

Culture in Development

At present, the term 'culture' generally is used to refer to the entire body of socially inherited past human accomplishments that serves as the resources for the current life of a social group ordinarily thought of as the inhabitants of a country or region (D'Andrade 1996). Although there is evidence of the rudiments of culture in nonhuman species (Tomasello 1999), human beings are unique in their dependence upon the medium of culture and the forms of organism–environment interactions that culture supports to sustain and reproduce themselves.

1. Defining Culture

For purposes of thinking about culture as it relates to development, it is useful to begin by tracing the concept of culture as it has evolved since entering the English language from Latin many centuries ago (see *Culture: Contemporary Views*). Modern conceptions of culture originate in terms that refer to the process of helping things to grow: 'Culture, in all of its early uses, was a noun of process: the tending of something, basically crops or animals' (Williams 1973, p. 87). From earliest times, this notion of culture included a general theory for how to promote growth: Create an artificial environment in which young organisms could be provided optimal conditions to develop. Such tending required tools, both material (hoes) and mental (the knowledge that one does not plant until winter is over). These tools are perfected over generations and designed for the special tasks to which they were put.

2. Culture in Development

Combining the historical notion of culture as a process of growing things with the modern conception of culture as social inheritance of prior generations' accomplishments, the study of culture in development can be seen to focus on the way in which biologically immature human beings are incorporated into the cultural 'designs for living' that are their social heritage by more mature humans who have already been enculturated. Although the role of culture begins even before conception (for example, by beliefs and customs that restrict who the parents are likely to mate with), it is sufficient for our purposes to begin with the period of prenatal development and provide examples of culture's role in development through infancy, childhood, and the transition to adulthood referred to in many societies as 'adolescence.'

2.1 Prenatal Development

The cultural environment influences the growing fetus both indirectly and directly. In the category of indirect

influences, mediated by the mother's physiology, are dietary laws in some societies that limit pregnant women's access to nutrients deemed important to later development (Mead and Newton 1967). In others, the use of substances such as cigarettes and alcohol, or the presence of industrial pollutants, can materially damage the fetus, depending upon such factors as timing and degree of exposure (Cunningham et al. 1997).

An important example of a direct influence of the cultural environment comes from evidence that during the last trimester, despite distortion introduced by filtering through the mother's body, fetuses are capable of hearing the language spoken in the mother's immediate environment (Lecanuet and Schaal 1996). Moreover, when they are born they show a preference for their native language, the sound stream of which is specific to the culture in which it is used (Moon et al. 1993). This universal sensitivity to language and culture-specific preference for one's own language provides the starting point for the crucial process of learning to extract meaning from the sound stream.

2.2 Birth

When babies emerge from the birth canal and the umbilical cord is cut, their automatic supply of oxygen and nutrients comes to an abrupt halt. Following birth, even essential biological processes occur *indirectly*—they are mediated by culture and other human beings. In order to survive in an environment mediated by culture, the baby must act on the nurturing environment in a qualitatively different way than was true before birth. While the effects of fetal activity *in utero* are minimal, once the baby is born it begins to make urgent, vocal demands upon its caregivers. Babies become social actors who re-order the social relationship among the people around them.

At the same time, babies become cultural objects for the older members of their community; their biological characteristics are interpreted in terms of the community's beliefs to a significant degree. For example, studies which present young infants wearing pink or blue diapers to adults to interact with (pink and blue being the symbolic representations of female and male gender in the society in question) show that the adults interact with them and interpret their behavior in terms of their *symbolic* gender, not their *biological* sex. Regardless of their biological sex, babies dressed in pink diapers are treated in a gentle manner and interpreted as physically pretty and sweet tempered, while babies dressed in blue diapers are bounced vigorously and have 'manly' attributes attributed to them (Rubin et al. 1974).

These forms of adult behavior illustrate a universal feature of the way in which culture mediates adult behaviors toward children: children are behaved toward in the present in terms of culturally prescribed theories that bear no necessary relationship to the

biological child with whom adults are interacting at the time.

2.3 Infancy

The role of culture in development manifests itself in a wide variety of ways during infancy. Perhaps the most direct, and certainly universal, influence of culture is in the way it shapes the development of the system of coordination between infant and caretakers known as 'getting on a schedule.' For example, rural Kenyan (Kipsigis) infants sleep with their mothers and are allowed to nurse on demand. During the day they are strapped to their mothers backs, where they often nap as their mothers go their daily work rounds. By contrast, the children of urban, middle-class North American parents generally sleep separately from their mothers and must adjust to a parental schedule which is governed by the clock (Super and Harkness 1997). As a consequence, within a few weeks of birth, North American children have begun to bunch their sleeping spells in longer and longer night episodes that approximate the adult pattern. Kipsigis children, by contrast, show comparatively slow development of long sleep spells, and remain more flexible in their sleeping habits even as adults.

Whereas the example of getting on a schedule highlights the role of contemporaneous constraints in shaping infant development, studies of mother-child interactions that incorporate objects indicate the way that cultural beliefs concerning future 'proper' behaviors influence current maternal behaviors. One such study of mothers and their 5-month old infants in Tokyo and New York found that the Japanese mothers were more responsive when their infants responded to them, while US mothers were more responsive when their infants oriented to the objects. At this early age, there was no difference in the infants' behavior at all. But at a later age, the Japanese and US children begin to differ in a manner that matches the differential parental behaviors observed at 5 months, although their language and play skills are judged to be of equivalent developmental level (Bornstein et al. 1991).

An area of development which has received special attention with respect to the role of cultural factors is the development of emotional attachments between babies and their parents (Crittenden and Clausen 2000). In a wide range of societies it has been observed that between 6 and 9 months of age children begin to display wariness of strangers, a heightened degree of distress when they are separated from their primary caretakers, and a marked tendency to cling to their parents in unfamiliar situations. The frequency and intensity of these behaviors increase for several months and then begin to wane as children approach the end of infancy at $2\frac{1}{2}$ -3 years of age. This universal trend is accompanied by apparent cultural variations in the patterns of distress that children display, a result

which is often interpreted as a reflection of cultural differences in the development of attachment relationships (see *Attachment Theory: Psychological; Cultural Psychology; Cross-cultural Psychology*).

For several decades, a major means of assessing qualitative differences in attachment behaviors has been to confront infants and young children with a standardized set of experiences referred to as the 'Strange Situation.' In this procedure, infants are first left in a room with their primary caretaker, who then leaves the child with a stranger and eventually returns (see Ainsworth 1967 for a more precise delineation of procedures). Children's responses to this sequence of events are coded into three major categories: *Anxious-avoidant* children turn away or run away when their caretaker returns instead of seeking closeness and comfort. *Securely attached* children go to their caregivers, calm down quickly after their early upset, and soon resume playing. *Anxious-resistant* children are often upset even when their caretaker is with them just as a result of being in the strange environment; they become excessively upset when their caretaker leaves and both reject and seek comfort when the caregiver returns.

The Strange Situation has been widely used in cross-cultural research. In middle-class US families that dominant pattern is one of secure attachment; anxious-avoidant behaviors are second most frequent. In Germany, an Anxious-avoidant pattern has been found to be dominant, while in Japan and Israel, the level of secure attachment approximates that of the US but there are high percentages of Anxious-resistant children. Psychologists are divided on the significance of these findings. Some believe that they mirror basic cultural differences (for example, reflecting a German emphasis on early independence). Others believe that the findings reflect more about the relative strangeness of the Strange Situation itself, and reject it as a measure of socioemotional development (see Cole 1999 for a summary of the issues).

Patterns of language socialization have provided a rich source of evidence on cultural universals and similarities. In societies throughout the world, caregivers speak differently with children than with adults, but there are wide variations in the specific forms of interaction. In a great many, if not all societies, adults use a special speech register (something akin to a 'baby-talk' mode with its high pitch, isolation of simplified words, and simplified grammar) when speaking to young babies. In many cultures, adults deliberately seek to teach vocabulary, style of address, and other linguistic features. The Kaluli of Papua New Guinea, for example, hold their young infants facing away from them and caregivers speak for them (Schieffelin and Ochs 1986). There is no evidence that any one of these practices enhances the rate of language acquisition in general although it certainly produces differences in the speech forms that children come to master.

Following infancy, there are wide cultural variations in the forms of experience that adults begin to arrange for their children. In rural, agrarian societies, even children as young as 3–4 years of age will be given work tasks to carry out and their older brothers and sisters will be assigned to watch over them. This form of socialization of children by children produces a distinctive pattern of interpersonal characteristics that mix nurturance and authoritarianism. By contrast, in societies where young children live in nuclear families and spend time in adult-supervised settings, interpersonal behavior is marked more by patterns of attention seeking and playful sociability (Whiting and Whiting 1975).

Even in societies where preschools are the dominant out-of-family settings for young children, the form of that experience can differ dramatically. For example, US preschool teachers are shocked and disapproving when they observe Japanese preschool classrooms with 30 children for each teacher. But Japanese teachers equally are shocked and disapproving when they observe American classrooms with one-third the number of children per adult. Tobin et al. (1989) found that these differences in both classroom organization and evaluation reflect different cultural conceptions of the optimal environment for creating a productive (Japanese or American) adult. The Japanese teachers believed that the children's development is most fully realized in their ability to feel a part of, and to coordinate with, their social group. The US teachers sought to foster independent initiative in the children reflecting the dominant norm in North American cultures. As in several previous examples, the *anticipated future* of the children, based on cultural norms and ideals, played a significant role in how adults structure the environments of children.

2.4 Middle Childhood

One of the most pervasive changes in the cultural organization of children's lives is the new social arrangements that societies institute when their children reach the age of 6–7 years (Sameroff and Haith 1996). Even in societies in which there is no schooling, marked changes in children's activities are likely to occur. For example, among the Ngoni of Malawi in Central Africa in the middle of the twentieth century (Read 1960), the boys, who had been living and socializing with other children of both sexes and their mothers, left the protection of the women, stopped playing childish games, and moved into dormitories where they submitted to male authority and began to engage in at least rudimentary forms of adult work. The girls lived among the women and participated in their work practices.

When we contrast the experiences of children who spend several hours a day, five days a week, attending formal schools with comparable children who remain at home helping their parents, several prominent

characteristics of the classroom experience stand out (Serpell and Hatano 1997) (see *Academic Achievement: Cultural and Social Influences; Cross-cultural Study of Education*).

(a) The settings in which schooling occurs are removed from contexts of practical activity.

(b) There is a distinctive social structure to formal schooling, in which a single adult interacts with many (often as many as 40 or 50, sometimes as many as 400) students at a time. Unlike most other settings for socialization, this adult is unlikely to have any familial ties to the learner.

(c) There is a peculiar value system associated with schooling that sets educated people above their peers and that, in secular education, values change, and discontinuity over tradition and community.

(d) There is a special mediational skill—writing—that is essential to the activity of schooling. Writing is used to represent both language and nonverbal systems (e.g., mathematics).

(e) Language is used in quite distinctive ways in formal schools (Mehan 1978).

A wide variety of evidence indicates that extensive exposure to schooling brings about changes in the intellectual skills, values, and uses of language which it promotes. The degree to which these experiences engender general changes in development remains unclear. At present, it appears that the intellectual changes associated with schooling are rather narrowly tied to particular contents and interactional formats and do not infuse thinking in everyday life. However, changes in values and cultural norms appear to generalize well beyond the school to influence the cultural organization of the community in which the school is located. This is seen, for example, in the way that the experience of formal schooling increases the use of complex language and problem-solving strategies when mothers interact with their children (Le Vine et al. 1996).

2.5 Adolescence: Stage or Transition?

By and large, the various periods of development we have used to organize this discussion take for granted the reality of the periods named, reflecting broad agreement across cultures in the basic age periodization of development. When we arrive at the transition from childhood to adulthood, the situation changes (see *Youth to Adulthood across Cultures, Transition from*).

An interesting fact about adolescence is that in many societies, there is no word corresponding to this presumed universal stage of life. This linguistic fact raises an interesting psychological question: there may be a universal transition from childhood to adulthood, but is there a distinctive stage of adolescence independent of cultural or historical circumstances?

What is indisputable is that some time around the end of a decade of life (the exact onset time depends

greatly on nutritional and other factors), a cascade of biochemical events begins that will alter the size, the shape, and the functioning of the human body. The most revolutionary of the changes that will occur is the development of the entirely new potential for individuals to engage in biological reproduction (Katchadourian 1989). These biological changes have profound social implications for the simple reason that reproduction cannot be accomplished by a single human being. As their reproductive organs reach maturity, boys and girls begin to engage in new forms of social behavior because they begin to find other individuals sexually attractive. According to many psychologists, some combination of biological changes in the brain and changed social circumstances give rise to new cognitive capacities. Consistent with this line of reasoning, some scholars argue that adolescence is indeed a universal and necessary stage of development, with its own special characteristics (Schlegel and Barry 1991).

However, the universality of adolescence as a unified stage is by no means clearly established on the basis of these data. The evidence from other cultures may support the idea that the transition to adult status is universally fraught with anxiety and uncertainty, but it provides equally strong evidence that adolescence, as the term is used in modern industrialized societies, exists only under particular cultural circumstances (Whiting et al. 1986).

Among the Inuit Eskimos of the Canadian Arctic at the turn of the nineteenth century, for example, special terms were used to refer to boys and girls when they entered puberty, but these terms did not coincide with Western notions of adolescence (Condon 1987). Young women were considered fully grown (adult) at menarche, a change in status marked by the fact that they were likely to be married by this time and ready to start bearing children within a few years. Young men were not considered fully grown until they were able to build a snowhouse and hunt large game unassisted. This feat might occur shortly after the onset of puberty, but it was more likely for boys to achieve adult status somewhat later because they had to prove first that they could support themselves and their families. In view of the different life circumstances of these people, it is not surprising that they developed no special concept corresponding to adolescence that applied to boys and girls alike; such a concept did not correspond to their reality.

When we consider the actual organization of life in terms of the role of culture in development, we are reminded that the process of biological reproduction by itself is insufficient for the continuation of our species. It must be complemented by the process of cultural reproduction (education, broadly conceived), which ensures that the designs for living evolved by the group will be transmitted to the next generation. According to this view, adolescence will exist as a distinctive period of life only when there is a gap of

several years between the biological changes that mark the onset of sexual maturity and the sociocultural changes that confer adult status (such as the right to marry without parental consent or to run for elective office).

Matters can be expected to be different in those societies in which there is little or no gap between the beginning of sexual maturity and the beginning of adulthood (Whiting et al. 1986). These are often societies in which the level of technology is relatively low and in which biological maturity occurs relatively late by our standards. By the time biological reproduction becomes possible, which is about the age of 15 in many nonindustrial societies, young people already know how to farm, weave cloth, prepare food, and care for children. Although they still have a good deal to learn (a fact that their elders impress on them, often with considerable force), they are capable of the basics of cultural reproduction. In such societies, there may be no commonly acknowledged stage of development equivalent to adolescence.

2.6 Development during Adulthood

So long as development is thought of essentially in biological terms, adolescence marks the 'high-water mark' of development; the species, imperative to reproduce is achieved and psychological processes remain more or less unchanged for a decade or so until they begin to deteriorate as a consequence of biological aging. However, for those who accord an essential role to culture in development, developmental change is a lifelong process. In fact, owing to the fact that cultural experience continues to accumulate, at the same time that biological capacities wane, serves to highlight a lifelong dynamic of bio-cultural change which is somewhat obscured so long as both biological and cultural capacities are increasing in tandem with each other (Labouvie-Vief 1981, Smith and Baltes 1999).

When the interplay of biological, cultural, and social factors which interweave to produce development are examined during adulthood and later life, one can see complex and shifting mosaics in which gradual change and predictable experiences are mixed with sudden, unexpected events—new insights, conceptual reintegration, and developmental triumphs occur side-by-side with loss of power and decline in a process which Baltes (1997) has referred to as the 'gain-loss' dynamic.

The precise contour of this dynamic depends importantly on the sociohistorical circumstances of development. In modern, industrial societies characterized by rapid change and rigidly enforced bureaucratic rules which remove adults from productive labor and the social supports such labor provides, the ensuing isolation and loss of status can combine with biological decline to hasten the decline or power and block further development. In nonindustrialized

societies where there is no social institution comparable to what we refer to as retirement, and technological change is less rapid, old people are likely to continue to play active and valued roles: among the Ashanti of West Africa in the middle of the nineteenth century, for example,

The grandparents ... on both sides are the most honored of one's kinfolk. Their position and status are of very great importance to the social system. In Ashanti it is the grandparents who are the prototypes of person and institutions commanding reverence and submission to norms of tradition (Fortes 1950, p. 276).

As early in life, the course of development during adulthood and old age depends crucially on the cultural organization of people's experience. If elderly people are placed in settings where they are confronted with new and unfamiliar events over which they have little control, they may simply give up on life (Rodin 1986). However, if special care is taken to provide experiences that increase social connectivity and are enabling and satisfying, healthy development remains a lifelong potential.

3. Future Directions

There is urgent need for increased research on the role of culture in development. At the same time, cross-cultural research is hampered by difficult methodological problems such as those encountered in the study of attachment. Future progress will depend upon the development of more adequate methods to ensure the validity of researchers' conclusions.

See also: Cultural Diversity, Human Development, and Education; Developmental Psychology; Historical Change and Human Development; Indigenous View on Human Development: West African Perspective; Lifespan Development, Theory of; Psychological Development: Ethological and Evolutionary Approaches

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Culture in Nonhuman Organisms

Whether or not nonhuman animals can be said to have 'culture' is a contentious issue that hangs on definitions of culture and the complexities of animal social behavior. However, it is well established that numerous animals have the ability to acquire from others skills, calls, and information concerning predators, mates, or resources. In some instances this information transmission is sufficient to propagate the diffusion of novel behavior patterns through animal populations, and to maintain distinct behavioral traditions between different populations of the same species. Such traditions are sometimes regarded as analogous to human culture in many respects, and have been described as 'proto-culture.' However, the use of this term indicates little more than that the behavior concerned has been learned socially, and does not necessarily imply that the animals concerned are unusually intelligent, or that they have exceptional linguistic or cognitive capabilities.

1. Social Learning in Animals

Underlying culture in nonhuman animals is a capacity for 'social learning.' The term social learning refers to learning that is influenced by observation of, or interaction with, another animal (typically of the same species) or its products. Social learning is frequently contrasted with individual or asocial learning, in which animals learn exclusively on the basis of their own personal experience, without recourse to social cues or guidance. In any instantiation of social learning, the learner or receiver of information is generally described as the 'observer,' while the transmitter of information is called the 'demonstrator.' Social learning occurs when the communication of information between two animals results in the observer learning from the demonstrator. Frequently the observer learns through social interaction to perform the same behavior as that exhibited by the demonstrator and, if repeated amongst other animals, this process can

result in the spread of a particular behavior pattern and behavioral conformity in a population. Less frequently, animals may learn by observation to perform a different behavior from that exhibited by the demonstrator.

Social learning among animals has been of interest to scientists from a number of different disciplines. Psychologists traditionally have been interested in animal learning. Contemporary animal learning theory describes much learning in animals as resulting from associations formed between two external stimuli (stimulus-stimulus, or classical conditioning), or between the behavior of an animal and an external stimulus (response-reinforcer, or operant conditioning). Arguments abound as to whether there will be anything different or special about social, compared with asocial learning, and whether social learning can be adequately explained in conditioning terms. Many psychologists have suggested those more complex forms of social learning might be indicative of the animal concerned possessing unusual or sophisticated psychological capabilities (Heyes 1994). For instance, it has been suggested that for an animal to imitate the motor patterns of another animal it must be conscious, must be capable of taking the other animal's perspective, must be unusually intelligent, or must be capable of intentional action. All such claims are hotly disputed.

At the same time, social learning has been of interest to ethologists and behavioral ecologists because it seems to allow animals to learn about their environments rapidly and efficiently, without having to engage in potentially costly or hazardous learning trials, or expend considerable time and energy exploring the environment. Animals can learn which foods to eat, acquire food processing skills, learn to identify predators, learn which members of the opposite sex to mate with, or develop songs and calls, by exploiting the knowledge base of more experienced conspecifics (Heyes and Galef 1996, Zentall and Galef 1988). Social learning can be regarded as a short cut to learning about the environment, but may incur a cost if the acquired knowledge is inappropriate or outdated.

Evolutionary biologists, biological anthropologists, and archeologists have also studied animal social learning because it is accorded a prominent role in the evolution of human culture. Although definitions of human culture vary, one central feature is the transmission of acquired information between individuals through social learning processes. Many researchers believe that an understanding of the ways in which social learning operates in animal populations will generate insights into the evolutionary roots of human culture. Social learning is regarded as pivotal to a number of social intelligence hypotheses, which maintain that the evolution of high intelligence or large brains was driven by a capacity for social learning and for proto-culture (Byrne and Whiten 1988).