering of individuals remains fairly constant across adulthood (e.g., a person who scores high in conscientiousness at age 30 is very likely to score high in conscientiousness at age 65). This stability also characterizes people's ideas about themselves. Self-ratings obtained in early adulthood are highly similar to self-ratings obtained many years later (Mortimer, Finch, & Kumka, 1982). Identities are added and lost, of course, but our ideas about ourselves remain fairly constant.

Some of this continuity arises because people misremember who they used to be. In one study (Markus, 1986), individuals were queried about their political attitudes at two points in time: When they were in their mid 20s and nine years later, when they were in their mid 30s. At the second testing session, individuals were also asked to remember what their attitudes had been nine years earlier. Even though many individuals' attitudes had changed quite a bit over time, they misremembered their earlier attitudes, recalling them as being much more like their current attitude than was actually the case. Doing so allowed them to perceive stability and consistency even though they had experienced discontinuity and change.

Of course, individuals don't always deny that they have changed. Many elderly

people concede that they are less impulsive or energetic than they used to be. Because these changes are expected and normative, they rarely challenge people's sense of personal identity. Instead, people embrace these changes as part of life, believing they are following a predictable trajectory (McFarland, Ross, & Giltrow, 1992; Ross, 1989; Ross & Wilson, 2002; Wilson & Ross, 2001).

These interpretive processes extend into late adulthood. Although advancing age often brings many changes, including impairment in visual, auditory, and motor functioning, there is little consistent evidence that people's views of themselves change appreciably in old age (Brandtstädter & Greve, 1994). Nor does research support the claim that elderly people are lonely, depressed, and filled with despair. Absent any serious health problems, people's feelings toward themselves and the perceived quality of their lives do not decline with age. Again, this is because people do not passively register the circumstances of their lives, they actively transform them. Among other things, they adjust their goals and compare themselves with people their own age. Age also brings positive changes as well (Carstensen & Freund, 1994; Cross & Markus, 1991). As was true with adolescence, then, most people are not filled with angst at this stage of life.

The processes of aging involve a multitude of changes and discontinuities that challenge the person's construction of self ... It seems plausible to assume, as many researchers in the field of adult development and aging have done, that such experiences should translate into problems of self-esteem, reduced well-being, and in increased vulnerability to depression. Despite their seeming theoretical consistency, these assumptions have received little empirical support. On the contrary, the picture that begins to emerge from recent research gives testimony to a remarkable stability, resilience, and resourcefulness of the aging self. (Brandtstädter & Greve, 1994, p. 71)

IV. **The Problem of Personal Identity**

As individuals mature, they encounter a wide variety of experiences, both trivial and transformative. Yet, most people perceive a continuity and unity to themselves that transcends these changes. In the final section of this chapter, we will consider the basis for this perceived continuity and unity. Our discussion will be framed around a philosophical puzzle known as the problem of personal identity.

The problem of personal identity refers to whether there is something that binds our myriad perceptions and thoughts. Our mental lives are a kaleidoscope of shifting perceptions and sensations (we see, we hear, we think, we remember). These various perceptions seem tied together and we use the term **I** to refer to this connection. It is **I** who heard the sound of thunder; **I** who thought about you yesterday. What is the nature of this **I** that appears to unite these perceptions? This is the problem of personal identity.

A deceptively simple answer is that the term refers to some aspect of our physical bodies. But what aspect? If you lost an arm or a leg, would you still refer to yourself with the personal pronoun **I**? Most people, it seems fair to say, would. Perhaps the appendages are not intimate enough to negate your identity; perhaps there is some other part of you that, if lost, would lead you to no longer refer to yourself with the personal pronoun **I**. But if so, what is it? Before answering, consider the following ancient puzzle of the ship of Theseus.

Theseus was an Athenian warrior who traveled to Crete, where he defeated the Minotaur, rescued some Athenian captives, and returned to Athens. In honor of his conquest, the Athenians preserved his ship and sailed it once a year on parade. Over the years, the ship began leaking, so planks were gradually removed and replaced with new ones. Eventually, none of the original planks remained.

The philosophical question of interest is whether the ship retains its identity, even though all of its original planks are gone. When asked this question, most people believe the ship would retain its identity. As long as the replacements are made gradually, people are comfortable saying the ship is still the same. Now let's complicate things a bit. Suppose I tell you that one Athenian had been collecting the old, discarded planks, one by one, and had carefully reconstructed the original ship according to the original design. When the annual parade comes around, he brings out his ship and proclaims it the real Ship of Theseus. Which is the real ship now? The refurbished ship that has none of the original planks or the reconstructed ship which has all of the original planks?

Although there is no one answer to this question, many philosophers believe the refurbished ship is the true Theseus. In making this argument, they draw inspiration from the Greek philosopher, Aristotle, who distinguished between the substance of an object and its form. The substance of an object is its matter—the material of which it is made. Its form is abstract and immaterial. Consider, for example, a bronze statue. The substance of the object (its matter) is bronze; statue is its form. If we melted the bronze and made some other object with it (say a poker for the fireplace), we would no longer have the same object, even though the object's substance is unchanged. As applied to the ancient ship of Theseus, this perspective maintains that the refurbished ship is the true Theseus because its form was continuous (though its matter has changed).

A. ***Historical Solutions to the Problem of Personal Identity***

A comparable logic can be applied to the problem of personal identity. Aristotle's analysis suggests that the essence of a person is not the person's physical substance, but the person's form, which Aristotle referred to as the person's Soul. For Aristotle (and many other theorists), the Soul is an immaterial (noncorporeal) entity that unites our various perceptions and establishes our identity. Although highly unlikely, it is possible that the same molecules and atoms that were once the body of Person X could come to comprise the body of another human being (Person Y). But even if this were to happen, Person X wouldn't be Person Y (anymore than the melted bronze would be a statue). This is because the essence of a person is form, not substance.

1. ***The Spiritualists***

Aristotle's view of the Soul as an immaterial entity that unites the person's various perceptions and sensations held sway for over 2,000 years after his death. It was adopted by the Scholastic philosophers of the Middle Ages (e.g., Augustine, Aquinas), and by Descartes and his followers during the Age of Reason. Each philosopher amended the doctrine and emphasized different aspects and functions of the soul, but all agreed that something substantial provided the unity behind our myriad perceptions. Adherents of this view are known as Spiritualists, as they assert that an immaterial (spiritual) substance constitutes the essence of personal identity.

2. **Locke**

The British philosopher, John [Locke \(1632-1704\)](#), offered another solution to the problem of personal identity. Locke wrote on a wide range of topics and is generally regarded as the father of modern democracy. His claim that people enter the world a blank slate (*tabula rasa*) undercut the notion that some people, by virtue of their birth, are privileged and destined to rule. Thomas Jefferson and other American colonists adopted Locke's position when writing the Declaration of Independence, asserting that "all men are created equal."

Locke also wrote about matters of moral responsibility. He wondered when people could be held accountable for their actions, a question akin to what today we would call the "insanity defense." He began by distinguishing two terms: man and person. Man refers to the physical aspects of existence, to our bodies; person refers to our personal identity. In his major work, *An Essay Concerning Human Understanding*, Locke defined a person as

a thinking intelligent being that has reason and reflection and can consider itself as itself, ... as the same thinking thing in different times and places. Further, as this consciousness can be extended backwards to any past action or thought, so far reaches the identity of that person.

Three aspects of Locke's analysis are particularly noteworthy. First, Locke's distinction between man and person is reminiscent of Aristotle's distinction between substance and form. Man is substance; person is form. Second, as did Mead, Locke emphasized that the ability to take ourselves as the object of our own attention is a defining feature of the human mind. Finally, Locke's reference to thought "across time and place" establishes that the criterion for personhood is an ability to remember our various perceptions in the prior situations of our lives. For Locke, then, the identity of the person is tied to memory; it extends as far back in time as the person has memories. As applied to matters of moral responsibility, Locke argued that only a person can be held accountable for his actions. If a human commits a crime but has no memory for the act, then he was not acting as a "person" and is not responsible for his crimes.

By treating identity in terms of memory, Locke moved the study of self from the spiritual to the empirical. At the same time, his departure from the substantialist tradition was incomplete. Locke could not bring himself to believe that a person's perceptions were not united in some fashion. He concluded that our memories are suspended in, or inhere in, an immaterial substance. Although he believed we could never know what this immaterial substance or substratum was like, he was sure it existed.

3. **Hume**

Locke's ideas were subsequently extended and modified by David [Hume \(1711-1776\)](#). Hume was a Scottish philosopher who applied a healthy skepticism to all matters. He is best known for his attack on the principle of causality. Hume argued that the true causes of events are never known directly, but are always inferred. Imagine, for example, we see someone roll Ball A at a stationary ball (Ball B). When Ball A strikes Ball B, Ball B begins to move. It is tempting under these circumstances to conclude that the first ball (or at least the force applied to it) caused the second ball to move. Hume cautioned that this is always an inference subject to error. Some other force may have caused the ball to move.

The only thing we experience directly is the temporal succession of one ball contacting another. Our conclusion that the first ball caused the second to move is entirely an inference; it is not a direct perception.

Hume applied these ideas to the topic of personal identity in his *Treatise on Human Nature*. As had Locke, Hume assumed that the subjective unity of the self derives from memory: We remember having particular perceptions and thus perceive a unified entity as having those perceptions. Hume disagreed with Locke, however, as to whether these perceptions were joined in any fashion other than a subjective, psychological one. He did not believe they were. He did not believe there was an immaterial substance that was the bearer of this unity. Instead, he believed that all that existed were isolated perceptions. We perceive them as joined, but this perception is a fiction; the isolated perceptions themselves are not joined in any real fashion.

Hume's basis for reaching this conclusion is that he cannot find any such substance or unity in himself.

There are some philosophers, who imagine we are every moment intimately conscious of what we call our SELF; that we feel its existence and its continuance in existence; and are certain, beyond the evidence of demonstration, both of its perfect identity and simplicity. ... These philosophers are the curious reasoners concerning the material or immaterial substances in which they suppose our perceptions inhere. In order to put a stop to these endless cavils on both sides, I know no better method than to ask these philosophers in a few words, What they mean by substance and inhesion? ... I desire those philosophers who pretend that we have an idea of the substance of our minds to point out the impression that produces it, and tell distinctly after what manner that impression operates, and from what object it is derived. Is it an impression of sensation or of reflection? Is it pleasant, or painful, or indifferent? Does it attend us at all times, or does it only return at intervals?

Hume fails to find any such substance in himself. He writes:

For my part, when I enter most intimately into what I call myself, I always stumble on some particular perception or other of heat or cold, light or shade, love or hatred, pain or pleasure. I never can catch myself at any time without a perception. When my perceptions are removed for any time, as by sound sleep, ... [I] may truly be said not to exist. ... If anyone, upon serious and unprejudiced reflection, thinks he has a different notion of himself, I must confess I can reason no longer with him. All I can allow him is, that he may be in the right as well as I, and that we are essentially different in this particular. He may, perhaps, perceive something simple and continued which he calls himself; though I am certain there is no such principle in me.

Hume goes on to say that our notions of personal identity derive from the fact that our thoughts follow one another so rapidly that we confuse temporal contiguity with unity.

The mind is a kind of theatre, where several perceptions successively make their appearance. ... [But] the comparison of the theatre must not mislead us. [It is only] the successive perceptions ... that constitute the mind; [we haven't] the most distant notion of the place where these scenes are represented, or of the materials of which it is composed. ... personal identity is nothing but a bundle or collection of different perceptions which succeed

each other in an inconceivable rapidity.

To summarize, in agreement with Locke, Hume believed that thoughts and perceptions make up our sense of personal identity. Unlike Locke, however, Hume sees no unity to these perceptions. For Hume, "The identity which we ascribe to the mind of man is only a fictitious one." All we experience are thoughts and perceptions in rapid succession. The rapidity with which these thoughts appear gives rise to an illusion of unity, much as cartoon characters on television shows seem to be moving. We perceive them to be joined and unified but in fact they are isolated and separate. For Hume, any view of self other than the mere succession of perceptions is a fiction.

4. **William James**

With these theorists providing the background, William James tackled the problem of personal identity. He introduced the issue by noting that the nature of personal identity is one of the most formidable problems in the field of psychology.

Ever since Hume's time, [the nature of personal identity] has been justly regarded as the most puzzling puzzle with which psychology has to deal; and whatever view one may espouse, one has to hold his position against heavy odds. If, with the Spiritualists, one contend for a substantial soul ... one can give no positive account of what that may be. And, if with the Humians, one deny such a principle and say that the stream of passing thoughts is all, one runs against an entire commonsense of mankind, of which the belief in a distinct principle of selfhood seems an integral part. (p. 330)

James attempts to solve this enigma by staking out a middle ground between these various positions. He disagrees with those who postulate the existence of an immaterial soul substance that binds our perceptions together, but he also disagrees with those who claim there is no tie binding these perceptions at all. Instead, James's position is that there is a unity to the self, provided by the thoughts and perceptions themselves and the feelings associated with them.

Let's look at how James developed his argument. He began by noting that everyone is familiar with an aspect of existence that seems peculiarly one's own.

... all men must single out from the rest of what they call themselves some central principle ... Some would say that it is a simple active substance, the soul, of which they are thus conscious; others, that it is nothing but a fiction, the imaginary being denoted by the pronoun I, and between those two extremes of opinion all sorts of intermediaries would be found. ... [But setting aside for the moment just what this central principle is,] let us try to settle for ourselves as definitely as we can, just how this central nucleus of the Self may feel. [For] whether it be a spiritual substance or only a delusive word ... this central part of the Self is felt. [It is not] cognized only in an intellectual way ... when it is found it is felt (pp. 298-299).

James goes on to claim that this central nucleus of the self (the **I** as we have called it) is a component of the spiritual self. Each perception flows by, but these perceptions are not isolated and distinct, joined only in an illusory manner by virtue of their close contiguity, as Hume had claimed. Instead, they are joined because they are part of the same stream (of consciousness). Moreover, each perception carries a distinctive feeling that we recognize as ours and ours alone, and this distinctive feeling is the tie that binds our perceptions

together.

Each thought, out of a multitude of other thoughts of which it may think, is able to distinguish those which belong to its own [Self] from those which do not. The former have a warmth and intimacy about them of which the later are completely devoid (p. 330)

To summarize, James's position is that the unity of the self can be explained entirely in psychological terms. Each successive thought is joined with previous thoughts by virtue of the feeling they share. There is no immaterial substance, but neither is identity a fiction. Personal identity is our uninterrupted memory for prior perceptions and our memory of the affect associated with them. Much as the ancient ship, Theseus, retained its identity when each plank was gradually replaced, so, too, does our identity remain intact as each idea, perception, or sensation fades and is immediately replaced by another that carries the same distinctive feeling.

A uniform feeling of 'warmth' ... pervades [our various selves] and this is what gives them a generic unity, and what makes them the same kind. ... where the resemblance and the continuity are no longer felt, the sense of personal identity goes too. (p. 335)

James's analysis is admittedly speculative, and readers of this book are free to draw their own conclusions regarding the cogency of James's solution. What is important to understand from the standpoint of this book is the attempt James made to understand the nature of the **I** within a psychology of the self. Many commentators have claimed that James believed the nature of the **I** was not a suitable topic for psychological analysis (e.g., [Allport, 1943](#)). This is not so. It is certainly the case that James believed psychology needn't concern itself with a soul substance, which he referred to as an "illusory term" and "a complete superfluity" (p. 348), but he also believed that the **I** (as it refers to our sense of personal identity) was a bona fide psychological phenomenon worthy of investigation.

The close connection James saw between self and emotion is also of interest. This emphasis surfaced in his discussion of our memory for childhood events.

We hear from our parents various anecdotes about our infant years, but we do not appropriate them as we do our own memories. Those breaches of decorum awaken no blush, those bright sayings no self-complacency. That child is a foreign creature with which our present self is no more identified in feeling than it is with some stranger's live child today. Why? Partly because great time-gaps break up all those early years—we cannot ascend to them by continuous memories; and partly because no representation of how the child felt comes up with the story. We know what he said and did; but no sentiment of his little body, of his emotions, of his psychic strivings as they felt to him, comes up to contribute an element of warmth and intimacy to the narrative we hear, and the main bond of union with our present self thus disappears. (p. 335).

This quote is noteworthy for several reasons. The first is the role of continuity. One reason we do not identify with our infancy is because of the gap. We simply cannot remember being the child our parents describe. More interesting is the emphasis on affect, warmth, and intimacy. We do not relate to our infancy because we cannot recapture the way we felt then. The implication is that even if we could remember the incidents

themselves, we would not identify with our infancy unless we also could remember what it felt like to be us. For James, it is the continuity of our distinctive warmth and intimacy that underlies personal identity.

It is interesting to compare James's analysis to Locke's distinction between man and person. Recall that Locke contended that personal responsibility required memory for one's actions. According to Locke, only someone who can remember committing an action can be held accountable for his or her behavior. James takes this analysis one step further. It is not enough to simply remember committing an act, James claims, one must also be able to access the feelings the act occasioned. Imagine that someone accused of a crime says "I remember committing the act, but only in a cold detached way, with no connection to the feelings that were present, as if I were watching a film of some other person committing the act." Would we be inclined to hold this person accountable for his actions? James's analysis of the problem of personal identity says "No." Personal identity requires more than memory; it requires an ability to recapture the feelings associated with the experience.

In more general terms, we began this section by asking whether there is something we could lose that would negate our identity, that would lead us to no longer refer to ourselves with the personal pronoun I. James's answer is that this something is the way it feels to be us.

If a man wakes up some fine day unable to recall any of his past experiences, so that he has to learn his biography afresh, or if he only recalls the facts of it in a cold abstract way ... he feels, and he says that he is a changed person. (p. 336; emphasis added)

Ultimately, James asserts, our identities are based on an uninterrupted awareness of how it *feels* to be us.

B. *Modern Solutions to the Problem of Personal Identity*

1. *Cognitive Neuroscience*

In recent years, the tools of cognitive neuroscience have been used to address the problem of personal identity (Lieberman & Pfeifer, 2005). This approach assumes that neurological processes produce our subjective sense of unity and continuity. Such an approach is called "reductionistic," because it assumes that complex psychological phenomena can be reduced to anatomical structures and biological events.

Scientists who examine the neurological substrates of psychological processes typically follow two strategies. First, they examine the behavior of patients who have neurological disorders or have suffered damage to various areas of the brain. Consider the case of verbal asomatognosia. Patients who suffer from this rare neurological disorder deny ownership of their own limbs. To illustrate, in one study (Feinberg, Haber, & Leeds, 1990), the experimenter lifted the left arm of patients and asked them "What is this?" The most common reply was "it's your hand" or "it's your arm," indicating that the patients believed their own left arm belonged to the experimenter. One patient called the arm "a breast" and a "deodorant," while another called it "my mother-in-law's" hand. All reported cases of verbal asomatognosia are the result of damage to the right cerebral hemisphere, suggesting that regions in this portion of the brain play a critical role in producing bodily

self-awareness (Decety & Sommerville, 2003).

Along with the study of neurological disorders, neuroscientists also examine areas of the brain that are activated when normally functioning individuals process information about themselves. Most of these investigations use functional magnetic resonance imaging (fMRI), a procedure that monitors brain activity by detecting changes in blood flow or blood oxygenation (Poldrack & Wagner, 2004). In one such study, Kircher et al. (2000) had heterosexual men view photographs of themselves or their romantic partner. Numerous areas of the brain were involved in both recognition tasks, but looking at one's own face differentially activated areas on the left prefrontal areas and the right limbic system, suggesting that these areas might be critically involved in self-recognition (but see also, Turk, Heatherton, Kelley, Funnell, Gazzaniga, & Macrae, 2002).

Although research in this areas is in its infancy, it is doubtful whether a reductionist approach will ever solve the problem of personal identity (Feinberg, 2001). Our identity includes a multitude of perceptions distributed across wide areas of the brain. In addition to visual self-recognition and awareness of one's own body, our sense of self also includes autobiographical memory, knowledge of our tastes, preferences, and habits, our social relationships, and our perceived psychological qualities. All of these perceptions contribute to identity, but none is essential.

Water provides one way to think about this issue (Searle, 1992). Water is composed of hydrogen and oxygen molecules, but the properties of water, such as its liquidity or transparency, cannot be found in these distinct elements. Instead, water is an emergent phenomenon—a whole that cannot be reduced to its constituent parts. In a comparable fashion, our sense of self is most likely an emergent phenomenon that cannot be reduced to its neural components. From our earliest days, we experience a multitude of sensations—some somatic, some social, some psychological—and these disparate sensations are integrated into a unified and organized experience we call “our selves.” In this sense, the self is a psychological construction, not an anatomical one. It is comprised of neurological processes but not derived from them.

2. **The Personal Narrative**

Identity is the story that the ... **I** constructs and tells about the **ME** (McAdams, 1997, p. 62).

Treating identity as a psychological construction lies at the heart of the final perspective we will consider on the nature of personal identity. This perspective asserts that identity is a story people tell about themselves (Bruner, 1987; Cohler, 1982; Dennett, 1991; Filipp & Klauer, 1986; Gergen & Gergen, 1983; Habermas & Bluck, 2000; McAdams, 1996, 1997, 2001; McLean, Pasupathi, & Pals, 2007; Staudinger, 2001; Vollmer, 2005). Like other stories, this personal narrative, as McAdams calls it (McAdams, 1996), has settings, scenes, characters, plots, and themes. It includes autobiographical memories of the past, a description of the present self, and our hopes and fears for the future.

Effective personal narratives typically accomplish three goals. First, they provide continuity by explaining how we came to be the person we are today. Second, they provide unity by integrating our various roles, relationships, and perceived characteristics into a coherent identity. Third, they outline visions of the future and the steps we plan on taking

to become the person we would like to become (or avoid becoming the person we are afraid of becoming).

Although cultures influence the precise form these stories take, most personal narratives contain one or two critical incidents or “turning point” experiences. These experiences (which may not be recognized as such until years later) usually involve the learning of an important life lesson or a powerful insight about one’s values and beliefs (McLean, 2005). For example, a person’s narrative might include the time they refused to succumb to peer pressure as a way of illustrating their burgeoning independence and maturity (“Watching everyone doing drugs made me realize I didn’t need to have other kids’ approval in order to feel good about myself. That was the first time in my life I felt grown up and strong.”)

The personal narrative is not a complete or literal recollection of one’s life. It is an edited, selective version that includes some events and excludes others. Moreover, it is subject to revision. As individuals age, they may regard a previous experience as being less important than it used to be, or view a formally unimportant event as now being self-defining. Often times these revisions take place in the form of conversation, when individuals relate these stories to others. This is a critical aspect of the personal narrative. Life stories are not constructed solely for our own benefit; instead, they are shared with others and other people’s expectations and reactions shape the narrative’s content and form (McLean et al., 2007; Pasupathi, 2001; Thorne, 2000). In this sense, personal narratives are a social construction.

Many theorists believe that personal narratives are not constructed until adolescence (McAdams, 2001; McLean & Pratt, 2006; Habermas & Bluck, 2000). Younger children have autobiographical memories and possess a self-concept, but they do not integrate these various aspect of self into a coherent identity until they face the adolescent identity crisis Erikson outlined. This change comes about for cognitive reasons—young children do not possess the ability to think abstractly and integrate diverse elements of a story into an overall theme—and motivational reasons—young children aren’t expected to have constructed a coherent story of their life in the service of forming a mature identity.

Adolescence continues to play a key role in our personal narrative in later life as well. When individuals of various ages are asked to recall important events in their life, they show a distinct tendency to remember more events from a period of life that encompasses late childhood to early adulthood (10-30 years of age) (Rubin, Rahhal, & Poon, 1998). This “autobiographical memory bump” (as it is called) not only includes events in our own life, but also important cultural experiences, such as movies, news events, and music. Several factors combine to produce this memory bump, including the overrepresentation of “first-time” experiences (e.g., many people remember their first kiss but few remember their 52nd) and a tendency to share our stories with others during this stage of life in an attempt to promote intimacy and connectedness.

Today, the World Wide Web provides an interesting repository for these personal narratives. Many people (and especially adolescents and young adults) now keep a BLOG or share their personal experiences and photographs through websites such as *Twitter* and *Facebook*. These “public diaries” enable individuals to relate their life story to others, and

to read and comment on other people's personal narratives. Ultimately, the prevalence of this form of discourse may shape the nature of identity itself, as the barriers between self and others become increasingly narrowed.

V. Chapter Summary

In this chapter we charted the developmental course of the self. We began by considering the origins of self-awareness. In the first days of life, infants are capable of distinguishing themselves from others and imitating another person's facial display. By two months of age they are able to detect their ability to control environmental events, and by nine months of age they can recognize themselves in a mirror. These findings suggest that a rudimentary self-concept emerges early in life and may even be present at birth.

Next, we discussed Mead's theory. Mead believed that the self emerges when individuals are able to look back on themselves from the perspective of another person, and that language and communication with gestures provide the impetus for this developmental milestone. Although Mead also believed this ability was unique to humans, more recent research has found that chimpanzees, orangutans, and dolphins may also possess self-awareness.

In the third section of this chapter we discussed the development of the **ME**. First, we noted that self-descriptions become increasingly general and abstract as people age. Next, we discussed adolescence, and the so-called "adolescent identity crisis," emphasizing that although adolescence is a time of great change in the self, most individuals weather these changes with a strong sense of identity.

Finally, we considered a philosophical problem known as the problem of personal identity. The question here is whether there is some aspect of self that binds various perceptions and memories together. After reviewing various historical positions on the matter, we noted that contemporary researchers emphasize that identity is a narrative story people tell about themselves.

Throughout our discussion of these issues, we have given particular attention to the views of William James. This emphasis is entirely commensurate with the influence he has had on the field. James wrote on a range of topics, and the insights he provided over 100 years ago have given subsequent researchers a wealth of testable hypotheses. We will have occasion to revisit many of these issues throughout the remainder of this text. Despite the breadth of his coverage, one idea runs like a leitmotif through James's analysis. This is the notion that whatever is self is laden with emotion. For James, emotion is the defining feature of that which is self.

- Self-awareness in humans may be present at birth. Infants appear to possess an innate capacity to distinguish self from "not self," to recognize their ability to produce desired outcomes, and to coordinate their own movements (suggesting the existence of a primitive body schema). These findings are consistent with the claim that newborns enter the world with a rudimentary sense of self that sets the stage for later development.
- Self-recognition in infants begins with the ability to recognize oneself through contingent movement (as indexed by a mirror-recognition task). This ability is apparent around nine months of age. At around 15 months of age, infants are able to recognize themselves with noncontingent stimuli (e.g., a photograph) and pass the facial mark test. By 21 months of age, most infants are further able to identify

themselves using personal pronouns.

- Mead presented a theory of the self that tied its development to social interaction. Individuals enter the world as unsocialized beings, but they come to adopt the standards and norms of the culture into which they are born. They do so, Mead argued, by developing self—by acquiring the capacity to look back on themselves through the eyes of others. Two activities—the need to communicate with symbols, and play—facilitate the development of this perspective-taking ability. At first, these activities lead individuals to adopt the perspective of particular others toward the self; later, individuals come to adopt the perspective of an abstract, generalized other. When this perspective-taking sequence is completed, the self is said to be fully developed and the individual is said to be fully socialized.
- Research using a mirror-recognition task has found that three species besides humans (chimpanzees, orangutans, and dolphins) are capable of recognizing themselves in a mirror. Chimpanzees raised in social isolation fail to show mirror-recognition, supporting Mead’s claim that self-development requires social interaction.
- People’s thoughts about themselves follow a developmental sequence of increasing generality and abstraction. Young children focus on specific concrete, observable aspects of themselves, such as their physical characteristics and typical activities. As they age, children increasingly couch their self-descriptions in terms of more general traits and qualities that subsume these more specific attributes. They also begin to define themselves in social terms. Self-descriptions become increasingly more general and abstract during adolescence, with an emphasis on hidden, psychological characteristics (e.g., feelings, motives) rather than observable, physical ones.
- Adolescence is a critical time in self-development. Erik Erikson coined the term “identity crisis” to describe the process many adolescents go through in their attempt to (re)define themselves. Not all adolescents suffer difficulties during this stage of life, however, and most weather the storms of adolescence unscathed.
- People’s ideas about themselves remain stable during adulthood. New identities are added as people’s lives change, but people actively interpret these experiences in ways that allows them to maintain a sense of continuity.
- For centuries, philosophers have pondered a puzzle known as the problem of personal identity. The problem centers around whether there is something that unites our various perceptions and sensations. Early philosophers (from Aristotle to Descartes) maintained that people possess a soul that unites these aspects of psychological life. John Locke, a British philosopher, tied personal identity to memory, arguing that the unity we experience is provided by our memories. David Hume, a Scottish philosopher, took issue with this claim and asserted that personal identity is entirely an illusion. William James built on these claims and argued that identity involves continuous memory for how it feels to be us.
- In more recent times, cognitive neuroscientists have attempted to solve the

problem of personal identity, adopting a reductionist approach by assuming that identity has a biological basis. Other researchers have suggested that Identity is a personal narrative people tell about themselves. These narratives provide continuity by explaining how we came to be the person we are today, provide unity by integrating our various roles, relationships, and perceived characteristics into a coherent identity, and outline visions of the future and the steps we plan on taking to become the person we would like to become (or avoid becoming the person we are afraid of becoming).

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