

Where Have All the Children Gone?: The Archaeology of Childhood

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Current images portray childhood as primarily a time of play and learning, de-emphasizing children's economic contributions and relegating them, like women, to the less-visible realm of the home. Ethnographic and historic literature amply demonstrates that age categories are constructs and, thus, exhibit considerable temporal and cross-cultural variability. Nevertheless, archaeologists have tended to ignore prehistoric children, perhaps viewing them as only peripheral to central research concerns, or to treat them stereotypically. The archaeological record provides opportunities for the exploration of numerous aspects of childhood and archaeologists are encouraged to respond to the challenge.

KEY WORDS: archaeological method and theory; children; gender.

INTRODUCTION

Picture a village that you know well—modern, historic, or prehistoric. Paint in the physical setting. Next sketch in some dwellings and other manufactured features. Now add the residents. What do you see? The village pulses with life. Depending upon the time of day and the cultural mores, men and women are probably moving around conducting their daily affairs, but children are almost certainly visible. Perhaps there is laughter, perhaps there are tears, but certainly there are infants and children. Now recall the archaeological descriptions of a time and place with which you are familiar. Where *have* all the children gone?

Maybe it's not important. Maybe childhood is simply irrelevant to the constructs commonly discussed by archaeologists and the types of issues of central concern to us. Perhaps subsistence strategies, social organization, population growth, and culture change, for example, are not affected by the presence of children, attitudes toward the young, or the nature of the childhood experience.

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Children and their role in the society may be an interesting topic, but peripheral to the real issues of interest, and age, in general, may be a rather unimportant variable.

Even a cursory consideration of modern societies shows that this is clearly not so. First and most obviously, childhood is the training ground, the time when skills and belief systems are learned, personality formed, and attitudes and values inculcated. In addition children are an integral part of most of the issues that from the literature seem nearest and dearest to archaeologists' hearts. In many societies children provide considerable amounts of labor and are thus integral to subsistence strategies. Specific activities such as herding, getting water, and collecting firewood may sometimes be almost totally the duty of children. Children may even play significant roles in the economy beyond the household, for example as factory workers, agricultural laborers, or entrepreneurs. At the household level, the number of children and their ages can have dramatic effects upon economic success, and the number of children may relate to both personal status and family power. Age grades are one potential principle of social organization. Initiation ceremonies and other rites of passage that are part of the childhood experience may act to solidify societal values, be an active ground for competition, or act as a vehicle for social change. Population growth and demographic structure are foci for many studies and critical variables in a number of models of culture change. Clearly, an understanding of children's economic role, attitudes toward children, the health of infants and children, and other aspects of childhood will improve not only our basic descriptions of a culture, but also our analyses of broader issues. It is only our ethnocentric construction of childhood as a time of little economic, political, or social importance that has blinded us to the need to use it as an analytic category.

Maybe, on the other hand, archaeologists neglect childhood not because it is perceived as unimportant, but because it is too intangible. Perhaps the material traces children leave are minor and hard to interpret or are too difficult to untangle from those of adults. To many of us who have been following the trajectory of gender research in archaeology, this complaint sounds disconcertingly familiar. Yet, in the past 10 or so years the research on gender roles has blossomed. All that was required was interest in the topic, and a realization that our studies of the past would not only be incomplete, but also in some cases flawed if gender was not one of the variables considered (Brumfiel, 1992; Claassen, 1997; Conkey and Gero, 1997). Furthermore, as with gender before it became a real focus of attention, some archaeologists have already tackled aspects of childhood and the childhood experience using archaeological data, and others (Chamberlain, 1997; Lillehammer, 1989; Roveland, 1997; Sofaer Derevenski, 1994a,b) have pressed for a further consideration of prehistoric childhood. The data available include, but are certainly not limited to, children's hand and fingerprints, burials and burial inclusions, toys and games, pictures showing children or used in conjunction with childhood rites of passage, artifacts produced by children either for their own use or when learning or practicing local crafts, clothing, and the skeletal remains of the children themselves and of the adults into which the more fortunate grew.

A review of the current archaeological literature on prehistoric children in the context of perspectives from history and cultural anthropology provides several general principles from which a further development of an archaeology of childhood can proceed. (1) Age categories, like gender categories are cultural constructs, rather than biological realities. (2) Age is one important principle of social organization, and thus should not be ignored in analyses of past societies. (3) Like adults, children play important social and economic roles in many societies. (4) It is possible to learn something about children's lives and the roles they played in society using archaeological data.

CHILDHOOD AS A CONSTRUCT

Childhood, youth, adolescence, adulthood, and other terms commonly used to denote age are, like gender categories, cultural constructs (James and Prout, 1990; Keith and Kertzer, 1984; Stephens, 1995). Although it is true that specific biological changes occur as an individual matures, the cultural meaning imposed on these changes is to a large extent arbitrary. Thus, both gender and age categories have relationships to biological characteristics, but neither is determined by biology. Not unexpectedly, the way that age categories are defined and operationalized varies across both time and space (Lamb and Hwang, 1996).

Today the notion of a universal period of childhood, grounded in biological and psychological reality, pervades both Western scholarship and international efforts to regulate and protect child welfare (Boyden, 1990). Because this model of childhood is essentially medical, it tends to assume that the period of childhood is delineated by biological changes. Indices of biological and sometimes psychological maturity mark the divide between the child and the adult or between finer gradations denoted by terms such as infant, toddler, child, adolescent, young adult, and adult. Because our culture believes that childhood is biologically defined and thus universal, we also tend to assume that our cultural expectations of childhood can be readily applied to other societies. Children are commonly envisioned as dependent beings who must be controlled, cared for, and kept secure and happy, and childhood is viewed as a somewhat liminal state between birth and full societal participation as an adult. Education, seen as a primary goal of childhood, is the responsibility of educational institutions and of the family (often read nuclear family). Ideally, children should not contribute significantly to the household coffers; their value is seen as primarily affectional, rather than economic. The consequence of this view of childhood is that the appropriate place for children becomes the home. Children, like women, are associated with private, rather than public space, and their activities become less visible, if not invisible (Baker, 1997; Stephens, 1995).

The accuracy of this model of childhood has been cast into doubt by both historians and anthropologists. Cross-culturally, there is considerable variability in definitions of childhood. Even in a single cultural tradition where some consistency

might be expected, variation is common. Historians have shown that in Europe and the United States, perceptions and definitions of childhood have changed considerably over time (Aries, 1962; Hendrick, 1990; Qvortrup, 1985), probably because of changes in economic organization, political climate, and patterns of family organization. In some parts of Europe during the Middle Ages, children may have been viewed as miniature adults (Aries, 1962). By the end of the Renaissance, under the influence of the French philosopher Rousseau, many Europeans believed that children were innocent and inherently good (Hughes, 1991). In contrast, the Puritans, while they valued children highly, believed that they were born sinful and needed guidance (Loucks, 1981). Although Western culture through most of this time considered it natural for children to work, reformers, primarily of the elite classes for whom children's labor was not economically critical, enacted mandatory schooling and child labor laws during the 19th century. These altered both the activities of most children and the general perception of a normal childhood experience. The emphasis placed on age in the West has also increased through time, particularly with the advent of age graded schooling and the proliferation of other age segregated organizations (Chudacoff, 1989). Even the age at which children are perceived as adult appears to have changed drastically, increasing over time. Legal documents demonstrate that in 7th century Anglo Saxon Britain 10 was the age at which children became adults, but by the 10th century the boundary had been raised to age 12 (Crawford, 1991), still considerably younger than the age of adulthood today.

If within a single culture area the nature of childhood and its definitions can be shown to be dynamic, changing with historic trends, the variability across cultures is even more dramatic. Modern Western societies tend to put considerable emphasis on age (Chudacoff, 1989) and often use hierarchical and rigid categories linked to chronological age (James and Prout, 1990). In contrast, in many preliterate societies chronological age is rarely recognized, but stages of maturation are (Fortes, 1984). These take into account not only biological age, but skills, capacities, personality, and other individual attributes.

Defining Childhood and its Stages Archaeologically

Like gender, age categories and roles are culturally defined and must be investigated, rather than assumed. It is not tenable to simply assume that specific age categories derived from modern Western models will correspond to socially significant stages for other cultures, past or present. In fact, the reverse is true. It should be expected that every society will have its own age categories and its own definitions of childhood. This means that an optimal first step in the study of prehistoric children would be a determination of significant cultural age categories and their basic characteristics.

James and Prout (1990, p. 220) have argued that transitions are particularly important for the study of childhood “since during them past, present, and future are symbolically represented.” Initiations (La Fontaine, 1985) often, but not always, mark significant personal changes, such as marriage, membership in societies, and the passage into economic or ritual adulthood or transitions between stages within childhood. They are commonly marked by ritual incorporating components such as feasts, bodily mutilations, shaving, washing, isolation of the initiates, instruction by the previously initiated, and new hair or clothing styles. Aspects of some rituals, such as ritual paraphernalia, feasting implements, and special facilities or locales, will be archaeologically discernable.

Several archaeologists have identified initiation rites, using a variety of types of archaeological remains. Cyphers Guillén (1993) suggests that at Chalcatzingo female figurines may represent the stages in a woman’s life and may have been used in female initiation rituals to teach girls about appropriate gender roles. Using the clothing and stance of statuary in the context of ethnographic parallels, Serwint (1993) proposes that the Heraia festival held at Olympia was an Hellenic prenuptial ritual, initiating girls into womanhood.

The genitalia of males on statuary and paintings and some mummified remains show that the ancient Egyptians practiced circumcision (Janssen and Janssen, 1990, pp. 90–95). More details of the age and ceremonial circumstances are revealed by a scene in the Saqqara tomb of the royal architect, Ankhmahor, which shows the circumcision of a boy whose age is estimated at 10–12. In this scene, the circumciser appears to be incising the foreskin with a “V,” rather than removing it completely. Corroboration for the notion that circumcision in ancient Egypt might be a puberty ceremony is found in statuary, as males with sidelocks, a hair style associated with young boys, are never circumcised (Janssen and Janssen, 1990).

Using primarily the Codex Mendoza and the Florentine Codex as sources, Joyce (1999a) describes Aztec initiations, which began at birth. The next initiation, held during the month of Izcalli, was conducted with groups of children every fourth year to produce a system of age-grades. Joyce (1999a) believes the children began the Izcalli initiation as young as 4, while Clendinnen (1991, p. 189) suggests that having been weaned was the requisite qualification and puts this age as 2–3. Additional rituals occurred about every four years until adulthood. Changes in status were often marked by alterations in hair and clothing styles, jewelry, and body ornamentation, all of which are potentially accessible archaeologically.

Indications of the locations of initiation ceremonies have also been discovered. Skeates (1991) and Whitehouse (1988, cited in Skeates, 1991) use the subadult human remains and other offerings concentrated in Neolithic Italian caves to argue that caves may have been the locales of initiation rituals. According to historic accounts, at their first menstruation the Zulu secluded girls for initiation rites lasting for up to three months (Roodt, 1992). During this time they stayed in a special screened-off section of the house. At Bheje, a small satellite community

located near uMgungundlovu, the headquarters of the Zulu king, uDingane (1828–1840), which may have been the residence for high-status concubines of the king, Roodt (1992) excavated two huts with trenches suggesting screened-off areas that may be interpreted as indicating a location for initiation ceremonies. He suggests that, given the paucity of males at Bheje, this may have been a very convenient place to conduct initiation rituals that necessitated secluding girls from males.

Funerals are probably the rite of passage most accessible to archaeologists. Funerary ritual and burial disposition often correlate with social persona (Binford, 1971; Saxe, 1970) and burials might be expected to reveal emic age categories. Social characteristics perceived by the mourners may be symbolized through ceremonial treatment of the body after death (Mizoguchi, 1993). Both ethnographic and archaeological data show that infants and children are often buried differently from adults (Kamp, 1998). This should reflect local beliefs about age categories. The ages at which changes in social definitions occur may thus be revealed through an analysis of burials.

For example, in Roman Britain (Scott, 1991, 1993) a large number of both infant and animal burials are found under malting floors and in association with other agricultural features, but separate from the burials of adults and older children, suggesting a different social or symbolic status for babies. Similarly, in Neolithic Italy children tend to be buried in caves and adults in settlements (Skeates, 1991). In Bronze Age Ireland it is not until about the age of 14 that children are accorded full burial rites “*in the same way as adults, as individuals in their own right*” (O’Donnabhain and Brindley, 1989/90, p. 19, italics in the original). The same is true in Bronze Age Scotland, where again child burials are only rarely found unless in conjunction with an adult burial; however, when children are buried individually, they are treated in the same way as adult burials (Small *et al.*, 1988). Mesolithic and Neolithic populations in the Dnieper Rapids regions of the Ukraine, however, buried children and adults in identical fashion, which Lillie (1997) interprets as indicating children’s incorporation into social and economic networks.

Obviously, this type of analysis entails assumptions about the differential preservation and recovery of skeletal remains and perishable grave contents, but ultimately that is unavoidable. For example, Lucy (1994) found that in British pre-Christian cemeteries infants were severely underrepresented. Because they are well-represented in both earlier Roman and later Christian cemeteries in the same area, this is likely to be due to differential depositional treatment. After infancy, there is considerable variability in the way that younger individuals were treated between pre-Christian cemeteries, and within a single cemetery the patterning is always statistical, rather than absolute. Lucy (1994, p. 29) suggests that

In terms of a society which often did create distinctions between different social groups by manipulation of burial practice, this suggests that some communities did not regard the rigid adult-child distinction as a valid one to emphasise . . . The idea of what a “child” was may have been a far more flexible (possibly even non-existent) concept than we can imagine.

This raises the interesting question of whether, given the somewhat arbitrary nature of the use of mortuary ritual to symbolize social categories, the absence of discernable patterning can be used to imply a lack of social differentiation. It is also possible that archaeologists sometimes miss significant patterning because of their own preexisting definitions of the boundaries between age categories. For example, Crawford (1991) points out that at the Anglo-Saxon site of Westgarth Gardens the inclusion of a shield in the grave of a 11–12 year old is anomalous, if, as in previous studies, the shield is classed as being in a child's burial. When it is understood that during this time period the legal age of adulthood is 10 for many purposes and the burial is reclassified, the presence of weaponry becomes explicable.

Both Joyce (1999b) and Meskell (1994) stress that burials reflect both individual and group identities. In Pre-Classic Mesoamerica the graves of juveniles tend to contain the greatest number and diversity of artifacts (Joyce, 1999b). Joyce (1999b) hypothesizes that this is because the offspring of a marriage serve to link social groups, and life stage ceremonies enacted for them solidify the linkages. When a young person dies, the ties are prematurely severed, so a more elaborate mortuary ceremony is desirable to aid in the continuance of the social network. At Chiapa de Corzo (Clark, n.d. cited in Joyce, 1999b, p. 40) status was indicated through the use of standardized costumes. Juveniles were buried wearing only incomplete costumes, perhaps implying that only through the attainment of maturity, either with or without formal initiations, were children permitted to wear the full costume.

Meskell (1994) notes that, while in New Kingdom Egypt ostentatious display and social aggrandizement may have been potent forces in structuring adult burials, at Deir el Medina the burials of the young show much less variability due to class. Age affects both the spatial location of the burial and the treatment of the body, but the objects included as grave goods are similar to those provided to adults, rather than being toys or other objects that seem specifically to belong to the realm of children. The burials seem designed to provide their occupants with the necessities for gaining access to the afterlife, and Meskell argues that in our consideration of burials we need to consider the affect involved in responding to a death and the importance of deceased as individuals.

Using an ethnographic model derived from Ortiz' description of the Tewa age-status system (Ortiz, 1969), Palkovich (1980, pp. 49–63) examines burials from the Southwestern site of Arroyo Hondo. She lumps several subdivisions of initiates and suggests that modern Tewa have three broad categories: those below age 6 who have not yet undergone an initiation to become a fully established Tewa, normal members of Tewa society, and those adults who have been initiated into ritual societies. Statistical analyses of grave locations, orientations, and furnishings show a statistically significant tendency for children ages 0–6 to be found more frequently with hide blankets and yucca fiber mats and less frequently with rare artifacts. No statistically significant differences were found within the 0–6 age

group and Palkovich interprets this as indicating that age 6 is a significant dividing line, representing a change in status. Further initiation into social or religious organizations is suggested by the presence of unusual and possibly ceremonial items (for example bird parts that may have been portions of a headdress) in one burial and the remains of body paint on two adult skeletons.

Although there have been some interesting first forays into investigating some of the archaeological patterning that may correlate with the changes in status occurring through the life cycle of an individual, this area of investigation is still in its infancy. In particular, what is lacking is an attempt to formulate a sequence of life stages that can be supported using multiple lines of evidence, then use them as the basis for other studies of social organization, including health, social status, and daily activities. Currently there is an unfortunate tendency to use a wide variety of rather arbitrary age divisions even when dealing with human skeletal remains where presumably this would be easiest to rectify. A variety of terms, such as infant, toddler, child, youth, adolescent, and young adult are used, but the exact terminology varies considerably from study to study. Similarly, the meaning of the same term often differs. For example, the boundary between sub-adult and adult may be defined as sexual maturity, skeletal maturity, or in terms of a specific age, often one currently of legal import, such as 18 or 21. The realization that age boundaries are social constructs, which must be discovered, rather than simply assumed, can act to make archaeological patterning more understandable.

DESCRIBING CHILDHOOD: PREVIOUS STUDIES

In 1984 Conkey and Spector called for the development of a more gender-sensitive archaeology. At the time there was a vigorous feminist movement and a burgeoning interest in gender studies in most of the social sciences (Farnham, 1987; Schuster and Van Dyne, 1985). Nevertheless, it was not until the early 1990s with the publication of a number of edited volumes on or partially devoted to the archaeology of gender (Claassen, 1992; Gero and Conkey, 1991; Nelson and Kehoe, 1990; Walde and Willows, 1991) that the study of gender became a very visible concern in archaeology.

In 1989 Grete Lillehammer called for more archaeological attention to children. To some small extent a few scholars responded, especially in Europe. Of particular note are the sections on children in Elizabeth Moore and Eleanor Scott's 1997 edited volume based on a 1993 Theoretical Archaeology Group (TAG) session, *Invisible People and Processes: Writing Gender and Childhood into European Archaeology*, and a 1994 special issue of *Archaeological Review from Cambridge* entitled *Perspectives on Children and Childhood*. Although the results were never published, in 1994 Blythe Roveland and Martin Wobst organized a Society of American Archaeology (SAA) symposium on childhood. According to Roveland (personal communication), it was so difficult to find potential contributors that it took them two tries to organize the session. In 1997, in the

AAA newsletter, Blythe Roveland reissued Lillehammer's call to action. Nevertheless, the results so far have been disappointing. A look at the SAA programs for the last five years reveals a paucity of papers dealing with children and over 10 years after Lillehammer's original article the literature expressly on prehistoric children is still sparse.

Some archaeological studies are in print, however, and a brief review of past research helps put progress in perspective. A number of the studies available are explicit attempts to treat childhood as a cultural construct, analogous to gender, but the corpus also includes traditional studies, dealing with archaeological databases that seem to demand some discussion of children. This is particularly true where skeletal remains of subadults must be analyzed, but also occurs when miniatures and other objects that appear toy-like to excavators are encountered. In many of these studies childhood may not be specific focus of study, but useful information about the lives of children is certainly included. The following sections on health and nutrition, child-rearing practices, enculturation and learning, work, play, and the meaning of childhood survey some of the current literature and provide some suggestions for continuing research.

Children's Health and Nutrition

Because subadult skeletal remains are common in archaeological sites, a considerable amount is known about the nutrition and health of prehistoric children, much more than can reasonably be discussed in a short review of the literature. In fact, some osteological abnormalities, such as porotic hyperostosis, may indicate childhood anemia, rather than recent episodes, even when seen in adult skeletons (Stuart-Macadam, 1985); thus, the study of adult skeletal remains also sheds light on the issue of children's health.

Although it is difficult to assure a representative sample of children's bones for a variety of reasons including their small size and fragility and the possibility that children may be buried in different contexts or using different methods from adults (Brahin and Fleming, 1982; Martin *et al.*, 1991, p. 61; Storey, 1992), physical anthropologists routinely construct a variety of types of mortality curves, life tables, and survivorship curves. In many societies childhood mortality is extremely high and subadults may account for 50% or more of the deaths. Analyses of both ethnographic and archaeological data show that children are particularly vulnerable at birth, then again at the time of weaning (Goodman and Armelagos, 1989; Hinkes, 1983; Martin *et al.*, 1991; Saunders and Melbye, 1990; Storey, 1992).

Even when children survive the critical years below the age of about 5 when most childhood deaths occur, the severity of childhood stresses can be assessed by examining skeletal remains for osteological and dental conditions such as Harris lines, dental hypoplasias, porotic hyperostosis, reduced cortical bone thickness, and retarded size (Goodman and Armelagos, 1989; Hinkes, 1983; Wetterstrom, 1986). In many populations a large percentage of children appear to have suffered

from the stress of either nutritional deficiencies or illnesses, which are hard to separate using osteological remains (Brahin and Fleming, 1982; Palkovich, 1980; Storey, 1992; Wetterstrom, 1986). The effects of childhood illness and malnutrition are long lasting; adults who have been severely stressed as children may have lower fertility, capacity for work, or adult health (Goodman and Armelagos, 1989; Wetterstrom, 1986). Local diets, medical care, and hygienic practices will all affect children's health. For example, children may suffer increased nutritional problems after the introduction of agriculture to an area (Goodman and Armelagos, 1989; Perzigian *et al.*, 1984). This may occur because diets become lower in protein, periods of scarcity are more common, birth spacing is shorter, or for a number of other possible reasons linked to the general health of populations and to maternal health in particular.

While considerable work has been done on children's health, little attention has been paid to the consequences of ill health for either the children themselves or the society, and only a few have studied the interconnectedness between cultural mores and child health. Bradley (1998) examines the relationship between ideology and health. She believes that the kinds of obligations stressed are particularly important because they dictate priorities for the fulfillment of individuals' needs. Thus, when the emphasis is on obligations to the community or the family as a whole, rather than on individuals, less energy may be expended on children's welfare and their health may suffer. Cultural ideas about the nature of children's needs also influence health practices. For example, Dettwyler (1994) reports that the Bambara do not recognize a connection between food and growth and believe that children don't require as high quality food as adults because adults do the work and appreciate the food more.

Most of the studies of childhood paleo-health and nutrition are weakened because they fail to use archaeological data to establish age group boundaries. Studies usually start with a definition of groups that seems logical to the investigator, then test for differences between the groups, rather than beginning the exploration by looking for differences that might imply local age definitions. Because the burial remains, which are often the basis for research into children's health and nutrition, are one of the primary sources for establishing age groups archaeologically, this area of investigation should be one of the pioneers in such a process.

Child-Rearing Practices

Each culture has specific notions of how children should be raised. From their first breath, children are embedded in a social milieu that includes both adults and other children. Human infants are born immature and require care. In addition, archaeologists have sometimes noted that the survival of individuals with severe health problems implies care from those around them (Meskell, 1994; Rowlett and Schneider, 1974) and this need is exacerbated when the individuals

are young. Some work has already been done on several aspects of early childhood socialization.

Breast feeding is one child rearing practice that can be investigated using archaeological data. It has been suggested that time of weaning can be estimated by examining patterns in dental hypoplasias (Goodman and Armelagos, 1989). Hypoplasias are defects in tooth enamel thickness resulting from physiological stresses occurring during crown development. Because tooth development occurs with a fairly predictable timetable, the location of the hypoplasias in deciduous teeth provides a record of the timing of stress episodes during the developmental period. For deciduous teeth this is from the last two trimesters of pregnancy through the first year, and for permanent teeth from birth to about age 6. For the inhabitants of Dickson Mounds the shift to more intensive agriculture during the Middle Mississippian resulted in an increase in health problems and a decreased life expectancy (Goodman and Armelagos, 1989). Simultaneously, an analysis of dental hypoplasias shows that weaning was occurring at earlier ages. The resulting ability to decrease the interval between births might have allowed Mississippian populations to compensate for higher death rates and even to increase population in response to the greater labor needs of intensive agriculture. Interestingly, the relationship may be iniquate as early weaning may result in increased risk of infectious diseases and inadequate dietary replacements may cause anemias and other nutritional diseases.

Cultural beliefs about the appropriate ages for weaning children vary considerably between cultures. In some societies women tend to breast-feed for fairly short lengths of time, from six weeks to a year (Cominsky, 1985; Hull, 1985; Manderson, 1985; Millard and Graham, 1985; Simpson, 1985). Others (Hrdlicka, 1908; p. 76 quoted in Wetterstrom, 1986, p. 115; Jenkins and Heywood, 1985) breast-feed for up to four or five years. Supplementary foods may be introduced gradually, so that ingestion of other foods occurs simultaneously with breast feeding. Age at weaning depends on both cultural norms and beliefs and on contextual factors, including work requirements, subsequent pregnancies, medical problems leading to the cessation of lactation, the availability of easily digested milk substitutes, and the economics of providing alternative foods. For example, in Thailand before the introduction of formulas most women breast-fed for the first 18 months to 2 years, but by the early 1980s the average age at weaning was 18 months for rural children and 8 months for urban children (Van Esterik, 1985). Breast feeding practices have ramifications for infant and child health, maternal health, bonding, and the role of males in early child raising, although their implications are not totally unambiguous (Maher, 1992a,b).

A second child-raising practice that leaves physical traces is the use of cradles or cradle boards. Occasionally, these types of implements are preserved. Even when they are not, the use of cradle boards (El-Najjar, 1986; Palkovich, 1980; Wheeler, 1985) or unpadded board cradles (Coon, 1939, p. 600) leads to distinctive

patterns of cranial flattening and sometimes occipital lesions (Holliday, 1993). Cranial deformations may also be intentionally caused as a means of beautifying or providing a physical means of marking social identity, but usually the two types of cranial alteration are separable. While cranial deformations are always noted when they occur, the ramifications of the use of cradle boards as a child-rearing technique are not generally considered. For example, does use of the cradle board tend to begin in dangerous physical or social circumstances when a means of controlling children's movement is vital to their own safety or even to the safety of the community? This would predict its development in locations such as cliff dwellings or under conditions of war. What are the alternative means of accomplishing the same thing? What does the use of cradle boards imply about the childcare giver? Does their use suggest that adults, rather than children are responsible for infants? What does their use mean about the ways children interact with the surrounding environment at an early age? About how far they are likely to go from the domestic locale? About notions of the child as an active agent?

Discipline imposed upon children by adults or older children is another area of possible investigation. Pictorial sources are one resource for the study of the control of children by adults. For example, the *Codex Mendoza* (Berdan and Anawalt, 1992; Calnek, 1992) provides textual and pictorial documentation of punishments such as waking the child in the middle of the night, beating, and smoking (holding the child over a fire into which chilis have been placed). The severity of appropriate punishments increases as the child becomes older. Of course, it must be recognized that this source, like all written documents, is far from bias-free. In particular, the descriptions of punishments may be an attempt to portray the ideal Aztec in particular ways to their conquerors. Calnek (1992, p. 86) believes that the third part of the *Codex Mendoza* which describes the life cycle and includes sections on appropriate punishments for both adults and children is essentially "another repetition of the familiar sermon favoring virtuous conduct and condemning the usual vices." On the other hand, Clendinnen (1991, p. 192) argues that the depictions of rather severe discipline may be fairly accurate and be reflective of the Aztecs' need to prepare children, especially males, for a harsh and demanding world.

Childhood as a Period of Enculturation and Learning

One aspect of child raising is teaching. Opinions about the mutability of children during the developmental process and the necessity for adults to provide guidance vary greatly between different cultures. At one extreme, the parents of San Ildefonso (Whitman, 1947, p. 39), Georgian villagers (Dragadze, 1988), and most Western psychologists and educators view children as individuals whose personalities, values, and attitudes are as yet unformed and who lack necessary intellectual, physical, and social skills. Given this perspective, it is the duty of adults to provide appropriate training. At the opposite extreme, the Chewong of Mayalasia believe that behavior is essentially innate, which relieves adults from

the need to explicitly mold children (Howell, 1988). Whatever the local theories of child development and the amount of conscious teaching, it is undeniable that childhood is the time during which humans first begin to learn language and other cultural behaviors, acquire a wide spectrum of knowledge about the natural and social environment, and develop physical abilities and skills.

The type of instruction given to children ranges from structured learning situations such as the classroom or initiation through informal teaching via casual demonstrations, discussions, and explanations, to simply doing normal activities while children are in the vicinity (DeBoer, 1990; Rogoff, 1990; Whiting and Edwards, 1988). Learning occurs in the context of both work and play activities. Contexts may be primarily group situations, as in initiation rites, or one-on-one. Teachers can include anyone from parents to other adults to siblings and other children. Some learning also occurs through individual experience and trial and error. The types of learning situations will vary not only between cultures, but will be dependent upon the type of skill or value being taught. While cultural anthropologists, educators, and psychologists have studied learning situations in modern societies fairly extensively, archaeologists have paid little attention to this issue.

The archaeological work that has been done so far stresses the acquisition of prehistoric craft techniques. Many of the studies that explore the learning of manufacturing skills attempt to recognize novice artisans by examining artifacts for evidence of inexpert workmanship (Bagwell, submitted; Finlay, 1997; Fischer, 1990; Goldsmith, 1998; Grimm, 1998; Kamp, 1998; Karlin and Julien, 1994; Shelley, 1990). Both cross-culturally and within a single society, children as young as 2–5 years of age, fully mature adults, or anyone in between can begin to learn a craft (Donley-Reid 1990; Hayden and Cannon, 1984, p. 353; Kramer, 1997; Krause, 1985). Accordingly, identifying novices is not automatically synonymous with identifying children (Finlay, 1997). Furthermore, there may be considerable variability in the production capability of nonnovice adults. It is not even unlikely that, if old age brings with it maladies such as poor eye sight or crippling arthritis, the craft products of the elderly may sometimes appear low in quality.

Several recent studies have begun to tackle the problem of identifying the craft production of children. Crown (1999, 1998) proposes that a knowledge of the psychology of development can aid researchers in identifying the products of children, because particular types of errors and imperfections may be associated with developmental immaturity, rather than merely a lack of expertise. Furthermore, because there is some cross-cultural regularity in the developmental sequence, it may be possible to identify the ages at which children begin certain aspects of ceramic production, by analyzing their use of concepts such as symmetry. Crown has examined the designs painted on a selection of Hohokam, Mimbres, and Salado vessels and argues that most children probably started painting decorations on pottery around the ages of 9–12, although some may begin as young as 4–6. Hohokam children appear to begin the process later than children from the other two areas and may have been taught as part of a cohort.

Another more direct avenue for identifying young artisans is measurement of fingerprints left on artifacts (Kamp *et al.*, 1999; Kamp, 1998). Using a combination of fingerprint measurements and quantitative and qualitative measurements made on clay animal figurines, and on both miniature and full-sized vessels, I have argued that the Sinagua of northern Arizona may have structured the learning process using play activities and the production of toys to familiarize children with the properties of clay and the processes of ceramic manufacture. This would have allowed the learning process to begin very young, as early as 2–5, and facilitated the incorporation of children into the economic system as competent ceramic artisans at a fairly early age.

During the enculturation process, children learn values as well as skills. Because skills may be the most readily accessible, they have been studied most intensively. Nevertheless, it is also important to discover the values that a prehistoric society passed on to the next generation. What kinds of work were most highly valued? Did individuals strive for high status or was a more egalitarian ethos dominant? Did families desire competitive children or cooperative ones? What was the relative position of males and females? Finding the answers to these types of questions will not be easy, but we will never discover them unless we ask. Some clues may be found in the symbolism used in initiations or the types of goods found in burials. Others may be discovered by looking for signs of stratification or by analyzing games to see if they involved cooperative or competitive strategies.

Gender roles are one of the issues of socialization to which archaeologists need to pay some attention. Children are not simply raised into adults. They become adults with a specific gender identity. The nature of gender roles varies according to age, and some types of gender differences may be de-emphasized in both childhood and old age (Lesick, 1997). Furthermore, children below a certain age may not have a concept of either their own or others' gender (Soafar Deverenski, 1997). Nonetheless, psychological studies have shown that, at least in Western culture, male and female neonates already behave somewhat differently (Philips *et al.*, 1978), and at least some of the variability is probably due to differences in the ways that adults unconsciously treat babies they regard as of different genders (Moss and Robson, 1968). This highlights the need to examine gender variability in children, rather than simply relegating them to a single unitary category (Soafar Deverenski, 1997).

Children and Work

The importance of prehistoric children's labor is almost invariably ignored by archaeologists, despite abundant cross-cultural and historic evidence of children's economic contributions (see below). When the work of subadults is acknowledged, its importance is usually described in terms of freeing adults from tasks. For example, childcare is usually discussed as women's work even when children, in reality, are the major care-givers. This suggests an ethnocentric tendency to

dichotomize all work into adult male or female tasks, rather than accepting the notion that some labor may be seen as primarily within the realm of children. Children's work, like much of women's work, especially before the advent of feminism, is underestimated or even unrecognized. Self-maintenance activities are never considered, even when children collect and prepare a fair amount of their own food. Interestingly, when an adult performs the same activities as a child, their efforts are considered work (Morrow, 1996).

The neglect of prehistoric children's work may be because today popular Western conceptions of the appropriate activities for children minimize the importance of work, viewing children's worth as affective, rather than practical (Zelizer, 1985). Children's work is usually described by parents as training or character-building in nature rather than strictly productive (White and Brinkerhoff, 1981). This has not always been true. In 1910 the U.S. Census reported almost 2 million workers between the ages of 10 and 15, a figure which did not include younger laborers or those unpaid workers who were assisting parents at home, on farms, or even in sweat shops (Zelizer, 1985, p. 56). Nevertheless, in Europe and the U.S. by the late 1800s the middle class ideal of childhood had become a time of learning and play, and theoretically children were not supposed to do any "real" work (Cunningham, 1996; Zelizer, 1985). This does not mean that children did not work, however, simply that the "exploitation" of children through their work activities began to be seen as a social evil.

The contribution of children to the work force in many cultures is considerable. Cross-cultural studies suggest that child labor is more important in agricultural and pastoral societies than for hunter-gatherers, but can be even more valuable in industrial contexts (Harris and Ross, 1987, p. 39, 40). A quantitative study of work activities in Kenya (United Nations Development Program, 1995) showed that rural Kenyan children between the ages of 9 and 16 spent a considerable number of hours in work activities. Including educational activities as part of the work regime, girls spent an average of 41 hr per week working and boys spent about 35 hr. Girls spent 3.7 times the number of hours of boys doing tasks within the household and 10 times the number of hours in wage labor. Even in societies where formal schooling is the norm and occupies a large fraction of children's time, where the locus of work has been removed from the home (Stern *et al.*, 1975), and where the dominant cultural ideology tends to downplay the contributions of sub-adults, the work of children may be extremely important. This is often recognized for farm children but is probably true of urbanites as well, for it is not uncommon for children to do a considerable number of tasks within the home (Morrow, 1996). Even though these jobs are not for wages, they would be considered work, if done by adult household members, and sometimes free adults to do work outside the home.

Child labor in both the formal and informal sector is extremely common today throughout the world. Some of these children work for wages, others are self-employed, and still others provide services vital to the household economy within

the home. In locations as varied as the Philippines (Rivera, 1986; Sancho-Liao, 1994), Naples (Goddard, 1985), India (Gulranjani, 1994), and Senegal (Mehra-Kerpelman, 1996) children as young as 5 to 7 work 7 hr a day and more at a variety of occupations including agricultural work, street-vending, shoe-shining and other services, and both home and factory manufacturing activities. While the nature of some of the work and the conditions under which it occurs are at least in part products of industrialization, capitalism, and widespread poverty, the notion that children are a part of the workforce appears common to most modern cultures and children probably worked prehistorically as well.

The age at which children are first expected to contribute their labor varies considerably, and is often gender-dependant as well. In Europe in the 1700s it was generally thought that children as young as 3 or 4 could be reasonably put to work. On the other hand, traditionally, the Manus of New Guinea gave children almost no responsibilities until quite late. Boys were not expected to work until sometime in their early twenties, when they married (Mead, 1962, p. 195). Girls began to do a few minor chores at 6 or 7 and even more after puberty, although they also did not participate fully until after marriage (Mead, 1962, p. 156, 188). This contrasts with the situation in much of Polynesia where children began to be independent by age 2. They were expected to do lots of chores at a young age, and often have primary responsibility for child care. By 8, children were expected to cook, wash, iron, fish, get water, and do numerous other work activities (Ritchie and Ritchie, 1979).

The types of work engaged in by children also vary considerably. Children herd, hoe, weed, plant, gather plant foods, trap and hunt animals, collect fire wood, bring water, cook, sew, care for other children, clean, and perform much work essential to the economy. In most societies, work responsibilities are dependant upon age as well as other attributes such as gender and class (Halperin, 1984). Some patterns can be seen in the allocation of tasks. In general, the tasks allotted to children tend to parallel the adult gender divisions of labor (Bradley, 1987). Perhaps because women's tasks tend to be done by children more than men's tasks, girls tend to do more work than boys. Although girls almost never do men's work, boys fairly often do tasks that are otherwise allocated to women. When there are no girls of an appropriate age boys are almost always expected to complete the jobs that are more normally seen as girls' responsibilities. Some jobs are so universally assigned to children that they might be considered children's jobs. For example, the care of very young children is almost always a job for 6–10 year olds, perhaps partly to free older children and adults for more demanding tasks and partly because children in this age group appear to have an affinity for the task (Whiting and Edwards, 1988).

While archaeologists have paid almost no attention to the possibility that children may have been an important constituent of the prehistoric workforce, children's position in society may have been strongly influenced by their economic importance or lack of it. Fertility levels are affected by both the cost and benefits

of having children (Harris and Ross, 1987; Livi-Bacci, 1992; Stern *et al.*, 1975; Zeller, 1987). The nature of the child's experience growing up and their integration within the household is also dependent upon the amount of participation in adult activities. According to Barry (1996), in less permissive societies, a high level of participation by children in adult activities is occasioned by the need for children's labor, whereas in more permissive societies, it correlates with the absence of an initiation ceremony and suggests increased avenues for children to be granted adult privileges.

Just as it has been notoriously to differentiate the gendered division of labor, so will age be a challenge archaeologically. Several studies hint at possibilities for investigating the relationship between age and the division of labor. Under some circumstances, recent historic links may provide testable hypotheses about possible children's tasks; however this method needs to be used with extreme care, because historic cases show how quickly the methods of labor allocation can change. Spector's task-differentiation method (Spector, 1983) provides another possible avenue that has yet to be explored for discerning the participation of children in economic activities. Using ethnographic information about the historic Hidatsa, she compiled a list of activities, along with information about personnel, physical setting, temporal context, and materials associated with each. This allowed her to demonstrate that male and female activity patterns were organized very differently, and to highlight the potential difficulty with discussing the Hidatsa as a single entity. A similar approach to children's activities might reveal interesting reasons for the use of child labor for certain tasks. For example, perhaps time/space conflicts with other tasks being done by adults made it desirable for children to do certain kinds of work. Other possible issues concerning child labor that beg examination are possible gender differences, task autonomy, and age differentiation.

The early learning of craft tasks by children may be an indication of their economic participation. If, for example, it is correct that prehistoric Puebloan children were beginning to learn ceramic production techniques at an early age (Bagwell, submitted; Crown, 1999, 1998; Kamp *et al.*, 1999, 1998; see above for a more detailed discussion), one possible explanation for the early training is the desire to incorporate their labor more effectively in economic production (Kamp, 1998). The ceramics identified as children's products by Kamp (Kamp *et al.*, 1999; Kamp, 1998) on the basis of fingerprints and by Crown (1999; submitted) on the basis of painting styles were potentially functional and many showed wear, attesting to the fact that they had actually been used.

In Egypt, tomb paintings attest to a variety of tasks for children (Janssen and Janssen, 1990, p. 51). Boys tend cattle, sow, plow, and chase birds from crops, while girls make beds and both boys and girls glean fields and care for younger children. Obviously the use of child labor would have varied considerably with class and the tomb paintings are quite limited as a source base, but they provide a starting point for further research.

Grave goods may provide another clue to the tasks of children, although obviously they must be interpreted with care. Rega (1997) found that at Mokrin in the former Yugoslavia bone needles were found in the graves of women and in juvenile burials with a southern orientation. Because this is the preferred orientation for women's graves, she infers that these subadults are girls and suggests that sewing might have been a task performed by both women and girls. Rega notes, however, that about half of the needles were broken or otherwise not functional and that the youngest children might not have had the strength requisite for sewing, and proposes as an alternative explanation for the inclusion of needles in the burial goods of children, that the needles were simply symbolic of female identity. A knitting kit in a child burial from a site in Delaware provides the alluring possibility that the child was at least in the process of learning the craft, if not already fully capable of producing flint tools (Custer *et al.*, 1990). Although the authors did not speculate about the possibility of child knappers, it is worth noting that the artifacts included in the grave goods were of the same type as those recovered with adults identified as knappers.

Some of the reservations that we tend to have about postulating the economic participation of children may relate to their competence to perform tasks well enough to be really useful. Obviously for very simple jobs this may not be an issue. Even for more complex activities, it is likely that with appropriate instruction fairly young children would be able to perform well enough to be useful. The use of children in early textile factories and as carpet weavers in some parts of the world today are obvious examples. The notion that children are incapable of performing complex tasks or assuming responsibility may be an ethnocentric result of the fact that we do not currently train our children in work skills or expect them to perform them. Certainly, it might be argued that a child who is able to learn to read, do arithmetic, and follow the rules of the classroom would also be able to perform a wide range of economically productive activities, some of them fairly complex.

Children and Play

All mammals play, especially as juveniles, and play appears to be part of the basic biological heritage of humans (Hughes, 1991). The need to play seems very strong in children, and even when they are working they tend to incorporate play into and around the work activity (Hughes, 1991). Among humans the nature of play varies cross-culturally and is influenced by cultural mores and definitions as well as the immediate cultural context, the physical environment, and the available materials (Harkness, 1996; Roopnarine and Johnson, 1994).

Scholarly interpretations of play have varied considerably (Cheska, 1978). While psychoanalysts concentrate on its cathartic value, educators stress skill development. Anthropologists have discussed the development of games and toys through time, their diffusion, their role in enculturation both as practice for adult

activities and as a way of learning basic cultural values and social skills, their value for dissipating conflicts and psychological tensions, and their function as social unifiers.

Cross-cultural studies of games demonstrate strong relationships between the type of games played and both a number of societal features and personality traits (Roberts and Barry, 1976; Schlegel and Barry, 1989). In general, the types of games played varies with the level of complexity of the society and with the emphases in child training practices. Games and toys provide encouragement for practicing adult roles and honing both physical and mental skills. Thus, the playthings of the prehistoric Thule of the Nelson River area (Kenyon and Arnold, 1985) and later Inuit as well (Park, 1998) show that children modeled a significant portion of their play on adult activities. Similarly, play provides opportunities to practice either cooperation or competition and to learn social and physical strategies useful in a particular culture because games are areas in which notions of fate can meet ideas about the nature of power and strategy (Sutton-Smith 1989).

Play is part of the socialization process, teaching values as well as physical and social skills. Nevertheless, there is a complex circular relationship between culture and play. To a large extent, cultures structure the pastimes of children. Games, songs, and other play activities are learned and transmitted from generation to generation. Play also has a creative element and may change through time, sometimes due to the innovations of the participant children and sometimes due to interventions by adults. The freedom for innovation allowed by certain types of play may have a definite cultural advantage, particularly in societies where adult roles are rather open-ended (Sutton-Smith, 1976). Sutton-Smith (1976) characterizes this aspect of play as "adaptive potentiation." Play provides a model for society and prepares individuals for new situations and roles by allowing them to practice a wide variety of behaviors and to devise solutions to potential problems.

Sometimes adults consciously manipulate the play contexts of children (Sutton-Smith, 1986). Devices such as cradle boards or playpens may restrict the movements of young children. Clothing styles may have a similar effect and may differentially affect girls and boys. Cultural rules can also limit mobility, either directly via ideas about appropriate spheres of movement or indirectly through the assignment of duties whose demands put restraints on movement. Similarly rules may prohibit certain choices in playmates or encourage interaction with others. Some cultures, for example, limit contact between males and females after a certain age; others may segregate by age. Toys also can be a means for parental manipulation. Generally where the emphasis is on playing with other children toys are minimal; when children are isolated from playmates, toys become more common. Some, such as soft stuffed toys and pets, may be useful for alleviating loneliness; others help provide pastimes independent of other children. Parents can consciously or unconsciously attempt to inculcate certain values through their choice of toys, but children can circumvent this intervention by producing their own playthings or by using the toys in alternative ways.

Although there is considerable archaeological evidence of both toys (Pandya, 1990; Van Beek, 1989) and games (DeBoer, 1993; Knol, 1987; Rollefson, 1992; Swiny, 1980), it is usually difficult to clearly identify objects that were intended as toys. Miniature tools found in burials, for example, may have been intended for finer work, symbolic of current or future roles of an individual or group (Marangou, 1991), cheaper substitutes for items needed in the afterlife, or toys. The interpretation of figurines is not easy as they have many possible roles other than as playthings (Park, 1998). In some cases, as with the Hopi and Zuni *katsina* dolls, figurines may have served several functions simultaneously, used in ceremonies, as instructional aids, and also played with by children (Adams, 1991, p. 6, 7; Ladd, 1994).

The relationship of games to culture is potentially quite complex. Games played by adults, in addition to being enjoyable, may serve important ritual, symbolic and political purposes. DeBoer (1993) argues that *chunkey*, a game played widely throughout the eastern United States and the plains, was manipulated by Mississippian elites to help them increase control of the exchange that occurred via the gambling associated with the sport and utilize the symbolic values attached to the game. Similarly, the Mesoamerican ball game is a classic example of an adult game with symbolic import (Scarborough and Wilcox, 1991). Children's games could also have had deep significance, although this has yet to be studied.

Although there has been some interest in describing toys and games, there has been little effort to discuss what play can reveal about the socialization process or about social values and organization in general. Are children's activities stressing strategy or chance? Cooperation or competition? Is play highly sex-segregated? What gender roles are being stressed? Is play of necessity organized to allow children to work or does it interfere with the opportunity to work? Do play activities teach children the skills needed for later work? Is play even separable from work?

The Meaning of Childhood

As Sillar (1994) points out, today children have distinct symbolic associations for most Europeans. Thus, it is no accident that the symbolically innocent babe is associated with Christ, whereas older males, who are often symbolically linked with wisdom, are associated with God. Images of children may also be manipulated to influence opinions, rather than simply reflecting them. Thus, it can be argued (Scott, 1993) that advertisers purposefully choose to picture babies old enough to smile in an attempt to convince women of the idyllic nature of motherhood. A similar argument has been made for the 14th century, when increases in the frequency of portrayals of Mary nursing the infant Jesus may be an attempt to enhance the value of motherhood and encourage breast feeding (Miles, 1986).

Because the symbolic meanings of childhood are pervasive, it is extremely important for archaeologists to make certain that they are avoiding stereotypes in their interpretations of the past. Analyses of Roman infant burials provide a case in

point. The controversy here revolves around the issue of infanticide, and particularly the terms in which it is described. Historic evidence suggests that the Romans did practice infanticide to limit family size, when the child was an undesired girl, and in cases of severe deformation (Mays, 1993). On the basis of a comparison of distributions of gestational ages at death for the infants from Romano-British and medieval (at Wharram Percy) contexts with data on modern deaths of infants, Mays (1993) argues that the Romano-British data suggests the use of infanticide. Whether, in fact, infanticide was common or the age distributions archaeologists are finding are the result of burial practices that mandate special ceremonies for infants and special infant burial areas can be discussed. What is more striking are the terms in which the Romano-British infanticide has been described. Infants buried in household contexts at several villas have been interpreted as attempts to disguise unwanted births by surreptitious burial (Johnston, 1983; Watts, 1989). As Scott (1993, p. 79) points out, the assumption is that "women in Roman Britain, given half the chance, would behave like these archaeologists' assumed and daft versions of naughty, irresponsible Victorian maids stuffing bastard offspring into sundry nooks and crannies around the house and yard." In contrast to these interpretations, Scott (1991) interprets the infant burial remains as part of a general revitalization movement occurring in late Roman Britain which sought to revive elements of Celtic culture and emphasized fertility. By burying their infants in association with agricultural features, the early Britons may have been establishing connections between their dead offspring, the ancestral lineage, and fertility.

Ideas about the appropriate position of children and their value both to the family and to society as a whole may depend in part on the roles children play in the culture. Thus, as mentioned previously, a high value may be placed on children because their work is needed or because they are seen as a future source of labor, political power, or security for their parents. Alternatively, children may be desired because they demonstrate the fertility and virility of their parents.

An examination of skeletal remains may reveal cultural attitudes towards children and maybe even differences in attitudes toward boys and girls. At Mokrin in the former Yugoslavia, Rega (1997) found that skeletal orientation corresponded well with sex even for those older children whose sex she felt could be determined using a discriminant function analysis relying on measurements from permanent dentition. Using burial orientation to determine sex for younger children, she notes a preponderance of females in the 1–6 year age group. Because the cemetery lacks infants under a year, Rega argues that to even the sex ratios more of the missing infants must be males. This implies higher death rates for infant males (under 1 year) and suggests that the inhabitants were practicing either selective male infanticide or preferentially neglecting male babies. Thus differential mortality of males and females or, alternatively, differences in stress patterns observed on skeletal remains may yield clues that a culture favored either boys or girls, although this type of analysis must be approached with care, since males and females have somewhat different biological needs and responses to stressors.

In Middle Kingdom Egypt apotropaic wands provided magical protection for pregnant woman and children. The names found on the wands show that they were used to protect infant sons, not daughters (Janssen and Janssen, 1990, pp. 9, 10). This may suggest that sons were preferred. Alternatively, boy babies may have been seen as more fragile and vulnerable or girl babies may have been protected using other methods that do not leave as readily identifiable traces.

The use of children as sacrifices has inspired students of both the Inca and the Aztecs to consider the issue of the symbolic meaning of children. Sillar (1994) uses a combination of ethnohistoric accounts, ethnographic data, and archaeological evidence to analyze the Inca custom of *capacocha*, the ritual sacrifice of children to the deities and their burial with miniature objects. Children were sacrificed because they were seen as especially effective communicants with the gods. Sillar argues that this is because in Andean culture work has a partially ritual nature and the work skills are given by the gods, but also learned through imitation and play. Play in itself, then acquires a strong symbolic significance which can be seen in its incorporation in a number of ritual activities. As Sillar (1994, p. 55) notes, "As children learn their skills as gifts from the saints/*Apus*, it seems logical that playing could be conceived of as an appropriate way to communicate with the deities." Miniatures are sometimes used for play, but are also associated with a variety of ritual practices, including *capacocha*. Archaeological documentation of the *capacocha* ceremonies has been found in the form of frozen naturally mummified children found high in the Andes and the artifacts associated with them.

Child sacrifice is also part of the prehistoric tradition in the northern Mexican highlands. It is well-attested at Teotihuacan (Sanchez, 1993), but best-documented for the Aztecs. Children sacrificed to Tlaloc were unique among sacrificial victims, because they were always of local origin (Clendinnen, 1991, p. 98). Presumably, only children born under a specific day sign and with a double cowlick were chosen. They were purchased from their mothers (Clendinnen, 1991, pp. 98, 99).

The children were kept by the priests for some weeks before their deaths (those kindergartens of doomed infants are difficult to contemplate). Then, as the appropriate festivals arrived, they were magnificently dressed, paraded in litters, and, as they wept, their throats were slit: gifted to Tlaloc the Rain God as "bloodied flowers of maize." (They were thought then to enter the gentle paradise of Tlaloc, which may have assuaged the parents' grief.) The pathos of their fate as they were paraded moved their watchers to tears, while their own tears were thought to augur rain. But their actual engagement with the people would be slight, being removed from their natal homes at two or three, and possibly well before that, and being very probably the children of lowly dependents.

Broda (1991) suggests that the sacrificed children were symbolic of the growth of maize. She sees their sacrifice as a kind of debt payment for rains. The sacrifice of children provided a perfectly reciprocal relationship between humans and the earth/gods. According to Arnold (1991, p. 226), "The earth (Tlaloc) physically sustained the human body through its wild resources and fruits of agriculture—fruits of the human body (children) sustained the earth." The tears of the sacrificed

children and of those mourning for them were symbolic of rain, the gift of Tlaloc (Arnold, 1991; Brundage, 1979, p. 219). Lopez Austin (1984, p. 324), on the other hand, posits children's purity as a reason for their particular ability to communicate with the gods.

Based upon his discovery of a large number of pathologies in the children found as offering at the temple of Ehecatl-Quetzalcoatl at Tlatelolco, Berrelleza (1991) suggests a more pragmatic view, that the sacrifice of ill children was a means of reducing energy expenditure, while still fulfilling religious purposes. Critical to part of the meaning of the sacrifice ritual may be the truth or falsity of Clendinnen's (1991, p. 110) assertion that "the Mexica identified their victims—whether warriors or captives from hostile tribes, or Mexica children not yet fully members of the group . . . —as humans, indeed, but as 'other'—those who are not."

Other insights into the symbolic meaning of Aztec children may be derived from an examination of their roles in other ceremonies, for example in the Pillahuana ritual, translated as the drunkenness of children, during which pre-pubescent youths drink quantities of octli and engage in a variety of sexual acts (Nicholson, 1991). Again, there is direct archaeological evidence of sacrifices, including the locales of the accompanying ceremonials, artifacts associated with the deposition of the body, and artistic and ethnohistoric representations, allowing archaeologists considerable scope for interpretation.

Aztec documents and archaeology provide a rich resource for understanding the symbolic meaning of children that has yet to be fully exploited. In addition to the meanings discussed above, Aztec children may have represented food for the cosmos (Read, 1998, p. 133; Sahagun, 1969, p. 171), fertility (Read, 1998, p. 126), raw materials analogous to precious stones or feathers to be fashioned into good Aztecs (Joyce, 1999a) or vegetation ready to grow and blossom (Sahagun, 1969, p. 171). Before being weaned, babies had a special symbolic status, because they were not yet bound to the earth, and hence to death, through the ingestion of food (Read, 1998, pp. 111, 187). Children are the bearers of honor (Sahagun, 1969, p. 93) and their value is high, like that of precious commodities such as necklaces (Sahagun, 1969, pp. 93, 105, 141). When Sahagun's informants described children they grouped them by age, gender, and relationship (Sahagun, 1961, pp. 2, 3, 12, 13). Undoubtedly children provided multivocal symbols for the Aztec, with nuances depending on variables such as age, gender, and even legitimacy, and the full complexity remains to be parsed out.

THE CHILD'S POINT OF VIEW

Because children are an integral part of cultural systems, prehistoric children should not be ignored. Furthermore, it is not enough to just pay cursory attention to children, to mention their existence occasionally, perhaps to desultorily discuss a toy, infant health, or the possibility of an apprentice craftsperson. The entire

age spectrum of a culture must be viewed as dynamic contributors to it, agents as well as objects. Feminists criticized archaeology for its androcentric biases. Now, we must examine archaeology for adultist biases. Because all archaeologists are adults, we tend to see children as passive, the object of others' initiatives, to assume that all the meaningful work is done by adults, and that it is only adults who produce cultural innovations.

Ideally children must be given voice. For historians, who provide the majority of current analyses of the children in the past, this is problematic. Most documents are controlled by adults, not children. Similarly, artistic depictions of children are often produced by adults. Thus, they are representations of particular adult perspectives on childhood, rather than necessarily accurate reflections of the childhood experience or the views of the children being depicted (Harkness, 1996; Kinney, 1995). When considering the issue of prehistoric children, it is important to think both about the evidence and about who controls the evidence. Thus, a tomb painting, the objects in a burial, and some types of toys are all the products of adult activities. As such, they can tell us about adult views of childhood and reflect adult attempts to communicate particular perspectives on the nature of childhood and appropriate childhood experiences. Obviously these are useful for an understanding of childhood in any time period, but are only part of the story. Other types of archaeological evidence are more nonreactive. They reflect simply the normal activities of children and adults and are not an attempt to communicate information. These include evidence of childhood disease and nutrition, the physical environment in which the child develops, and the effects of childhood activities on archaeological sites. Other aspects of the archaeological record such as toys and art made by children may more directly reflect the views of children.

CONCLUSIONS

Although sociology (James and Prout, 1990), history (Cunningham, 1996), and even feminist studies (Alanen, 1994) have, to an extent, neglected the subject of childhood, several general studies of childhood have included early time periods when documentation is sparse (Aries, 1962; Golden, 1990; Janssen and Janssen, 1990; Sommerville, 1982) and many others have focused on later historic and contemporary time periods. While archaeologists have recognized in passing that children affect the patterns of archaeological deposits (Hammond and Hammond, 1981; Sutro, 1991), heretofore, archaeologists have paid little attention to the lives of the children who inhabited the prehistoric landscape. Like women, children have been relegated to the home, their work devalued, their actions seen as passive and lacking in agency, and their import scant (Baker, 1997; Chamberlain, 1997; Sofer Derevenski, 1997; Scott, 1997).

While there have been brief forays into the investigation of some aspects of prehistoric children or of issues tangential to them, archaeologists have not

attempted to systematically reconstruct a detailed picture of childhood in any single prehistoric culture or to relate their studies to the broader literature that is available from cultural and biological anthropology, or other disciplines such as history and psychology. Instead of serious scholarship on childhood, we are usually left with either silence or the naive reiteration of modern Western stereotypes.

It is time finally for archaeologists to avoid falling into the trap of viewing childhood as a constant or relegating the activities of children to the periphery. There is no political movement that will spur scholarship on children and the topic is not particularly *avant garde* in other disciplines either. Therefore, archaeologists must begin investigating childhood simply because not to do so is to ignore a large percentage of the prehistoric population and, hence, to produce inadequate and biased scholarship.

An initial step in any investigation into prehistoric childhood should be the establishment of local definitions of childhood based on empirical archaeological evidence. In gender studies, despite the explicit acknowledgement that gender and sex are not equivalent and that multiple genders may exist, most actual analyses start with the premise of two gender categories, male and female. In most societies with multiple gender identities all but two of the genders are infrequent. Thus, because the recognition of a social group relies on patterning, not unique or rare cases, it is difficult to identify alternative genders securely using the archaeological record. This problem should not occur with the stages of childhood. If, for example, individuals within a certain age range are socially differentiated and thus warrant specific burial treatment, the sample of individuals within that age range should be large enough to allow investigators to discern even imperfect patterning.

Because life stages based in part or solely on age are social constructs, even though they may have biological analogues, archaeologists must be extremely careful about imposing their own preconceptions upon the evidence. The number of age categories used will vary from society to society as will the chronological ages demarcating the divisions. As described earlier for Crawford's Anglo-Saxon data (Crawford, 1991), using age categories appropriate to the culture being discussed may yield explicable patterns, while ethnocentrically imposing the archaeologist's definition produces confusion.

It has been noted that much gender research assumes a modal woman for a particular society, ignoring important variability due to age (Joyce and Claassen, 1997). Similarly, variability in age needs to be viewed as one of a number of intersecting variables that determine an individual's identity and social roles (Meskell, 1998). We should not expect that a society will possess a single definition of childhood, independent of gender, class and other social attributes. Even the chronological boundaries of age categories may vary with gender or other important social attributes.

Obviously, critical to a consideration of prehistoric children is a description of their life circumstances. As demonstrated above, archaeologists have just begun

to examine traditional data sources, such as architecture, burial remains, statuary, pictures, and other artifact types for evidence of the status and roles of prehistoric children. Some creativity will be needed to discern the fullest possible picture. This means our analysis of the archaeological evidence must include the social and physical settings, as well as traditional artifacts that might be considered relevant.

The natural and built environment will affect the amount of mobility that children are allowed, the physical competencies required of them, the kinds of objects that are a part of their daily lives, and the types of play and work activities in which they are likely to engage. Descriptions of material culture have always been and still are the backbone of most archaeological research. What has not been consciously attempted, however, is an explicit consideration of the ways in which this material culture would have been likely to affect the childhood experience. For instance, a fortified site location and indications of chronic warfare may suggest restricted mobility for some or all children.

Also of relevance is the social setting. For example, activities are likely to be structured differently in large groups than in small groups. Of particular importance may be the size of the child's cohort, which is to an extent archaeologically discernable. In larger populations children may be able to associate primarily with others of a similar age and may even be organized into age grades, while in small groups the demographic structure is likely to make this impossible. Gender segregation may work in the same fashion, as in small social units there are unlikely to be a large number of same-sex children. This has potential implications for the effective units of children's socialization and play, but also for work. Small groups may need to be more flexible about the types of tasks assigned to boys and girls, leading to less gender differentiation for children. It should be noted, however, that the size of the total site population is not always the same as the units of socialization. In some urban settings, for example, the actual effective social unit for children is a fairly small kindred or neighborhood, and in some village societies children from many communities may be brought together for schooling or initiation.

It is perhaps almost self-evident that the most difficult task will be to cast aside our own perceptions of the meaning of childhood. Whether investigating the nature of work, play, learning or power, we should remember that the ethnographic and historic sources show considerable variability, and we must forget our own preconceptions. We cannot assume that small tools are "toys," meant just for amusement when we have ample evidence that children are often economically productive. Similarly, if we reflect on the participation of individuals age 10 and even younger in recent wars, we cannot automatically assume that young individuals buried with weaponry were not, in fact, warriors.

Finally, we need to allow children the possibility of agency. While individual autonomy is circumscribed by social circumstances such as hierarchies of

authority, this is true for adults as well. In many circumstances children may be less powerful than adults, but like women in cultures where men have more formal power, they have the ability to use a variety of strategies to manipulate their circumstances. Children learn from adults and act as the recipients of culture, but children also learn from other children, innovate, and pass their innovations on to other children and perhaps adults as well.

Like gender categories, age categories are cultural constructs. Like gender categories, they provide basic organizational principles for most societies. Like gender categories, age categories have been hard for us as archaeologists to dissociate from our own cultural stereotypes. Like gender categories, age categories and their cultural meanings have provided a challenge to archaeologists working with a primarily material record of the past. Nevertheless, just as an archaeology that includes a consideration of gender provides a more accurate and interesting perspective on the past, an archaeology that includes all ages from the newborn to the oldest inhabitants will illuminate the operations of past cultures in a more complete and revealing manner. It is imperative that archaeologists search for the lost children of the past. Once we begin the quest, we will probably experience the same kinds of successes (and frustrations too, of course) that scholars dealing with gender have found. Once we have begun to look for children, it is also not unlikely that we will be driven to investigate other age categories as well. Perhaps the next question should be, "Where have all the old people gone?"

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