

meaning is constructed across these contexts as individuals develop social cognitive abilities that allow for such construction to occur. Awareness of the meanings associated with these cultural constructions leads to the development of cultural or ethnic identity, which appears to develop later than gender or racial identity. Future research will need to test these ideas directly and explore the degree to which these processes are similar or different in people of different cultures around the world.



## Glossary

**acculturation** The process of adapting to, and in many cases adopting, a different culture from the one in which a person was enculturated.

**authoritarian parent** A style of parenting in which the parent expects unquestioned obedience and views the child as needing to be controlled.

**authoritative parent** A style of parenting that is viewed as firm, fair, and reasonable. This style is seen as promoting psychologically healthy, competent, independent children who are cooperative and at ease in social situations.

**cofigurative culture** A culture in which change occurs rapidly. Both adults and peers socialize young people. Young people may have to turn to one another for advice and information in this type of culture.

**enculturation** The process by which individuals learn and adopt the ways and manners of their culture.

**permissive parents** A style of parenting in which parents allow children to regulate their own lives and provide few firm guidelines.

**postfigurative culture** A culture in which change is slow and socialization occurs primarily by elders transferring their knowledge to their children. Elders hold the knowledge necessary for becoming a successful and competent adult.

**prefigurative culture** A culture that is changing so rapidly that young people may be the ones to teach adults cultural knowledge.

**socialization** The process by which we learn and internalize the rules and patterns of behavior that are affected by culture. This process, which occurs over a long period of time, involves learning and mastering societal and cultural norms, attitudes, values, and belief systems.

**socialization agents** The people, institutions, and organizations that exist to help ensure that socialization occurs.

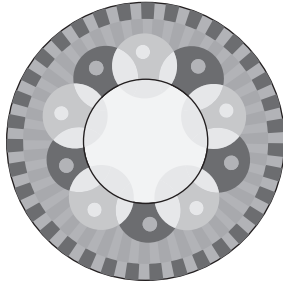
**uninvolved parents** A style of parenting in which parents are often too absorbed in their own lives to respond appropriately to their children and may seem indifferent to them.



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- socialization



## Culture and Developmental Processes

Are people born with inherent, biological predispositions to behavioral and cultural differences, or are such differences due entirely to environment and upbringing? What psychological differences are there in childhood and development when people are raised in different cultures? This chapter examines the main question of what kind of psychological differences appear to exist across cultures during infancy and childhood, and throughout development. A considerable amount of cross-cultural research has been conducted on topics such as temperament, attachment, and cognitive and moral development; in this chapter, we review that literature, comparing and contrasting what that literature says in relation to mainstream knowledge. The information presented complements that in the previous chapter; together they provide a comprehensive view of the influence of culture on developmental processes.

### Culture and Temperament

As discussed in the previous chapter, the process of socialization starts early, probably from the very first day of life. Some people believe that the biological temperament and predispositions we bring with us into the world at birth are actually part of the socialization process. In other words, the characteristics we are born with determine, to some extent, how our caregivers react and interact with us, initiating the lifelong process of socialization. We begin this review by examining the possibility that children of different cultures are born with different biological predispositions to learn certain cultural practices—that is, the issue of **temperament**.

## Traditional Knowledge

Any parent can tell you that no two babies are alike. It is not simply that they look different but that they differ from the very beginning in temperament. Each baby has its own way of being in the world—easygoing or fussy, active or quiet. These qualities of responsiveness to the environment exist from birth and evoke different reactions from people in the baby's world. Temperament is a biologically based style of interacting with the world that exists from birth.

Thomas and Chess (1977) have described three major categories of temperament: easy, difficult, and slow-to-warm-up. **Easy temperament** is defined by a very regular, adaptable, mildly intense style of behavior that is positive and responsive. **Difficult temperament** is an intense, irregular, withdrawing style generally marked by negative moods. **Slow-to-warm-up** infants need time to make transitions in activity and experiences. Though they may withdraw initially or respond negatively, given time and support they will adapt and react positively.

The interaction of a child's temperament with that of the parents, known as **goodness of fit**, seems to be a key to the development of personality. Parental reactions to a child's temperament can promote stability or instability in the child's temperamental responses to the environment. The parents' responses to the child's temperament may also affect subsequent attachment.

## Cross-Cultural Studies on Temperament

Several studies have examined whether children of non-American cultures have general styles of temperament that differ from those described for American infants. The implications of differences in temperament, if they exist, are large. If children of other cultures have different temperaments at birth, they will respond to the environment differently. Moreover, they will evoke responses from the environment and caregivers that are different from what Americans would expect. These two fundamental differences—in temperament and environmental response—should produce a fundamental difference in the learning and social experiences of those children, and consequently in their worldview and culture as they grow older. Indeed, Freedman (1974) found that Chinese American babies were calmer and more placid than European American babies or African American babies. When a cloth was placed on their faces covering their noses, the Chinese American babies lay quietly and breathed through their mouths. The other babies turned their heads or tried to pull the cloth off with their hands. A more recent study supports similar cultural differences in temperament between Chinese and Anglo infants. It was found that Chinese infants were significantly less active, less irritable, and less vocal than American and Irish infants (Kagan, Snidman, Arcus, & Reznick, 1994).

Caudill (1988) found that Japanese infants cried less, vocalized less, and were less active than Anglo infants. Freedman (1974) also found similar differences with Japanese American and Navajo babies when compared to European Americans. Likewise, Chisholm (1983) extensively studied Navajo infants and

found that they were much calmer than European American infants. Chisholm argues that there is a well-established connection between the condition of the mother during pregnancy (especially high blood pressure levels) and the irritability of the infant. This connection between maternal blood pressure and infant irritability has been found in Malaysian, Chinese, and Aboriginal and white Australian infants, as well as in Navajo infants (Garcia Coll, 1990). Garcia Coll, Sepkoski, and Lester (1981) found that differences in the health of Puerto Rican mothers during pregnancy were related to differences in their infants' temperaments when compared to European American or African American infants. The Puerto Rican babies were alert and did not cry easily. The African American babies scored higher on motor abilities—behaviors involving muscle movement and coordination.

#### **Cross-cultural studies using the Neonatal Behavior Assessment Scale.**

Much cross-cultural research has been conducted using T. Berry Brazelton's Neonatal Behavior Assessment Scale (NBAS). This instrument, used to assess newborns' behaviors in the first 30 days of life, is thought to give an indication of temperamental characteristics of newborns. Studies all over the world have been conducted with the NBAS. For instance, Saco-Pollit (1989) investigated how altitude may relate to newborn behaviors. She compared Peruvian infants who were raised in high-altitude (in the Andes) and low-altitude (Lima) environments. She reports that in comparison to low-altitude infants, those raised in the Andes were less attentive, less responsive, and less active, and had a more difficult time quieting themselves. The harsh environment of living in the high Andes may have contributed to the newborns' differences. In a study of Nepalese infants, who by Western standards were undernourished, it was found that they were actually more alert and had better motor performance compared to a sample of U.S. infants (Walsh Escarce, 1989). The author hypothesizes that these results may reflect an adaptation on the part of the infant to years of poverty. She also noted that the cultural practice of daily massaging the infant, along with special rituals surrounding the baby, may have contributed to their higher performance on the NBAS.

Research conducted in the United States on Hmong infants in the Midwest, also using the NBAS, found that they were quieter and less irritable than Anglo infants (Muret-Wagstaff & Moore, 1989). These infant behaviors were also correlated with greater maternal sensitivity. The researchers raise an interesting question of how this culture in transition would be reflected in later infant-parent interactions. These studies with the NBAS illuminate how differences in temperament across cultures must not be considered in isolation from the cultural practices of infant caregiving, cultural goals for appropriate infant behaviors, and cultural ideas on the capabilities of infants. These studies also suggest that temperamental differences across cultures are indeed evident, even in infants only a few days after birth.

**Temperament and learning culture.** The interaction between parents' responses and infant temperament is certainly one of the keys to understanding

the development of culture and socialization processes. The quiet temperament and placidity that are notable in infants from Asian and Native American backgrounds are probably further stabilized in later infancy and childhood by the response of the mothers. Navajo and Hopi babies spend long periods of time tightly wrapped in cradle boards; Chinese parents value the harmony that is maintained through emotional restraint (Bond & Wang, 1983). Thus, differences in infant temperament may make it easier for parents of different cultures to engage in parenting styles and behaviors that teach and reinforce their particular cultural practices. Temperament, therefore, may serve as a baseline biological predisposition of the infant that allows this type of learning to occur.

The cultural differences that we find concerning temperament, evident very early in life, may give us a clue to what kinds of personalities and behaviors are valued in a culture as an adult. For instance, in Japan, nonreactivity (which is related to a general suppression of emotionality) is more valued than in Western cultures, where higher levels of reactivity (expression of emotionality) are more acceptable. Thus, the differences in temperament we see in the first few days of life may be a reflection of what each culture values concerning appropriate ways of acting and being (Lewis, 1989). As stated earlier, a child's temperament and the environmental response to his or her temperamental style will most likely result in differences in the learning and social experiences of those children, and consequently in their behaviors, personalities, and worldviews as they become adults.

**The goodness of fit between temperament and culture.** Research on Masai infants in Kenya has corroborated the importance of the goodness of fit between an infant's temperament and his or her environment. In other words, the adaptiveness of an infant's temperamental style to his or her development may be specific to the immediate environment. Based on Thomas and Chess's temperament classifications, deVries (1987, 1989) identified difficult and easy Masai infants and followed them for several years. What was considered a "difficult" temperament by Western standards became a protective factor against malnutrition during a time of drought. Those infants who were classified as difficult had a greater chance of survival compared to their easy counterparts. DeVries explains this surprising finding by suggesting that the difficult infants, who were very active and fussy, demanded and consequently received more feeding and caring from their mothers. In sum, a particular type of temperament may be adaptive in one culture and maladaptive in another. His findings highlight the need to consider the cultural context in analyzing the role of a child's characteristics in his or her development.

These findings also caution us about how we label the different temperamental styles. For instance, infants in the United States who have a "difficult" temperament have been found to be at risk for later behavior problems (Caspi, Henry, McGee, Moffitt, & Silva, 1995; Graham, Rutter, & George, 1973). However, having a "difficult" temperament in an extreme situation (as in the con-

text of a life-threatening drought) may be protective, rather than a risk factor, improving the infant's chances of survival. We have to remember that the way we interpret an infant's dispositions and behaviors must be considered in relation to the specific culture; the same dispositions and behaviors may have different meanings when placed in a different cultural context.

**Sources behind temperamental differences.** Why does temperament differ across cultures? It is possible that differences in temperament reflect differences in genetics and in reproductive histories. Thus, environmental and cultural pressures over generations may have helped to produce minor biological differences in infants through a functionally adaptive process. In addition, the cultural experiences of the mother during pregnancy, including diet and other culture-related practices, may contribute to a prenatal environment that modifies an infant's biological composition to correspond to those cultural practices. The fetal environment is one context where significant stimulation occurs; however, the nature and consequences of this stimulation are largely unknown (Emory & Toomey, 1991).

Whatever the causal mechanism, temperamental differences that are evident from birth contribute to the personality differences we observe in adults of different cultures. Therefore, it is important to understand the magnitude of their contributions as building blocks in the development of adult members of the cultures of the world. Future research in this area should focus on the cultural practices and actual behaviors of people of different cultural groups, and examine the relationship between those and infant temperament.

In sum, cross-cultural research suggests that there are group differences across cultures in infants' and children's temperaments. These differences may be due to multiple factors—what temperamental styles are valued in each culture, specific environmental demands (such as living in poverty or in a high-altitude environment), or physiological aspects of the mother (for example, higher blood pressure). Examining the interaction between the child's temperament and the caregiving environment into which he or she is born can help us understand the process of how we eventually learn to internalize the values, attitudes, and behaviors appropriate to our culture.

## Culture and Attachment

**Attachment** refers to the special bond that develops between the infant and its primary caregiver. Many psychologists believe that the quality of attachment has lifelong effects on our relationships with loved ones. Attachment provides the child with emotional security. Once attached, babies are distressed by separation from their mothers (separation distress or anxiety). The studies on attachment in rhesus monkeys by the Harlows (Harlow & Harlow, 1969) highlighted the importance of contact and physical comfort in the development of attachment.

## Bowlby's Theory of Attachment

Bowlby's (1969) evolutionary theory of attachment states that infants must have a preprogrammed, biological basis for becoming attached to their caregivers. This innate behavioral repertoire includes smiling and cooing to elicit physical attachment behaviors on the part of the mother. He argues that the attachment relationship between caregiver and child functioned as a survival strategy: Infants had a greater chance of survival if they remained close to the mother for comfort and protection.

Attachment as a survival strategy is illustrated in a study in Nigeria of Hausa infants and their caregivers (Marvin, VanDevender, Iwanaga, LeVine, & LeVine, 1977). The researchers report that the attachment relationship protected infants from the dangers of their environment, which included open fires and tools and utensils that were easily accessible. Infants explored their environment, but only when they were in close proximity to an attachment figure. Furthermore, True (1994) found that secure attachment functioned as a protective factor against infant malnutrition among the Dogon of Mali.

## Ainsworth's Classification System of Attachment

Based on Bowlby's attachment theory, Mary Ainsworth's (1967, 1977) famous study in Uganda led to the tripartite classification system of attachment relationships between infants and their mothers. Based on her careful observations of 28 mother–infant pairs over a span of one year, she described three attachment styles: secure, ambivalent, and avoidant. The latter two attachment styles she labeled as “insecurely attached.” She later replicated her results in a sample of Boston mothers and their infants. In her samples, she found that approximately 57% of mothers and infants were classified as securely attached, 25% as ambivalent, and 18% as avoidant.

Some studies from other cultures have found a similar distribution of attachment classifications; others have found considerable differences. Some attachment styles are not reported in certain cultures; for example, no avoidant infants were found in a sample of Dogon of Mali (True, 1994). In other countries (such as Israel), higher percentages of certain attachment styles (ambivalent) have been found (Sagi et al., 1994, 1997).

## Cross-Cultural Studies on Attachment

Since Ainsworth's early studies, hundreds of studies of attachment have been conducted in cultures all over the world. Van IJzendoorn and Sagi (1999) outline some important cross-cultural issues that Ainsworth's Uganda study raised: the universality of the infant–mother attachment relationship and the tripartite classification system; whether maternal sensitivity is a necessary antecedent of attachment; and what aspects of attachment development are culture-specific.

Mothers of **securely attached** infants are described as sensitive, warm, and more positive in their emotional expression. Mothers of **avoidant** children, who shun their mothers, are suspected of being intrusive and overstimulating. **Ambivalent** children are uncertain in their response to their mothers, going back and forth between seeking and shunning her attention. These mothers have been characterized as insensitive and less involved. These mothers have also been characterized as being inconsistent in their responsiveness. In a review of 65 studies of attachment, parent sensitivity was related to security of attachment; however, this association was rather modest (DeWolff & van IJzendoorn, 1997). More cross-cultural studies on the antecedents of secure attachment are needed before definitive conclusions can be drawn.

### Cross-Cultural Validity of Assessing Attachment

The cross-cultural validity of the methods of assessing attachment and the meaning of the attachment classifications themselves have been questioned. The meaning of the Strange Situation, a widely used measure of attachment, has been challenged. In the Strange Situation, infants are separated from their mothers for a brief period of time. The quality of attachment is derived partly from an assessment of the infant's reaction to the separation and subsequent reunion with the mother. However, the meaning of the separation may differ across cultures (Takahashi, 1990). As noted earlier, Japanese infants are rarely separated from their mothers, and the separation during the Strange Situation may represent a highly unusual situation that may mean something different for Japanese infants and their mothers than for U.S. infants and their mothers.

Other researchers studying Chinese infants and their mothers question the validity of the avoidant category as an indication of insecure attachment (Hu & Meng, 1996, cited in van IJzendoorn & Sagi, 1999). The researchers state that Chinese mothers emphasize early independence in their infants and, at the same time, stress their reliance on nonparental (usually the grandparent) caregivers. These factors, rather than an insecure relationship between the mother and her infant, may be responsible for findings of avoidant attachment. It may also be the case that subtle attachment behaviors (for instance, those that characterize avoidant relationships) are difficult even for well-trained coders to observe in infants from different cultures (Crittenden, 2000; van IJzendoorn & Sagi, 1999).

### Is Secure Attachment a Universal Ideal?

In the United States, secure attachment is assumed to be the ideal. The very term that Ainsworth and colleagues chose to describe this type of attachment, and the negative terms used to describe others, reflects this underlying bias. Some research suggests that cultures may differ, however, in their notion of "ideal" attachment. For example, German mothers value and promote early independence and regard avoidant attachment as the ideal. German parents see



the “securely” attached child as “spoiled” (Grossmann, Grossmann, Spangler, Suess, & Unzner, 1985). Of Israeli children who are raised on a kibbutz (collective farm), half display anxious ambivalent attachments, and only a third appear to be securely attached (Sagi et al., 1985). Children raised in traditional Japanese families are also characterized by a high rate of anxious ambivalent attachment, with practically no avoidant types (Miyake, Chen, & Campos, 1985). These traditional mothers seldom leave their children (such as with babysitters) and foster a strong sense of dependence in their children (which in itself is curious, because studies of U.S. culture have shown that ambivalent infants are generally associated with mothers who are less involved). This dependence supports the traditional cultural ideal of family loyalty. In nontraditional Japanese families, in which the mother may have a career, attachment patterns are similar to those in the United States (Durrett, Otaki, & Richards, 1984). Crittenden (2000) suggests that we should stop using value-laden terms such as “secure” and “insecure” in describing the attachment relationship. Instead, she proposes that it may be more useful to describe the attachment relationship as “adaptive” or “maladaptive” to the specific context, which would take into consideration how cultures differ in the particular attachment strategy that may be most appropriate for that culture.

However, other studies suggest that securely attached infants may indeed be the ideal across cultures. For instance, in a study involving experts (in the field of attachment) and mothers from China, Colombia, Germany, Israel, Japan, and the United States, Posada and his colleagues (1995) asked the experts to rate the characteristics of a securely attached child, and mothers to rate the characteristics of the ideal child. The researchers report that in each of the countries, the characteristics of the securely attached child were closely associated with the characteristics of the ideal child. Thus, even cultures that vary on the dimension of individualism and collectivism may have similar views on the importance of secure attachment.

A review of 14 studies on attachment from Africa, China, Israel, and Japan reports that in each of these samples the majority of infants and their mothers were classified as being securely attached (van IJzendoorn & Sagi, 1999). Furthermore, there is evidence that 7- to 9-month-old infants in every culture studied show distress when they are separated from their primary caregiver (Grossman & Grossman, 1990). Thus, attachment between infants and their mothers is considered a universal phenomenon. What may differ across cultures, however, is the specific attachment behaviors exhibited by the infant that indicate secure or insecure attachment (van IJzendoorn & Sagi, 1999).

In sum, the vast literature accumulated concerning attachment in different cultures suggests that attachment between infants and their caregivers is a universal phenomenon. There is also some evidence that the “secure” attachment relationship may be preferred in many different cultures. However, this is an ongoing debate. As stated earlier, researchers such as Crittenden (2000) argue that viewing attachment through the lens of being “adaptive” and “maladaptive” may be more useful than using the evaluative terms “secure” and “insecure.” She defines adaptive attachments as relationships that promote the

maximum level of safety for the child within a specific cultural context. This would then allow us to define an “optimal” relationship between infant and caregiver as one that may be achieved in different ways, under different circumstances, in different cultures.

### Attachment and Child Development

Why is there such a keen interest in the development of a secure attachment to a parent? One reason is that attachment styles may predict child competence. Takahashi (1990) found that at 2 years old, securely attached Japanese infants, compared to resistantly attached infants, complied more with their mother’s directions and demands, showed more curiosity about a new object, and demonstrated more social competence in how they related to unfamiliar peers. Security of attachment, however, did not predict infant competence in the third year of life. The long-term effects of the attachment relationship have been questioned. More longitudinal research that considers the stability of the caregiving environment (which is usually not measured), as well as the attachment relationship, is needed (van IJzendoorn, 1996).

Interestingly, the attachment relationship that an infant has with different caregivers may have implications for different areas of development. For instance, Gusii infants in Kenya who were securely attached to their *nonmaternal* caregivers scored higher on the Bayley Scales of Infant Development, which includes an assessment of cognitive development, than their insecurely attached counterparts. In this sample, an infant’s security of attachment to his or her *mother* did not predict cognitive development. What the infant–mother attachment relationship did predict was the nutritional or health status of the infants: Infants who were securely attached to their mothers scored higher on nutritional status than insecurely attached infants. Thus, the various attachment relationships that infants experience may affect their development in different ways (Kermorian & Leiderman, 1986).

Studies involving an African tribe of forest-dwelling foragers known as the Efe show a very different pattern from the one psychologists have come to accept as necessary to healthy attachment (Tronick, Morelli, & Ivey, 1992). Efe infants are cared for by a variety of people in addition to their mothers; the time spent with caregivers other than their mothers increases from 39% at 3 weeks to 60% by 18 weeks. They are always within earshot and sight of about ten people. They have close emotional ties to many people other than their mothers and spend very little time with their fathers. However, when infants are 1 year old, they clearly show a preference for being cared for by their mothers and become upset when left by their mothers. At this age, then, mothers once again become the primary caretakers. Thus, there is evidence that attachment to a primary caregiver is still formed, and that children are emotionally healthy despite having multiple caregivers. The Efe have large extended families, and these families are permanent parts of the growing Efe children’s lives.

Studies by Miyake (1993) and his colleagues on infant attachment patterns in Japan summarize and highlight many of these points. In numerous studies

on this topic, Miyake has reported finding no avoidantly attached children. In contrast to the United States, where most attachments are characterized as secure, attachments in Japan are overwhelmingly characterized as ambivalent, indicating a strong desire to prevent separation (and thus to foster dependence between mother and infant). Some of their other studies, moreover, have demonstrated the close relationship between temperament and attachment. These researchers measured irritability in response to interruption of sucking—a common measure of temperament—during the 2nd and 5th days of life. They then classified the neonate's cries as either smooth (fast rise time, brief duration, quick quieting) or effortful (prone to interruption, raucous in quality, and with facial and vocal expressions disorganized). They found that the nature of these cries in the 2nd and 5th days of life predicted attachment one year later, with smooth criers being associated with secure attachments and effortful criers associated with ambivalent attachment (the Japanese mode). Other studies, however, do not find a relationship between temperament and attachment style (for example, Bates, Maslin, & Frankel, 1985; Vaughn, Lefever, Seifer, & Barglow, 1989). Thus, more work needs to be done before offering conclusive statements concerning the link between temperament and attachment.

## Temperament and Attachment: A Summary

Much still needs to be done to understand the attachment patterns in other cultures and the relationship among cultural milieu, infant temperament, and attachment style. Notions about the quality of attachment and the processes by which it occurs are qualitative judgments made from the perspective of each culture. What is considered an optimal style of attachment may not necessarily be optimal across all cultures. Each culture has different but not necessarily better values than others. Furthermore, because nonparental caretaking is either the norm or a frequent form in most cultures (Weisner & Gallimore, 1977), examining the attachment “network” instead of focusing solely on dyads, as has traditionally been done, is of crucial importance (van IJzendoorn & Sagi, 1999).

The information presented so far concerning temperament and attachment relationships speaks to just a few of the many ways in which enculturation occurs around the world. Children may be born with differences in biological predispositions or temperament that may make it easier for them to engage in the cultural learning that occurs throughout socialization and enculturation. Differences in attachment provide learning platforms for children that allow them to achieve developmental goals fostered by their particular cultures. Thus, the temperamental characteristics that you were born with, your caregiver's responses to your temperamental style, and the resultant attachment relationship you develop with your caregiver together play important roles in how you come to acquire the aspects of your specific culture.

We turn now to examine cultural similarities and differences in two major developmental processes: cognitive and moral development. These topics are of great interest to developmental psychologists, both mainstream and cross-cultural, and speak to the pervasive influence of culture on developmental processes.

## Cognitive Development

### Piaget's Theory

**Cognitive development** is a specialty in psychology that studies how thinking skills develop over time. Theories of cognitive development have traditionally focused on the period from infancy to adulthood. The theory that has dominated this field for the past half-century is Piaget's stage theory of cognitive development.

Piaget based his theories on observations of Swiss children. He found that these children tended to solve problems quite differently at different ages. To explain these differences, Piaget (1952) proposed that children progress through four stages as they grow from infancy into adolescence.

1. **Sensorimotor stage.** This stage typically lasts from birth to about 2 years of age. In this stage, children understand the world through their sensory perceptions and motor behaviors. In other words, children understand by perceiving and doing. The most important achievement of this stage is the capability to use mental symbols to represent objects and events. The acquisition of object permanence—that is, knowing that objects exist even when they cannot be seen—illustrates this achievement. Early in this stage, children appear to assume that when a toy or other object is hidden (for example, when a ball rolls under a sofa), it ceases to exist. Later in this stage, children will search under the sofa for the lost ball, demonstrating that they have come to understand that objects exist continuously.

Other cognitive developments that also depend on the development of mental representation typical of this stage include deferred imitation and language acquisition. These developments have important implications for later cognitive development and enculturation. Imitation is an important cognitive component of observational learning, and language skills are necessary to ensure proper communication of verbal socialization processes.

2. **Preoperational stage.** This stage lasts from about 2 to 6 or 7 years of age. Piaget described children's thinking at this stage in terms of five characteristics: conservation, centration, irreversibility, egocentrism, and animism. **Conservation** is the awareness (or in this stage, the lack of awareness) that physical quantities remain the same even when they change shape or appearance. **Centration** is the tendency to focus on a single aspect of a problem. **Irreversibility** is the inability to imagine "undoing" a process. **Egocentrism** is the inability to step into another's shoes and understand the other person's point of view. **Animism**

is the belief that all things, including inanimate objects, are alive. For example, children in the preoperational stage may regard a book lying on its side as “tired” or “needing a rest,” or they may think that the moon is following them. Children at this stage do not yet think in a logical and systematic manner.

3. **Concrete operations stage.** This stage lasts from about 6 or 7 years until about 11 years of age. During this stage, children acquire new thinking skills to work with actual objects and events. They are able to imagine undoing an action, and they can focus on more than one feature of a problem. Children also begin to understand that there are different points of view from their own. This new awareness helps children master the principle of conservation. A child in the concrete operations stage will understand that six apples are always six apples, regardless of how they are grouped or spaced, and that the amount of clay does not change as a lump is molded into different shapes. This ability is not present in the preoperational stage. However, instead of thinking a problem through, children in this stage tend to rely on trial-and-error strategies.

4. **Formal operations stage.** This stage extends from around 11 years of age through adulthood. During this stage, individuals develop the ability to think logically about abstract concepts, such as peace, freedom, and justice. Individuals also become more systematic and thoughtful in their approach to problem solving.

The transition from one stage to another is often gradual, as children develop new abilities alongside earlier ways of thinking. Thus, the behavior of some children may represent a “blend” of two stages when they are in a period of transition from one to the other.

Piaget hypothesized that two primary mechanisms are responsible for movement from one stage to the next: assimilation and accommodation. **Assimilation** is the process of fitting new ideas into a preexisting understanding of the world. **Accommodation** refers to the process of changing one’s understanding of the world to accommodate ideas that conflict with existing concepts.

Piaget believed that the stages were universal, and that progression through these stages was invariant in order. According to Piaget, knowledge is constructed through the interactions between the biological maturation of the child and his or her actions and experiences with the physical and social environment. Because there are similarities across cultures in how individuals mature physically and in how they act on the physical world (for example, in every culture individuals ask questions, exchange information, and work together), the stages are thought to be universal. The richness of Piaget’s theory has prompted a multitude of studies of cognitive development in cultures all over the world. One finds it difficult to think of another theorist who has sparked so much comparative cross-cultural research.

### Piaget’s Theory in Cross-Cultural Perspective

Cross-cultural research on Piaget’s theory has focused on four central questions. The findings to date show an interesting blend of cultural similarities and differences in various aspects of cognitive development that parallel Piaget’s stages.

**Do Piaget's stages occur in the same order in different cultures?** Studies that have addressed this question have convincingly demonstrated that Piaget's stages occur in the same fixed order in other cultures. For instance, a large cross-cultural survey that tested children in Great Britain, Australia, Greece, and Pakistan (Shayer, Demetriou, & Perez, 1988) found that schoolchildren in these different societies performed Piagetian tasks within the same stage of concrete operations. We do not find cultures in which 4-year-olds typically lack an awareness of object permanency or 5-year-olds understand the principle of conservation. Thus, we know that children from very different cultures do indeed learn groups of Piagetian tasks in a similar order.

**Are the ages that Piaget associated with each stage of development the same in all cultures?** Studies have found surprising cultural variations in the ages at which children in different societies typically reach the third and fourth Piagetian stages. In some cases, the difference may be as much as 5 or 6 years. However, it has often been overlooked that children may have the potential to solve tasks sooner than their answers would indicate. For example, a child in the concrete operations stage will typically give the first answer that comes to mind during a test. If the child comes from a culture in which he or she has had practice performing the task in question, this answer is likely to be correct. However, a child who has never thought about the concept before may well utter the wrong answer and only later realize the mistake. When researchers checked for this possibility by repeating tests a second time at the end of testing sessions, they found that many children corrected their previous answers on the second attempt (Dasen, 1982; Dasen, Lavalley, & Retschitzki, 1979; Dasen, Ngini, & Lavalley, 1979). Thus, it is important to remember that performance on a task may not reveal actual cognitive competence or ability.

**Are there cultural variations within, rather than between, Piaget's stages?** There is considerable cultural variation in the order in which children acquire specific skills within Piaget's stages. In a comparative study of tribal children (the Inuit of Canada, the Baoul of Africa, and the Aranda of Australia), half of all Inuit children tested solved a spatial task at the age of 7 years, half of the Aranda solved it at 9 years, and the Baoul did not reach the halfway point until the age of 12 (Dasen, 1975). On a test of the conservation of liquids, however, the order changed dramatically: half of the Baoul children solved the problem when they were 8 years old, the Inuit at 9 years, and the Aranda at 12 years. Why did the ages at which these children could perform the same task vary so much? The Inuit and Aranda children live in nomadic societies, where children need to learn spatial skills early because their families are constantly moving. The Baoul children live in a settled society, where they seldom travel but often fetch water and store grain. The skills these children used in their everyday lives seem to have affected the order in which they were able to solve Piagetian tasks within the concrete operations stage.

**Do non-Western cultures regard scientific reasoning as the ultimate developmental end point?** Piaget's theory assumes that the scientific reasoning associated with formal operations is the universal end point of cognitive development—that the thinking most valued in Swiss and other Western societies (formal operations) is the yardstick by which all cultures should be judged. Because Piaget considered scientific reasoning to be the ultimate human achievement, his stage theory is designed to trace the steps by which people arrive at scientific thinking. This perspective has been widely accepted within North American psychology, and generally by the North American public, at least until very recently.

Cross-cultural research indicates that this perspective is by no means universally shared. Different societies value and reward different skills and behaviors. For example, until recently, the most respected scholars in traditional Islamic societies were religious leaders and poets. Although the Islamic educational system included science and mathematics, its primary goal was not to train people in the scientific method but to transmit faith, general knowledge, and a deep appreciation for poetry and literature. People from such cultures could be expected to be at a disadvantage when confronted with advanced Piagetian tasks, which are drawn almost exclusively from Western physics, chemistry, and mathematics.

Many cultures around the world do not share the conviction that abstract, hypothetical thought processes are the ultimate or desired end point in the cognitive development process. Many cultures, for example, consider cognitive development to be more relational—involving the thinking skills and processes needed to engage successfully in interpersonal contexts. What North Americans refer to as “common sense,” rather than cognitive development per se, is considered a much more desired outcome in many cultures. This value structure is especially apparent in more collectivistic and group-oriented cultures, in which high-level, individualistic, abstract thinking is often frowned upon.

### **Piaget's Theory: Summary and Discussion**

Cross-cultural studies of Piaget's stage of formal operations have found that in some cultures, very few people are able to complete fourth-stage Piagetian tasks. Does this mean that entire cultures are suspended at a lower stage of cognitive development? To answer this question, we must first ask whether Piagetian tasks are a culturally appropriate way of measuring an advanced stage of cognitive development. In fact, those tasks may not be meaningful in other cultures. Besides the issue of cultural appropriateness, there is also the issue of what is being tested. Tests of formal operations may tell us whether people can solve a narrow range of scientific problems, but they do not tell us whether people in different cultures develop advanced cognitive skills in areas other than those selected by Piaget.

We can say with certainty, however, that people who have not attended high school or college in a Westernized school system perform very poorly on tests of formal operations (Laurendeau-Bendavid, 1977; Shea, 1985). These findings

again raise the question of the degree to which Piagetian tasks depend on previous knowledge and cultural values rather than cognitive skills. It is also important to remember the wide range of differences in cognitive development within a given culture. These within-culture differences make it extremely difficult to draw valid conclusions or inferences about differences in cognitive development between cultures. For example, not only do members of non-Western cultures have difficulty with tests of formal operations, but many adults in North American society also have such difficulties. Scientific reasoning does not appear to be as common in Western societies as Piaget thought, and it is frequently limited to special activities. Individuals who apply scientific logic to a problem on the job may reason quite differently in other situations.

Because large numbers of people are unable to complete Piagetian tasks of formal operations, it has not been possible to demonstrate the universality of the fourth stage of Piaget's theory of cognitive development. It is possible that most adults do possess the ability to complete Piagetian tasks but lack either motivation or knowledge of how to demonstrate such ability. To demonstrate success on a task purporting to measure some aspect of cognitive ability or intelligence, it is crucial that the test-taker and the test-maker agree on what is being assessed. Cultural differences in the desired end point of cognitive development, as well as in definitions of intelligence (see Chapter 4), contribute to this dilemma.

## Other Theories of Cognitive Development

Although Piaget's theory is the most influential theory in the United States, it is only one of many stage theories that have been proposed by Western social scientists. The 18th-century German philosopher Hegel, for example, ranked all societies on an evolutionary scale based on a classification of religious beliefs, with Christianity at the top. Stage theories multiplied in the 19th century after Darwin's theory of evolution became well known. Several writers (for example, Morgan, 1877; Spencer, 1876; Tylor, 1865) proposed that humanity had progressed from savagery to civilization in a series of stages.

One of the most influential stage theories of the early 20th century was proposed by the French philosopher Levy-Bruhl (1910, 1922, 1949). In common with earlier scholars, Levy-Bruhl drew most of his conclusions from material related to the mystical and religious beliefs of non-Western peoples. Levy-Bruhl put forth the **great divide theory**, separating the thought of Westerners from that of people who lived in primitive societies. He described non-Western peoples as having a distinct way of thinking, which he attributed to the effects of culture. According to Levy-Bruhl, non-Westerners were not bothered by logical contradictions, and they lacked a clear sense of individual identity.

More recently, some scientists (Goody, 1968, 1977; Hippler, 1980; Luria, 1976) have put forward new great divide theories. Although these researchers have various names for the two groups, their division of humanity breaks down along similar lines. In all these theories, the cultural development or thought of non-Westerners is usually judged as deficient or inferior to that of Europeans.



Several points need to be made about these theories. First, it is probably more than coincidence that stage theories produced by Westerners judge people from other cultures (and minorities within their own countries) in terms of how closely they resemble Westerners, thereby placing themselves at a relatively superior level of development. The popularity of stage theories in the 19th century, for example, coincided with the colonial imperialism of the period. Stage theories provided justification for imposing European rule around the world, based on the demonstrated superiority of European civilization.

Other problems also existed. Stage theorists persisted in evaluating the rationality of non-Westerners in terms of their magical and religious beliefs, while the rationality of Western beliefs was usually not questioned. Levy-Bruhl's theory has been fiercely attacked over the years by field anthropologists who have objected to both his methodology and his conclusions. Levy-Bruhl based his work on stories told by missionaries and travelers, many of whom could barely speak native languages.

But Westerners are not the only ones who have ethnocentric assumptions. Cross-cultural studies have shown that people from many cultures prefer their own groups and rate them more positively than they rate outsiders. For example, a study that compared what people in 30 different East African societies thought of themselves and others demonstrated that members of each society rated themselves highly and judged outsiders to be "advanced" when they were culturally similar to their own group (Brewer & Campbell, 1976).

This brings us back to Piaget's theory, which has several strong points. Piaget's theory is considerably more sophisticated than earlier theories. By devising tasks to measure concepts in an experimental setting, Piaget established a new standard by which to gauge cognitive development, one that appears to be less vulnerable to ethnocentric bias. Piaget's tests can be, and have been, administered cross-culturally, with clear-cut results that do not rest on the subjective beliefs of the researcher (although the choice of research instruments and the interpretation of data are still subject to researcher bias). Still, cognitive development is complicated, and it is unlikely that such tasks can capture all of its complexity.

## Moral Reasoning

Another area of development crucial to our becoming functional adults in society and culture concerns moral judgments and reasoning. As they grow, children develop increasingly complex ways of understanding their world. These cognitive changes also bring about changes in their understanding of moral judgments. Why something is good or bad changes from the young child's interpretation of reward and punishment conditions to principles of right and wrong.

Morality and culture share a very close relationship. Moral principles and ethics provide guidelines for people's behaviors with regard to what is appro-

priate and what is not. These guidelines are products of a specific culture and society, handed down from one generation to the next. Morality is thus heavily influenced by the underlying, subjective, and implicit culture in which it is embedded. Morality also serves as the basis of laws, which are formalized guidelines for appropriate and inappropriate behavior. In this way, culture also affects the laws of a society. For these and other reasons, morality occupies a special place in our understanding of culture and cultural differences.

Our knowledge of the development of moral reasoning skills, at least in the United States, has been heavily influenced by the work of a psychologist named Lawrence Kohlberg. His model of moral reasoning and judgment is based in large part on Piaget's model of cognitive development.

### Kohlberg's Theory of Morality

Kohlberg's theory of moral development (1976, 1984) proposes three general stages of development of moral reasoning skills. (Kohlberg further divided each of these three general stages into two stages, for a total of six substages of moral development.)

1. **Preconventional morality** involves compliance with rules to avoid punishment and gain rewards. A person operating at this level of morality would condemn stealing as bad because the thief might get caught and be thrown in jail or otherwise punished. The focus of the justification is on the punishment (or reward) associated with the action.
2. **Conventional morality** involves conformity to rules that are defined by others' approval or society's rules. A person operating at this level of morality would judge stealing as wrong because it is against the law and others in society generally disapprove of it.
3. **Postconventional morality** involves moral reasoning on the basis of individual principles and conscience. A person operating at this level of morality would judge stealing within the context either of societal or community needs or of his or her own personal moral beliefs and values, which supercede perceived societal and community needs.

Gilligan (1982) has challenged Kohlberg's theory by suggesting that its stages are biased toward the particular way in which males as opposed to females view relationships. She argues that male moral reasoning is based on abstract justice, whereas female moral reasoning is based on obligations and responsibilities. These two types of moral reasoning have been called "morality of justice" versus "morality of caring." Despite the fervor of the debate, however, reviews of the research seem to indicate few gender differences in moral reasoning (Walker, 1984, 1991). It appears that variations between males and females in moral reasoning can be explained by other variables, such as education, occupation, or types of issues under consideration. Cross-cultural research may shed more light on this issue.

## Cross-Cultural Studies of Moral Reasoning

The universality or cultural specificity of moral principles and reasoning has been an area of interest for anthropologists and psychologists alike. A number of anthropological ethnographies have examined the moral principles and domains of different cultures (see review by Shweder, Mahapatra, & Miller, 1987). Many of these works have complemented and challenged traditional American views of morality, and for good reason. Culture, morality, ethics, and law share a close relationship.

The findings from a number of cross-cultural studies suggest that many aspects of Kohlberg's theory of morality are universal. Snarey (1985), for example, reviewed 45 studies involving participants in 27 countries and concluded that Kohlberg's first two stages could be regarded as universal. Others have reached similar conclusions, including Ma (1988), in a study involving Hong Kong and mainland Chinese as well as British participants; Ma and Cheung (1996), in a study involving Hong Kong, mainland Chinese, British, and Americans; and Hau and Lew (1989), in a study of Hong Kong Chinese participants.

However, a number of cross-cultural studies on moral reasoning raise questions about the universal generalizability of Kohlberg's higher stages. One of the underlying assumptions of Kohlberg's theory is that moral reasoning on the basis of individual principles and conscience, regardless of societal laws or cultural customs, represents the highest level of moral reasoning. This assumption is grounded in the cultural milieu in which Kohlberg developed his theory, which had its roots in studies involving American males in the midwestern United States in the 1950s and 1960s. Although democratic notions of individualism and unique, personal conscience may have been appropriate to describe his samples at that time and place, it is not clear whether those same notions represent universal moral principles applicable to all people of all cultures.

In fact, some researchers have criticized Kohlberg's theory for harboring such cultural biases (Bronstein & Paludi, 1988). Miller and Bersoff (1992) compared the responses to a moral judgment task by respondents in India and the United States. The Indian subjects, both children and adults, considered not helping someone a moral transgression more than did the American subjects, regardless of the life-threatening nature of the situation or whether the person in need was related. These researchers interpreted the cultural differences as having to do with values of affiliation and justice, suggesting that Indians are taught a broader sense of social responsibility—individual responsibility to help a needy person.

More recent evidence suggests that Chinese and Icelandic children differ in a way similar to the differences between Hindus and Americans concerning moral judgments (Keller, Edelstein, Schmid, Fang, & Fang, 1998). More specifically, Chinese children emphasized altruism and relationships when reasoning about moral dilemmas, whereas Icelandic children emphasized contractual and self-interest considerations. The issue of interpersonal responsiveness that

Miller and Bersoff (1992) and Keller et al. (1998) raised is related to Gilligan's (1982) claims of gender bias in U.S. studies. It is entirely possible that Gilligan's findings were influenced by cultural as well as gender differences.

Snarey's (1985) review mentioned earlier also concluded that moral reasoning at the higher stages is much more culture-specific than Kohlberg originally suggested. Other reviews of the cross-cultural literature by Bergling (1981) and Edwards (1981) reached similar conclusions. Kohlberg's theory, as well as the methodology for scoring moral stages according to verbal reasoning, may not recognize higher levels of morality as defined in other cultures. Should different cultures define those higher levels of morality along totally different dimensions, those differences would imply profound differences in people's judgments of moral and ethical appropriateness. Fundamental differences in the bases underlying morality and ethics across cultures are not at all impossible, given that they feed and are fed by subjective culture. Above all, those fundamental differences in morality as a function of culture form the basis for the possibility of major intercultural conflicts.

In order to better understand cultural differences in morality, researchers have highlighted the importance of the particular social structure and environment. For instance, Miller (2001) has argued that "the understanding of social structure entailed in Stage [substage] 4 and higher on the Kohlbergian scheme has relevance primarily in contexts that are closely tied to state or national governments, a finding that may explain, at least in part, the association observed cross-culturally between higher levels of Kohlbergian moral stage development and processes of modernization" (p. 159).

Miller (2001) also points out the need to consider other perspectives on morality that are overlooked in traditional theories of morality. She describes "moralities of community" that emphasize interpersonal relationships and community. For instance, in China, the concept of *jen*, which connotes love and filial piety, contributes to the way Chinese individuals view morality (Ma, 1997). In response to Kohlberg's moral dilemmas, Chinese individuals tend to emphasize the importance of filial piety—respecting and honoring parents and fulfilling their wishes—when judging what is right or wrong. Concerning Hindu Indians, Miller observes that "whereas European Americans tend to approach morality as freely given commitments or matters of personal choice . . . Hindu Indians tend to view interpersonal responsibilities as matters of moral duty that extend across a broader range of need and role situations" (p. 162). Miller also describes "moralities of divinity," in which religious beliefs and spirituality are central to moral development. For instance, Algerians' responses to Kohlberg's moral dilemmas are based on the belief that God is the creator and supreme authority of the universe (Bouhmama, 1984). In another example, fundamental Baptists in the United States consider divorce morally wrong based on their beliefs concerning the relationship between God, the church, and human relationships (Jensen, 1997).

One recent study exemplifies how the examination of morality at different levels of abstraction—from internalized ideals to actual behaviors—may be

important to understanding cultural similarities and differences in moral judgment. In this study (Carlo, Koller, Eisenberg, DaSilva, & Frohlich, 1996), researchers examined prosocial moral reasoning in Brazilian and American adolescents. In addition, they assessed actual prosocial behaviors through peer ratings. In both cultures, age and gender differences in prosocial moral reasoning were the same, as was the relationship between prosocial moral reasoning and prosocial behaviors. There were, however, cultural differences in internalized moral reasoning, with American adolescents scoring higher than Brazilian adolescents. These findings suggest that cultural similarities and differences in moral reasoning and behavior may be explained by taking into account different levels of morality than are being examined. Future cross-cultural studies will need to incorporate such a multilevel view of morality to investigate similarities and differences in the same groups of participants across a broad range of morality-related psychological phenomena.

## Other Developmental Processes

Cross-cultural research on psychological processes in development continues to be one of the most popular and thoroughly studied areas of the field, for good reason. This research offers important insights into the question of just how the differences observed in adults in many other studies over the years have come to be. In seeking to explain how and why cultural differences occur among adults, psychologists, mainstream and otherwise, have turned to developmental research to explicate the causes and contexts of the ontogenesis of cultural differences.

The past decade has witnessed a renewed interest in cross-cultural developmental research, no doubt due in large part to the increased interest in culture in all areas of psychology. This research has spanned many processes related to development, including future-oriented goals and commitments (Nurmi, Poole, & Seginer, 1995; Nurmi, Liiceanu, & Liberska, 1999), appraisal processes (Dalal, Sharma, & Bisht, 1983; DiMartino, 1994), social expectations (Rotherram-Borus & Petrie, 1996), affective and romantic relationships in adolescence (Takahashi, 1990; Takahashi & Majima, 1994; Coates, 1999), political formation in adolescence (ter Bogt, Meeus, Raaijmakers, & Vollebergh, 2001), task persistence (Blinco, 1992), preschoolers' responses to conflict and distress (Zahn-Waxler, Friedman, Cole, Mizuta, & Hiruma, 1996), children's social pretend play and social competence (Farver, Kim, & Lee-Shin, 2000; LaFreniere et al., 2002), coping (Olah, 1995; Seiffge-Krenke & Shulman, 1990), and social interaction (Farver & Howes, 1988). Other studies examining other developmental topics no doubt exist as well. Collectively, these studies highlight both similarities and differences in development across cultures, and pave the way for exciting new research in these areas in the future.



## Conclusion

In this chapter, we have seen how culture produces similarities as well as differences in various areas of development, such as cognition and moral reasoning. The developmental research presented here provides a comprehensive view of how culture influences a number of developmental psychological processes. Still, much work remains to be done. In particular, cross-cultural developmental work has focused largely on infants and children, but mainstream psychology has come to recognize the importance of developmental processes throughout the life span, including adolescence, young, middle, and older adulthood, and old age.

The developmental differences discussed in this chapter all speak to how a sense of culture develops in each of us. As cultures exert their influence in their own special and unique ways, they produce specific tendencies, trends, and differences in their members when compared to others. When we are in the middle of a culture, as we all are, we cannot see those differences or how culture itself develops in us. Only when we look outside ourselves and examine the developmental and socialization processes of other cultures are we able to see what we are ourselves. Only then can we come to appreciate that those differences and similarities are our culture, or at least manifestations of our culture. Thus, while cultures produce differences in development that we observe in our research, these differences simultaneously contribute to the development of culture.



## Glossary

**accommodation** The process of changing one's understanding of the world to accommodate ideas that conflict with existing concepts.

**ambivalent attachment** A style of attachment in which children are uncertain in their response to their mothers, going back and forth between seeking and shunning her attention. These mothers have been characterized as insensitive and less involved.

**animism** The belief that all things, including inanimate objects, are alive.

**assimilation** The process of fitting new ideas into a preexisting understanding of the world.

**attachment** The special bond that develops between the infant and its primary caregiver. The quality of attachment has lifelong effects on our relationships with loved ones.

**avoidant attachment** A style of attachment in which children shun their mothers, who are suspected of being intrusive and overstimulating.

**centration** The tendency to focus on a single aspect of a problem.

**cognitive development** A specialty in psychology that studies how thinking skills develop over time. The major theory of cognitive development is that of Piaget.

**conservation** An awareness that physical quantities remain the same even when they change shape or appearance.

**conventional morality** The second stage of Kohlberg's theory of moral development, emphasizing conformity to rules that are defined by others' approval or society's rules.