

## Bringing Up Children

Comparisons of child-rearing ▪ Childbirth ▪ Infanticide ▪ Weaning and birth interval ▪ On-demand nursing ▪ Infant-adult contact ▪ Fathers and allo-parents ▪ Responses to crying infants ▪ Physical punishment ▪ Child autonomy ▪ Multi-age playgroups ▪ Child play and education ▪ Their kids and our kids

### Comparisons of child-rearing

On one of my visits to New Guinea I met a young man named Enu, whose life story struck me then as remarkable. Enu had grown up in an area where child-rearing was extremely repressive, and where children were heavily burdened by obligations and by feelings of guilt. By the time he was five years old, Enu decided that he had had enough of that lifestyle. He left his parents and most of his relatives and moved to another tribe and village, where he had relatives willing to take care of him. There, Enu found himself in an adoptive society with *laissez-faire* child-rearing practices at the opposite extreme from his natal society's practices. Young children were considered to have responsibility for their own actions, and were allowed to do pretty much as they pleased. For example, if a baby was playing next to a fire, adults did not intervene. As a result, many adults in that society had burn scars, which were legacies of their behavior as infants.

Both of those styles of child-rearing would be rejected with horror in Western industrial societies today. But the *laissez-faire* style of Enu's adoptive society is not unusual by the standards of the world's hunter-gatherer societies, many of which consider young children to be autonomous individuals whose desires should not be thwarted, and who

are allowed to play with dangerous objects such as sharp knives, hot pots, and fires (Plate 19).

Why should we be interested in child-rearing practices of traditional hunter-gatherer, farmer, and herder societies? One answer is an academic one: children account for up to half of a society's population. A sociologist who ignored half of a society's members couldn't claim to understand that society. Another academic answer is that every feature of adult life has a developmental component. One can't understand a society's practices of dispute resolution and marriage without knowing how children become socialized into those practices.

Despite those good reasons for us to be interested in child-rearing in non-Western societies, it has received much less study than it deserves. Part of the problem is that many of the scholars who go out to study other cultures are young, don't have children of their own, aren't experienced in talking with or observing children, and mainly describe and interview adults. Anthropology, education, psychology, and other academic fields have their own ideologies, which at any given time focus on a certain range of research topics, and which impose blinders on what phenomena are considered worth studying.

Even studies of child development that claim to be broadly cross-cultural—e.g., comparing German, American, Japanese, and Chinese children—are actually sampling societies all drawn from the same narrow slice of human cultural diversity. All of those cultures just mentioned are similar in sharing centralized government, economic specialization, and socioeconomic inequality, and in being very atypical of the wide range of human cultural diversity. As a result, those and other state-level modern societies have converged on a small range of child-rearing practices that by historical standards are unusual. Those practices include systems of school education administered by a state (as opposed to learning as part of everyday life and play), protection of children by police and not just by parents, same-age playgroups (as opposed to children of all ages routinely playing together), children and parents sleeping in separate bedrooms (as opposed to sleeping together in the same bed), and mothers nursing infants (if the infants are nursed at all) on a schedule often set by the mother rather than by the infant.

A result is that generalizations about children by Jean Piaget, Erik



Erikson, Sigmund Freud, pediatricians, and child psychologists are based heavily on studies of WEIRD (Western, educated, industrial, rich, democratic) societies, especially on studies of their college undergraduates and children of college professors, and have been inappropriately generalized to the rest of the world. For example, Freud emphasized the sex drive and its frequent frustration. But that psychoanalytic view doesn't apply to the Siriono Indians of Bolivia, nor to many other traditional societies, where willing sex partners are almost constantly available, but where hunger for food, and preoccupation with the food drive and its frequent frustration, are ubiquitous. Formerly popular Western child-rearing theories that stressed the need of infants for love and emotional support viewed other societies' widespread practice of breast-feeding infants on demand as "overindulgence," and classified it in Freudian terms as "excessive gratification at the oral stage of psychosexual development." However, we shall see that breast-feeding on demand was formerly almost universal, that it has much to recommend it, and that the common modern practice of breast-feeding at infrequent intervals to suit the mother's convenience is, from a historical perspective, a rare exception.

Those are academic reasons for us to be interested in traditional child-rearing practices. But there are compelling practical reasons for all of us non-academics to be interested as well. Small-scale societies offer us a vast database on child-rearing. They reveal the outcomes of thousands of natural experiments on how to rear children. Western state societies would not permit us to carry out the experiments that Enu lived through, of either extreme repression or extreme *laissez-faire* as the norm. While few readers of this book would consider it admirable to let children roll into fires, we shall see that many other traditional child-rearing practices do recommend themselves for consideration. Thus, another reason for studying them is that they can inform our own choices. They may suggest practices different from those now routine in the West, but that we may find appealing when we learn about their consequences for children.

In recent decades, there has at last been increasing interest in comparative studies of child-rearing by small-scale societies. For instance, there have been half a dozen dedicated studies of children, not just incidental to other anthropological observations, among some of the world's last human groups still obtaining much of their subsistence by hunting

and gathering: the Efe and Aka Pygmies of African rainforests, the !Kung of southern African deserts, the Hadza of East Africa, the Ache Indians of Paraguay, and the Agta of the Philippines. In this chapter I shall discuss what such studies of small-scale societies have shown us about childbirth and infanticide, nursing and weaning, infant/adult physical contact, the role of fathers and of care-givers other than the parents, responses to a child crying, punishment of children, a child's freedom to explore, and children's play and education.

### Childbirth

Today, childbirth in Westernized societies usually takes place in a hospital, with the help of trained professionals: physicians, midwives, and nurses. Mortality of infants and mothers associated with childbirth is low. But traditional childbirth was different. Before or in the absence of modern medicine, death of the infant and/or the mother in childbirth was much more common than it is now.

The circumstances of childbirth vary among traditional societies. In the simplest case, very exceptionally, a cultural ideal is for the mother to give birth alone and unassisted. For instance, among the !Kung people of southern African deserts, a woman about to give birth is expected to walk a few hundred yards from the camp and give birth alone. In practice, especially for a first-time !Kung mother, she may be accompanied by other women to help, but with successive births the mother is more likely to achieve that ideal of giving birth alone. However, even if the mother does so, she remains close enough to camp that other women can hear the first cries of the baby and then go join the mother to help in cutting the umbilical cord, cleaning the baby, and carrying it back to the camp.

The Piraha Indians of Brazil (Plate 11) are another group in which women often give birth unassisted. The commitment of the Piraha to that ideal is illustrated by an experience of linguist Steve Sheldon, related by Daniel Everett: "Steve Sheldon recounted a story once of a woman giving birth alone on a beach. Something went wrong. A breech birth. The woman was in agony. 'Help me, please! The baby will not come,' she cried out. The Pirahas sat passively, some looking tense, some talking normally.



'I'm dying! This hurts. The baby will not come!' she screamed. No one answered. It was late afternoon. Steve started toward her. 'No! she doesn't want you. She wants her parents,' he was told, the implication clearly being that he was not to go to her. But her parents were not around and no one else was going to her aid. The evening came and her cries came regularly, but ever more weakly. Finally, they stopped. In the morning Steve learned that she and the baby had died on the beach, unassisted. . . . [This tragic incident] tells us that the Pirahas let a young woman die, alone and without help, because of their belief that people must be strong and get through difficulties on their own."

Much more commonly, traditional childbirth takes place with the assistance of other women. For example, among the Kaulong people of New Britain, whose men are obsessed with the polluting effects of women during menstruation and childbirth, a woman about to give birth goes to a shelter in the forest, accompanied by several older women. At the opposite extreme are societies in which birth is virtually a public event. Among the Agta people of the Philippines, a woman gives birth in a house in the camp, and everyone in camp may crowd into the house and shout out instructions to the mother and midwife ("push," "pull," "don't do that").

### Infanticide

Infanticide—the intentional acknowledged killing of an infant—is illegal in most state societies today. In many traditional societies, however, infanticide is acceptable under certain circumstances. While this practice horrifies us, it is difficult to see what else the societies could do under some of the conditions associated with infanticide. One such condition is when an infant is born deformed or weak. Many traditional societies experience lean seasons of marginal food supply, when it becomes difficult for the small number of productive adults to provide food for the larger number of non-producing children and old people. An additional consuming but non-productive mouth is then a burden that the society can ill afford.

Another circumstance associated with infanticide is a short birth interval: i.e., an infant born within only two years of the birth of the mother's

previous child that is still nursing and being carried. It is difficult or impossible for a woman to produce enough milk for a two-year-old and also for a newborn, and to carry not just one but two children while shifting camp. For the same reason, twin births by hunter-gatherer women may result in the killing or neglect of at least one of the twins. Here is an interview with an Ache Indian named Kuchingi reported by Kim Hill and A. Magdalena Hurtado: "The one [the sibling] who followed me [in birth order] was killed. It was a short birth spacing. My mother killed him because I was small. 'You won't have enough milk for the older one [i.e., Kuchingi],' she was told. 'You must feed the older one.' Then she killed my brother, the one who was born after me."

Still another factor predisposing towards infanticide at childbirth is if the father is absent or dead, and thus unable to help feed the mother and protect the child. For a single mother, life is hard even today. It was harder in the past, especially in societies in which lack of a father tended to result in a higher probability of a child dying, e.g., because fathers provided most of the calories or protected their children against violence by other men.

Finally, in some traditional societies the ratio of boys to girls increases from birth to adolescence, as a result of female infants dying through passive neglect, or (in exceptional cases) even being intentionally killed by strangling, exposure, or burying alive—because many societies value boys over girls. For example, among the Ache Indians, 14% of boys but 23% of girls have been killed by the age of 10. The absence of either the father or the mother increases by four-fold the chance that an Ache child will be killed by homicide, but the risk is higher for girls than for boys. In modern China and India that widespread valuing of boys over girls results in an excess of infant boys by a new mechanism: pre-natal sex determination permitting the selective abortion of female fetuses.

The !Kung consider it a mother's obligation to evaluate the case for or against infanticide at the time of childbirth. The sociologist Nancy Howell wrote, "The custom that women should or can give birth alone gives the mother the unquestioned right to control infanticide. At the scene of the birth, usually before the baby is named and certainly before bringing the baby back to the village, it is the mother's responsibility to examine the baby carefully for birth defects. If it is deformed, it is the mother's duty to smother it. Many !Kung informants told me that this examination and

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decision is a regular and necessary part of the process of giving birth. !Kung infanticide is not equivalent to murder in their eyes, since they do not consider birth to be the beginning of life of a zun/wa [a !Kung person]. Life begins with giving a name and the acceptance of the baby as a social person back in the village after the birth. Before that time, infanticide is part of the mother's prerogatives and responsibility, culturally prescribed for birth defects and for one of each set of twins born. There are no pairs of twins surviving in the population. . . ."

However, infanticide is certainly not universal in traditional societies and is less common than infant death due to "benign neglect." (That euphemism means that an infant is not actively killed but instead dies through neglect, e.g., due to the mother stopping nursing, or nursing the infant less often, or rarely cleaning or washing the infant.) For example, when Allan Holmberg lived among a group of Siriono Indians in Bolivia, he found that infanticide and abortion were unknown. Even though 15% of Siriono children were born with club feet, and only one out of five of those children survived to adulthood and raised a family, those children received normal love and feeding.

### Weaning and birth interval

In the U.S. the proportion of infants who were nursed at all by their mothers, and the age at which those nursed infants were weaned, decreased through much of the 20th century. For example, by the 1970s only 5% of American children were being nursed at the age of six months. In contrast, among hunter-gatherers not in contact with farmers and without access to farmed foods, infants are nursed far beyond six months, because the only suitable infant food available to them is mother's milk: they have no access to cow's milk, baby formula, or soft food replacements. The age of weaning averaged over seven hunter-gatherer groups is about three years old, an age at which children finally become capable of fully nourishing themselves by chewing enough firm food. While some solid pre-chewed foods may be introduced around the age of six months, a hunter-gatherer child may not be fully weaned off its mother's milk until the mother is pregnant with the next child. Individual !Kung children

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continue to nurse beyond the age of four if a next sibling has not yet been born. Studies show that, the older the age of a !Kung child when it is weaned, the more likely is the child to survive to adulthood. But in settled agricultural populations and among hunter-gatherers trading with farmers, those weaning ages and birth intervals of two and a half to four years for nomadic hunter-gatherers decrease to an average age of two years, because farmers do have livestock milk and soft cereal gruels onto which to wean a small child. For instance, when the !Kung themselves settle down to become farmers, as has been happening increasingly in recent decades, their birth interval quickly drops from three and a half years to the two years typical of farmers.

The ultimate evolutionary causes and the proximate physiological mechanisms responsible for those long birth intervals of nomadic hunter-gatherers have been the subject of much discussion. It appears that the ultimate reasons are two-fold. First, a mother without access to cow's milk or cereal gruel, and hence likely to nurse a child until the age of three or more years, cannot produce enough milk to nurse both a newborn and a not-yet-weaned older child. If she tried, one of those children would be likely to starve for lack of milk.

The other reason is that only when a child is around four years old or more does it become capable of walking fast enough to keep up with its parents when they are shifting camp. Younger children have to be carried then. While walking, a 90-pound !Kung woman has to carry an under-four-year-old child of up to 28 pounds, a load of wild vegetables weighing from 15 to 40 pounds or more, and several pounds of water, plus utensils. That's already a large burden, and it would be even heavier if a younger infant were added to the load. We thus have a second ultimate evolutionary factor contributing to the rapid decrease in birth interval when nomadic hunter-gatherers settle down to become farmers: most farmers live in permanent villages and don't face the problem of having to carry all children less than four years old whenever they shift camp.

That late weaning age means that, for a hunter-gatherer mother, much physical and emotional energy goes into the rearing of one child. Western observers have the impression that a !Kung child's very close relationship with the mother, and the exclusive attention that it enjoys for several years without younger siblings, provide an emotional security in childhood



that translates itself into the emotional security of !Kung adults. But when a hunter-gatherer child finally does become weaned, the result can be traumatic. Within a short time, the child receives much less maternal attention, becomes hungry without mother's milk, has to cede to the next infant its sleeping place at night next to the mother, and may be increasingly expected to enter the adult world. !Kung children being weaned are miserable and have tantrums. !Kung who survive to become old adults still look back on weaning 70 years earlier as a painful experience. In camps of Piraha Indians at night, one often hears children screaming, almost always because they are being weaned. Nevertheless, while traditional societies do wean at a later age than do modern Americans, the specific patterns vary among societies. For example, Bofi and Aka Pygmy children wean gradually rather than abruptly, tantrums are rare, and weaning is often initiated by the child rather than by the mother.

### On-demand nursing

Those two ultimate causes responsible for the long birth intervals of hunter-gatherers leave open the question of the proximate physiological mechanism ensuring that there are not two children less than several years old to be cared for simultaneously. One mechanism is the resort to neglect or (less often) infanticide, as we have already mentioned: if a hunter-gatherer mother becomes pregnant when her previous child is still less than two and a half years old, then she may neglect or even kill the newborn, knowing that she cannot take care of it as well as of the older child. The other proximate factor is that physiological mechanisms operating in a mother nursing according to the on-demand schedule of frequent feedings characteristic of hunter-gatherer babies (as opposed to the infrequent nursing bouts set for the convenience of the mother in Western society) make it less likely that a nursing mother will become pregnant, even if she resumes sex while nursing.

In hunter-gatherer groups in which nursing has been specifically studied, it is often "on demand." That is, the infant has constant access to the mother's breast, is held in contact with the mother during the day, sleeps next to the mother at night, and can nurse at any time it wants, whether

or not the mother is awake. For example, measurements among the !Kung have shown that an infant nurses on the average four times per hour during the day, 2 minutes per nursing bout, with an average interval of only 14 minutes between bouts. The mother wakes to nurse the infant at least twice a night, and the infant nurses without waking the mother several times per night. This constant opportunity for nursing on demand usually continues for at least three years of the !Kung child's life. In contrast, many or most mothers in modern societies schedule nursing at times when the mother's activities permit it. The organization of a mother's work, whether the work is a job outside the house or domestic work within the house, often involves mother-child separations of several hours. The result is many fewer daily nursing bouts than the dozens of bouts for a hunter-gatherer mother, longer individual bouts, and much longer intervals between bouts.

That high nursing frequency of hunter-gatherer mothers has physiological consequences. As mentioned above, nursing hunter-gatherer mothers usually do not conceive for several years after a child's birth, even if the mother resumes sexual activity. Evidently, something about traditional on-demand nursing acts as a contraceptive. One hypothesis is termed "lactational amenorrhea": suckling releases maternal hormones that not only stimulate the secretion of milk but that may also inhibit ovulation (a woman's release of eggs). But that inhibition of ovulation requires a constant regime of frequent nursing; a few bouts of nursing per day do not suffice. The other hypothesis is termed the "critical-fat hypothesis": ovulation requires that the mother's fat levels exceed a certain critical threshold. In a nursing woman from a traditional society without abundant food, the high energy costs of milk production keep the mother's fat level below that critical value. Thus, sexually active nursing mothers in modern Western industrial societies, unlike their hunter-gatherer counterparts, may still conceive (to their surprise) for either or both of two reasons: their nursing frequency is much too low for hormonally induced lactational amenorrhea; and they are sufficiently well nourished that their body fat levels remain above the critical threshold for ovulation, even despite the caloric expenditure of lactation. Many educated Western mothers have heard of lactational amenorrhea, but fewer have heard that it is effective only at high nursing frequencies. A friend of mine who recently,



to her dismay, conceived again only a few months after the birth of her previous child thereby joined the long list of modern women exclaiming, "But I thought that I couldn't conceive while I was nursing!"

Nursing frequency differs among mammal species. Some mammals, including chimpanzees and most other primate species, bats, and kangaroos, nurse continuously. Other mammals, of which rabbits and antelopes are prime examples, nurse discontinuously: a mother rabbit or antelope leaves her infant hidden in the grass or in a den while she goes out to forage, then she returns after a long interval and suckles the infant only a few times per day. Human hunter-gatherers resemble chimpanzees and Old World monkeys in being continuous nursers. But that pattern, which we inherited from our primate ancestors and presumably maintained for the millions of years of human evolution separate from the evolution of chimpanzees, changed only in the thousands of years since the origins of farming, when we developed lifestyles involving mother-infant separations. Modern human mothers have acquired the suckling habits of rabbits, while retaining the lactational physiology of chimpanzees and monkeys.

### Infant-adult contact

Associated with those mammalian species differences in nursing frequency are differences in the percentage of an infant's time spent in contact with an adult (especially with the mother). In the discontinuously nursing species the infant is in contact with the mother just for brief bouts of nursing and care. In the continuously nursing species the mother carries the infant while she forages: a mother kangaroo keeps the infant in her pouch, a mother bat holds the infant on her stomach even while she is flying, and chimpanzee and Old World monkey mothers carry the infant on their back.

In modern industrial societies today, we follow the rabbit-antelope pattern: the mother or someone else occasionally picks up and holds the infant in order to feed it or play with it, but does not carry the infant constantly; the infant spends much or most of the time during the day in a crib or playpen; and at night the infant sleeps by itself, usually in a separate room from the parents. However, we probably continued to follow our

ancestral ape-monkey model throughout almost all of human history, until within the last few thousand years. Studies of modern hunter-gatherers show that an infant is held almost constantly throughout the day, either by the mother or by someone else. When the mother is walking, the infant is held in carrying devices, such as the slings of the !Kung, string bags in New Guinea, and cradle boards in the north temperate zones. Most hunter-gatherers, especially in mild climates, have constant skin-to-skin contact between the infant and its care-giver. In every known society of human hunter-gatherers and of higher primates, mother and infant sleep immediately nearby, usually in the same bed or on the same mat. A cross-cultural sample of 90 traditional human societies identified not a single one with mother and infant sleeping in separate rooms: that current Western practice is a recent invention responsible for the struggles at putting kids to bed that torment modern Western parents. American pediatricians now recommend not having an infant sleep in the same bed with its parents, because of occasional cases of the infant ending up crushed or else overheating; but virtually all infants in human history until the last few thousand years did sleep in the same bed with the mother and usually also with the father, without widespread reports of the dire consequences feared by pediatricians. That may be because hunter-gatherers sleep on the hard ground or on hard mats; a parent is more likely to roll over onto an infant in our modern soft beds.

For example, !Kung infants spend their first year of life in skin-to-skin contact with the mother or another care-giver for 90% of the time. !Kung infants are carried by the mother wherever she goes, interrupted only when the infant is passed from the mother to other care-givers. A !Kung child begins to separate more frequently from its mother after the age of one and a half, but those separations are initiated almost entirely by the child itself, in order to play with other children. The daily contact time between the !Kung child and care-givers other than the mother exceeds *all* contact time (including contact with the mother) for modern Western children.

One of the commonest Western devices for transporting a child is the stroller, which provides no physical contact between the baby and the care-giver (Plate 39). In many strollers, the infant is nearly horizontal, and sometimes facing backwards. Hence the infant does not see the world as



its care-giver sees the world. In recent decades in the United States, devices for transporting children in a vertical (upright) position have been more common, such as baby carriers, backpacks, and chest pouches, but many of those devices have the child facing backwards. In contrast, traditional carrying devices, such as slings or holding a child on one's shoulders, usually place the child vertically upright, facing forwards, and seeing the same world that the care-giver sees (Plates 21, 38). The constant contact even when the caretaker is walking, the constant sharing of the care-giver's field of view, and transport in the vertical position may contribute to !Kung infants being advanced (compared to American infants) in some aspects of their neuromotor development.

In warm climates, it is practical to have constant skin-to-skin contact between a naked baby and a mostly naked mother. That is more difficult in cold climates. Hence about half of traditional societies, mostly those in the temperate zones, swaddle their infants, i.e., wrap the infant in warm fabric. The swaddled infant is often strapped to a board called a cradle board. That practice was formerly widespread around the world, mainly in societies at high latitudes. The basic idea of swaddling and of the cradle board is to wrap the baby as protection against the cold, and to restrict the baby's ability to move its body and limbs. Navajo Indian mothers who use cradle boards explain that the purpose is to induce the child to go to sleep, or to keep the child asleep if the child is put on the cradle board when it is already asleep. The Navajo mother usually adds that the cradle board prevents the infant from suddenly jerking while asleep and thereby waking itself up. A Navajo infant spends 60%–70% of its time on a cradle board for the first six months of life. Cradle boards were formerly also common practice in Europe but began to disappear there a few centuries ago.

To many of us moderns, the idea of a cradle board or swaddling is abhorrent—or was, until swaddling recently came back into vogue. The notion of personal freedom means a lot to us, and a cradle board or swaddling undoubtedly does restrict an infant's personal freedom. We are prone to assume that cradle boards or swaddling retard a child's development and inflict lasting psychological damage. In fact, there are no personality or motor differences, or differences in age of independent walking, between Navajo children who were or were not kept on a cradle board, or between cradle-boarded Navajo children and nearby

Anglo-American children. The probable explanation is that, by the age that an infant starts to crawl, the infant is spending half of its day off of the cradle board anyway, and most of the time that it spends on the cradle board is when the infant is asleep. Actually, immobilizing an infant on a cradle board lets the infant be kept near its mother, and taken with the mother when she goes anywhere. Hence it is argued that doing away with cradle boards brings no real advantages in freedom, stimulation, or neuromotor development. Typical Western children sleeping in separate rooms, transported in baby carriages, and left in cribs during the day are often socially more isolated than are cradle-boarded Navajo children.

#### Fathers and allo-parents

The investment of fathers in caring for their offspring varies greatly among animal species. At one extreme are some species, such as ostriches and sea horses, in which, after a male has fertilized a female and the female has produced eggs, the female goes off and leaves brooding of the eggs and care for the hatched offspring entirely to the father. At the opposite extreme are many species of mammals and some birds: after the male fertilizes the female, the male deserts her to pursue other females, and the entire burden of parenting falls upon the female. Most species of monkeys and apes fall between these two extremes but nearer the latter one: the father lives with the mother and her offspring, perhaps as part of a larger troop, but provides the offspring with little other than protection.

In humans, paternal care is low by the standards of ostriches, high by the standards of apes and most other primate species, but the father's involvement in the care of infants is less than that of the mother in all known human societies. Nevertheless, fathers play a significant role in food provisioning, protection, and education in most human societies, with the result that the death of a child's biological father decreases a child's probability of surviving in some societies. Fathers' involvement tends to be greater for older children (especially for sons) than for infants, and fathers in modern societies usually succeed in delegating many aspects of child care, such as changing diapers, wiping bottoms and noses, and bathing a child.



Among human societies, there is much variation in that involvement of fathers, partly related to a society's subsistence ecology. Paternal involvement is highest in societies in which women spend time obtaining most of the food. For instance, Aka Pygmy fathers furnish more direct care to their infants than do the fathers of any other studied human population (Plate 8), perhaps related to the fact that Aka Pygmy mothers not only gather plant foods but also participate in hunting with nets. On the average, child care by fathers, and also women's contribution to the food supply, are higher in societies of hunter-gatherers than in societies of herders. Fathers' direct care of their children tends to be low in societies, such as those of New Guinea Highlanders and African Bantu groups, in which the men devote much of their time and identity to being warriors, and to protecting their family against aggressive other men. In much of the New Guinea Highlands, men traditionally even lived in separate communal men's houses, together with their sons after the age of six, while each wife lived in a separate hut with her daughters and young sons. The men and boys ate by themselves, consuming food that a man's wife and a boy's mother brought to the men's house.

What about the child-rearing contribution of care-givers other than the mother and the father? In modern Western society, a child's parents are typically by far its dominant care-givers. The role of "allo-parents"—i.e., individuals who are not the biological parents but who do some care-giving—has even been decreasing in recent decades, as families move more often and over longer distances, and children no longer have the former constant availability of grandparents and aunts and uncles living nearby. This is of course not to deny that babysitters, schoolteachers, grandparents, and older siblings may also be significant care-givers and influences. But allo-parenting is much more important, and parents play a less dominant role, in traditional societies.

In hunter-gatherer bands the allo-parenting begins within the first hour after birth. Newborn Aka and Efe infants are passed from hand to hand around the campfire, from one adult or older child to another, to be kissed, bounced, and sung to and spoken to in words that they cannot possibly understand. Anthropologists have even measured the average frequency with which infants are passed around: it averages eight times per hour for Efe and Aka Pygmy infants. Hunter-gatherer mothers share

care of infants with fathers and allo-parents, including grandparents, aunts, great-aunts, other adults, and older siblings. Again, this has been quantified by anthropologists, who have measured the average number of care-givers: 14 for a four-month-old Efe infant, 7 or 8 for an Aka infant, over the course of an observation period of several hours.

In many hunter-gatherer societies, older grandparents often stay in camp with children, enabling the parents to go off and forage unencumbered. Children may be left in the care of their grandparents for days or weeks at a time. Hadza children who have an involved grandmother gain weight faster than do children without involved grandmothers (Plate 21). Aunts and uncles also serve as important allo-parents in many traditional societies. For instance, among Bantu of Southern Africa's Okavango Delta, the strongest influence of an older male on a boy is not from the boy's father but from a maternal uncle, the mother's oldest brother. In many societies, brothers and sisters take care of each other's children. Older siblings, especially older girls and especially in farming and herding societies, often play a major role as care-givers of younger siblings (Plate 38).

Daniel Everett, who lived for many years among the Piraha Indians of Brazil, commented, "The biggest difference [of a Piraha child's life from an American child's life] is that Piraha children roam about the village and are considered to be related to and partially the responsibility of everyone in the village." Yora Indian children of Peru take nearly half of their meals with families other than their own parents. The son of American missionary friends of mine, after growing up in a small New Guinea village where he considered all adults as his "aunts" or "uncles," found the relative lack of allo-parenting a big shock when his parents brought him back to the United States for high school.

As children of small-scale societies grow older, they spend more time making longer visits to stay with other families. I experienced one such case while I was studying birds in New Guinea and hiring local people as porters to carry my supplies from one village to the next. When I arrived at one particular village, most of the porters from the previous village who had brought me there left, and I sought help from people of any age capable of carrying a pack and wanting to earn money. The youngest person who volunteered was a boy about 10 years old, named Talu. He joined me,



expecting to be away from his village for a couple of days. But when we reached my destination after a delay of a week caused by the trail becoming blocked by a river in flood, I sought someone to stay and work with me, and Talu volunteered again. As it thus worked out, Talu remained with me for a month until I finished my study and he walked back to his home. At the time that he had set out with me, his parents had been away from the village, so Talu just came, knowing that other people in the village would tell his parents on their return that he had gone off for a few days. His village friends who also came along as porters and then returned to the village would have told his parents more than a week later that he was going to stay for an uncertain length of time longer. It was evidently considered normal that a 10-year-old boy would decide by himself to go away for an indeterminate length of time.

In some societies those lengthy trips of children without their parents become lengthened even further into recognized adoptions. For example, after the age of 9 or 10, Andaman Island children rarely continue to live with their own parents but are adopted by foster parents, often from a neighboring group, and thereby help to maintain friendly relations between the two groups. Among the Iñupiat of Alaska, adoption of children was common, especially within Iñupiaq groups. Adoption in the modern First World is primarily a link between the adopted child and the adoptive parents, who until recently were not even told the identity of the biological parents, so as to preclude an on-going relationship of the biological parents with the child or with the adoptive parents. However, for the Iñupiat the adoption served as a link between the two sets of parents and between their groups.

Thus, a major difference between small-scale societies and large state societies is that responsibility for children becomes widely diffused beyond the child's parents in the small-scale societies. The allo-parents are materially important as additional providers of food and protection. Hence studies around the world agree in showing that the presence of allo-parents improves a child's chances for survival. But allo-parents are also psychologically important, as additional social influences and models beyond the parents themselves. Anthropologists working with small-scale societies often comment on what strikes them as the precocious development of

social skills among children in those societies, and they speculate that the richness of allo-parental relationships may provide part of the explanation.

Similar benefits of allo-parenting operate in industrial societies as well. Social workers in the United States note that children gain from living in extended, multi-generational families that provide allo-parenting. Babies of unmarried low-income American teenagers, who may be inexperienced or neglectful as mothers, develop faster and acquire more cognitive skills if a grandmother or older sibling is present, or even if a trained college student just makes regular visits to play with the baby. The multiple care-givers in an Israeli kibbutz or in a quality day-care center serve the same function. I have heard many anecdotal stories, among my own friends, of children who were raised by difficult parents but who nevertheless became socially and cognitively competent adults, and who told me that what had saved their sanity was regular contact with a supportive adult other than their parents, even if that adult was just a piano teacher whom they saw once a week for a piano lesson.

### Responses to crying infants

There has been a long debate among pediatricians and child psychologists about how best to respond to a child's crying. Of course, the parent first checks whether the child is in pain or really needs some help. But if there seems to be nothing wrong, is it better to hold and comfort a crying child, or should one put down the child and let it cry until it stops, however long that takes? Does the child cry more if its parents put the child down and walk out of the room, or if they continue to hold it?

Philosophies about this question differ among Western countries, and differ from generation to generation within the same country. When I was living in Germany over 50 years ago, the prevailing view there was that children should be left to cry, and that it was harmful to attend to a child that cried "without reason." Studies showed that, when a German infant cried, its crying was ignored on the average one out of three times, or else the parent responded only after an interval of between 10 and 30 minutes. German infants were left alone in a crib for a long time, while the mother



went out shopping or was working in another room. The magic words for German parents were that children should acquire *Selbständigkeit* (meaning approximately "self-reliance") and *Ordnungsliebe* (literally, "love of order," including self-control and complying with the wishes of others) as quickly as possible. German parents considered American children spoiled, because American parents attended too quickly to a child's crying. German parents were afraid that too much attention would make a child *verwöhnt*—an important and very, very bad word in German vocabulary regarding children, meaning "spoiled."

The attitudes of urban American and British parents in the decades from 1920 to 1950 were similar to contemporary German attitudes. American mothers were told by pediatricians and by other experts that regular schedules and cleanliness were all-important for infants, that rapid response would spoil the baby, and that it was essential for babies to learn to play by themselves and to control themselves as early as possible. The anthropologist Sarah Blaffer Hrdy described as follows the philosophy prevailing in the United States in the mid-20th century about how to respond to a baby's crying: "Back in my mother's day, educated women were under the impression that if a baby cried and his mother rushed to pick him up, she would spoil him, conditioning the baby to cry more." By the 1980s, when my wife Marie and I were raising our twin sons, that was still the prevalent philosophy about what to do with a baby who cried when being put to bed. We were advised to kiss our babies good-night, tiptoe out of their bedroom, ignore their heart-rending sobs when they heard us leave, come back in 10 minutes, wait for them to quiet down, tiptoe out again, and again ignore the resulting sobs. We felt horrible. Many other modern parents have shared our ordeal, and continue to share it.

In contrast, observers of children in hunter-gatherer societies commonly report that, if an infant begins crying, the parents' practice is to respond immediately. For example, if an Efe Pygmy infant starts to fuss, the mother or some other care-giver tries to comfort the infant within 10 seconds. If a !Kung infant cries, 88% of crying bouts receive a response (consisting of touching or nursing the infant) within 3 seconds, and almost all bouts receive a response within 10 seconds. Mothers respond to !Kung infants by nursing them, but many responses are by non-mothers (especially other adult women), who react by touching or holding the infant.

The result is that !Kung infants spend at most one minute out of each hour crying, mainly in crying bouts of less than 10 seconds. Because the responses of !Kung care-givers to crying by their infants are prompt and reliable, the total time that !Kung infants spend crying each hour is half that measured for Dutch infants. Many other studies show that one-year-old infants whose crying is ignored end up spending more time crying than do infants whose crying receives a response.

To settle once and for all the question of whether children whose crying is ignored turn out to be healthier adults than do children whose crying receives a prompt response, one would have to do a controlled experiment. The all-powerful experimenter would arbitrarily divide a society's households into two groups, and the parents of one group of children would be required to ignore their child's "needless" crying while the other group of parents would respond to crying within three seconds. Twenty years later, when the infants were adults, one could assess which group of children were more autonomous, secure in relationships, self-reliant, self-controlled, unspoiled, and endowed with other virtues emphasized by some modern educators and pediatricians.

Naturally, those well-designed experiments and rigorous assessments have not been carried out. One must instead fall back on the messy natural experiments and unrigorous anecdotes of comparing societies with different child-rearing practices. At least, one can conclude that the prompt responses of hunter-gatherer parents to infants crying do not consistently lead to children who end up conspicuously lacking in autonomy and self-reliance and other virtues. We shall return to the impressionistic answers that scholars have offered to this question of long-term outcomes.

### Physical punishment

Related to those debates about spoiling a child by promptly responding to its crying are the familiar debates about spoiling a child by avoiding punishing it. There is great variation among human societies in their attitudes towards punishing children: variation within a given society from generation to generation, and variation between similar neighboring societies within the same generation. As for variation within the same society be-



tween generations, spanking of children was much more widely practised in the United States in my parents' generation than it is today. The German chancellor Bismarck commented that, even within a given family, spanked generations tend to alternate with non-spanked generations. That conforms to the experience of many of my American friends: those who were spanked as children swear that they will never inflict such barbaric cruelties on their own children, while those who were not spanked as children swear that it is healthier to administer a brief spanking than to practise the guilt manipulation and other behavioral controls that substitute for spanking, or to spoil kids entirely.

As for variation between contemporary neighboring societies, consider Western Europe today. Sweden forbids spankings; a Swedish parent who spanks a child can be charged with the criminal offense of child abuse. In contrast, many of my educated liberal German and British friends and American evangelical Christian friends believe that it is better to spank a child than not to spank. Spankers are fond of quoting the 17th-century English poet Samuel Butler ("Spare the rod and spoil the child") and the Athenian playwright Menander ("The man who has never been flogged has never been taught"). Similarly, in modern Africa the Aka Pygmies never beat or even scold their children, and they consider horrible and abusive the child-rearing practices of neighboring Ngandu farmers, who do beat their children.

Variation in physical punishment characterizes or characterized not only modern Europe and Africa but also other times and parts of the world. Within ancient Greece, Athenian children (despite Menander's dictum) ran around unchecked, while at the same time in Sparta everyone, not just a child's parents, could beat a child. In New Guinea, while some tribes do not even punish babies for brandishing sharp knives, I encountered an opposite extreme at a small village (Gasten) of a dozen huts around a clearing, where village life took place in full view of all the residents. One morning, I heard angry screaming, and I looked out to see what was happening. A mother was incensed at her daughter of about age eight, shouting at the daughter and hitting her, and the daughter was sobbing and holding her arms in front of her face to ward off the blows. Other adults were watching, and nobody was interfering. The mother got more and more furious. Finally, the mother went over to the edge of the clearing,

bent down to pick up some object, came back to the child, and vigorously rubbed the object into the child's face, causing her daughter to scream uncontrollably in agony. It turned out that the object was a bunch of stinging nettle leaves. I don't know what the daughter had done to provoke this punishment, but the mother's behavior was evidently considered acceptable by all of the onlookers.

How can one explain why some societies practise physical punishment of children, while others don't? Much of the variation is evidently cultural and unrelated to differences in subsistence economy. For instance, I am unaware of differences between the economies of Sweden, Germany, and Britain, all of them industrialized agriculture-based societies speaking Germanic languages, that could explain why many modern Germans and British spank but Swedes don't. The New Guineans of both Gasten and of Enu's adoptive tribe are gardeners and swineherds, again without obvious differences to explain why physical punishment with nettles is acceptable at Gasten while even mild physical punishment is rare among Enu's adoptive people.

However, there does seem to be a broad trend: most hunter-gatherer bands do minimal physical punishment of young children, many farming societies do some punishment, and herders are especially likely to punish. One contributing explanation is that misbehavior by a hunter-gatherer child will probably hurt only the child and not anyone or anything else, because hunter-gatherers tend to have few valuable physical possessions. But many farmers, and especially herders, do have valuable material things, especially valuable livestock, so herders punish children to prevent serious consequences to the whole family—e.g., if a child fails to close the pasture gates, valuable cows and sheep can run away. More generally, compared to mobile societies of egalitarian hunter-gatherers, sedentary societies (e.g., most farmers and herders) have more power differences, more gender-based and age-based and individual inequality, more emphasis on learning deference and respect—and hence more punishment of children.

Here are some examples. Among hunter-gatherers, the Piraha, Andaman Islanders, Aka Pygmies, and !Kung practise little or no physical punishment. Daniel Everett relates the following story from his years of living among the Piraha. He became a father at the age of 19, and he came from



a Christian background that practised physical punishment. One day, his daughter Shannon did something that he considered to merit a spanking. He grabbed a switch, told her to come to the next room where he would spank her, and she began yelling that she didn't need a spanking. The Pirahas came running at the sound of angry voices and asked him what he was doing. He didn't have a good answer to tell them, but he still recalled biblical injunctions about spanking children, so he told his daughter that he wouldn't spank her there in the presence of the Pirahas, but that she should go to the end of the airstrip and find another switch to be spanked with, and that he would meet her there in five minutes. As Shannon started on her way, the Pirahas asked her where she was going. Fully aware of what the Pirahas would think of her answer, she replied with glee, "My dad is going to hit me on the airstrip!" Out came Piraha children and adults to follow Daniel Everett as he was about to carry out this unthinkably barbaric behavior of hitting a child. He surrendered in defeat, leaving his smug daughter to celebrate her triumph. Piraha parents instead talk to their children respectfully, rarely discipline them, and do not use violence.

Similar attitudes prevail among most other hunter-gatherer groups studied. If one Aka Pygmy parent hits an infant, the other parent considers that ground for divorce. The !Kung explain their policy of not punishing children by saying that children have no wits and are not responsible for their actions. Instead, !Kung and Aka children are permitted to slap and insult parents. The Siriono practise mild punishment of a child that eats dirt or a taboo animal, by roughly picking up the child, but they never beat a child, whereas children are allowed to have temper tantrums in which they beat their father or mother as hard as possible.

Among farming peoples there is variation, with the most punitive being herders whose valuable livestock are at stake if a child looking after the livestock misbehaves. In some farming communities, discipline of children is lax, and they have few responsibilities and also few opportunities to damage valuable possessions, until they reach puberty. For example, among the people of the Trobriand Islands near New Guinea, who are farmers without livestock except for pigs, children are neither punished nor expected to obey. The ethnographer Bronislaw Malinowski wrote of the Trobriand Islanders, "Often . . . I would hear a youngster told to do this or that, and generally the thing, whatever it was, would be asked as a

favor, though sometimes the request might be backed up by a threat of violence. The parent would either coax or scold or ask as from one equal to another. A simple command, implying the expectation of natural obedience, is never heard from parents to child in the Trobriands. . . . When I suggested, after some flagrant infantile misdeed, that it would mend matters for the future if the child were beaten or otherwise punished in cold blood, the idea appeared unnatural and immoral to my [Trobriand] friends.”

A friend who has lived for many years among a herding people of East Africa told me that the herders’ children there behave like little juvenile delinquents until the age of male circumcision, at which time they are expected to assume responsibilities. Then, following an initiation ceremony, boys begin herding the valuable cows, girls begin caring for siblings, and both begin to be disciplined. Among the Tallensi people of Ghana in West Africa, no one hesitates to punish a child who seems to deserve it, e.g., for dawdling while driving cattle. One Tallensi man pointed out to a visiting British anthropologist a scar that had resulted from his being severely whipped as a small boy. A Tallensi elder explained, “If you don’t harass your child, he will not gain sense”—similar to Butler’s dictum “Spare the rod and spoil the child.”

### Child autonomy

How much freedom or encouragement do children have to explore their environment? Are children permitted to do dangerous things, with the expectation that they must learn from their mistakes? Or are parents protective of their children’s safety, and do parents curtail exploration and pull kids away if they start to do something that could be dangerous?

The answer to this question varies among societies. However, a tentative generalization is that individual autonomy, even of children, is a more cherished ideal in hunter-gatherer bands than in state societies, where the state considers that it has an interest in its children, does not want children to get hurt by doing as they please, and forbids parents to let a child harm itself. I write these lines just after I picked up a rental car at an air-



port. The recording that was broadcast to us passengers on the shuttle bus from the airport baggage claim to the rental car lot warned us, "Federal law requires children under five years of age or weighing under 80 pounds to be transported in a federally approved car seat." Hunter-gatherers would consider that warning to be none of the business of anyone other than the child and perhaps its parents and band members, but certainly not of a distant bureaucrat. At the risk of overgeneralizing, one could say that hunter-gatherers are fiercely egalitarian, and that they don't tell anyone, not even a child, to do anything. Generalizing or overgeneralizing further, small-scale societies appear to be not nearly as convinced as are we WEIRD moderns of the idea that parents are responsible for a child's development, and that they can influence how a child turns out.

That theme of autonomy has been emphasized by observers of many hunter-gatherer societies. For example, Aka Pygmy children have access to the same resources as do adults, whereas in the U.S. there are many adults-only resources that are off-limits to kids, such as weapons, alcohol, and breakable objects. Among the Martu people of the Western Australian desert, the worst offense is to impose on a child's will, even if the child is only three years old. The Piraha Indians consider children just as human beings, not in need of coddling or special protection. In Daniel Everett's words, "They [Piraha children] are treated fairly and allowance is made for their size and relative physical weakness, but by and large they are not considered qualitatively different from adults . . . the Pirahas have an undercurrent of Darwinism running through their parenting philosophy. This style of parenting has the result of producing very tough and resilient adults who do not believe that anyone owes them anything. Citizens of the Piraha nation know that each day's survival depends on their individual skills and hardiness. . . . The Pirahas' view that children are equal citizens of society means that there is no prohibition that applies to children but does not equally apply to adults and vice versa. . . . They have to decide for themselves to do or not to do what their society expects of them. Eventually they learn that it is in their best interests to listen to their parents a bit."

Some hunter-gatherer and small-scale farming societies don't intervene when children or even infants are doing dangerous things that may

in fact harm them, and that could expose a Western parent to criminal prosecution. I mentioned earlier my surprise, in the New Guinea Highlands, to learn that the fire scars borne by so many adults of Enu's adoptive tribe were often acquired in infancy, when an infant was playing next to a fire, and its parents considered that child autonomy extended to a baby's having the right to touch or get close to the fire and to suffer the consequences. Hadza infants are permitted to grasp and suck on sharp knives (Plate 19). Here is an incident observed by Daniel Everett among the Piraha Indians: "We noticed that a [Piraha] toddler about two years old was sitting in the hut behind the man we were interviewing. The child was playing with a sharp kitchen knife, about nine inches in length. He was swinging the knife blade around him, often coming close to his eyes, his chest, his arm, and other body parts one would not like to slice off or perforate. What really got our attention, though, was that when he dropped the knife, his mother—talking to someone else—reached back nonchalantly without interrupting her conversation, picked up the knife, and handed it back to the toddler. No one told him not to cut himself or hurt himself with the knife. And he didn't, but I have seen other Piraha children cut themselves severely with knives."

Nevertheless, not all small-scale societies permit children to explore freely and do dangerous things. Variation in the freedom that children enjoy seems to me partly understandable from several considerations. Two are the considerations that I already discussed as accounting for more physical punishment among herders and farmers than among hunter-gatherers. While hunter-gatherer societies tend to be egalitarian, many farming and herding societies recognize different rights for men and women, or for younger and older people. The hunter-gatherer societies also tend to have fewer valuable possessions that a child could damage than do farmers and herders. Both of those considerations may contribute to hunter-gatherer children enjoying greater freedom to explore.

In addition, how much freedom children enjoy seems to depend partly on how dangerous the environment is, or is perceived to be. Some environments are relatively safe for children, but others are dangerous because of either environmental hazards or else dangers from people. Consider the following spectrum of environments, from the most dangerous to the least dangerous, paralleled by a range of child-rearing practices from



adults severely restricting the freedom of young children to adults permitting young children to wander.

Among the most dangerous environments are the New World's tropical rainforests, which teem with biting, stinging, poisonous insects (army ants, bees, scorpions, spiders, and wasps), dangerous mammals (jaguars, peccaries, and pumas), large poisonous snakes (fer-de-lance and bushmasters), and stinging plants. No infant or small child left alone would survive for long in the Amazon rainforest. Hence, Kim Hill and A. Magdalena Hurtado write, "[Ache] infants under one year of age spend about 93% of their daylight time in tactile contact with a mother or father, and they are never set down on the ground or left alone for more than a few seconds . . . it is not until about three years of age that Ache children begin to spend significant amounts of time more than one meter from their mother. Even still, Ache children between three and four years of age spend 76% of their daylight time less than one meter away from their mother and are monitored almost constantly." As a result, Hill and Hurtado commented, Ache children don't learn to walk independently until they are 21 to 23 months old, 9 months later than American children. Ache children between three and five years of age are often carried piggyback in the forest by an adult, rather than being allowed to walk. Only when an Ache child is five years old does it begin to explore the forest on its own legs, but even then Ache children remain within 50 meters of an adult for most of the time.

Dangerous, but not quite as dangerous as the neotropical rainforest, are the Kalahari Desert, the Arctic, and the swamps of the Okavango Delta. !Kung children play in groups that are supervised casually but effectively by adults; the children are usually within eye or ear contact of adults in camp. In the Arctic one cannot allow children to run around freely, because of dangers from accidents that would result in exposure or freezing. Young girls in Southern Africa's Okavango Delta are permitted to catch fish with baskets, but they stay near shore because of danger from crocodiles, hippopotamuses, elephants, and buffaloes. These examples should be tempered, however, by mentioning that 4-year-old Aka Pygmy children, while they don't go off into the Central African rainforest by themselves, do go off with 10-year-old Aka children despite the dangers of leopards and elephants.

A less dangerous environment, where children can be given more freedom, is that of the Hadza in East Africa. It has leopards and other dangerous predators, as does the environment of the !Kung, but it differs from the !Kung environment in being hilly, so that it is possible to see greater distances, and parents can keep an eye on children playing at greater distances from a Hadza camp than from a !Kung camp. The New Guinea rainforests are also moderately safe: there are no dangerous mammals, many snakes are poisonous but they are rarely encountered, and the main danger is from other people. Hence I often see New Guinea children playing, walking, or canoeing by themselves, and my New Guinea friends tell me of spending much time in the forests by themselves as children.

Among the safest environments are Australia's deserts and Madagascar's forests. In recent times Australian deserts have harbored no mammals dangerous to humans. Like New Guinea, Australia has a reputation for poisonous snakes, but one rarely comes across them unless one goes looking for them. Hence Martu children in the Australian desert regularly go out on foraging trips unsupervised by adults. Similarly, Madagascar's forests harbor no large predators and few poisonous plants and animals, so children can safely go off by themselves in groups to dig yams.

### Multi-age playgroups

On the American frontier, where population was sparse, the one-room schoolhouse was a common phenomenon. With so few children living within daily travel distance, schools could afford only a single room and a single teacher, and all children of different ages had to be educated together in that one room. But the one-room schoolhouse in the U.S. today is a romantic memory of the past, except in rural areas of low population density. Instead, in all cities, and in rural areas of moderate population density, children learn and play in age cohorts. School classrooms are age-graded, such that most classmates are within a year of each other in age. While neighborhood playgroups are not so strictly age-segregated, in densely populated areas of large societies there are enough children living within walking distance of each other that 12-year-olds don't routinely play with 3-year-olds. That norm of age cohorts applies not only to mod-



ern societies with state governments and schools, but also to populous pre-state societies, because of the same basic demographic fact: many children close in age, living in proximity. For example, many African chiefdoms have or had age cohorts, in which children close in age were initiated and circumcised at the same time, and (among the Zulu) boys of the same age formed military cohorts.

But demographic realities produce a different result in small-scale societies, which resemble one-room schoolhouses. A typical hunter-gatherer band numbering around 30 people will on the average contain only about a dozen pre-adolescent kids, of both sexes and various ages. Hence it is impossible to assemble separate age-cohort playgroups, each with many children, as is characteristic of large societies. Instead, all children in the band form a single multi-age playgroup of both sexes. That observation applies to all small-scale hunter-gatherer societies that have been studied.

In such multi-age playgroups, both the older and the younger children gain from being together. The young children gain from being socialized not only by adults but also by older children, while the older children acquire experience in caring for younger children. That experience gained by older children contributes to explaining how hunter-gatherers can become confident parents already as teen-agers. While Western societies have plenty of teen-aged parents, especially unwed teen-agers, Western teen-agers are suboptimal parents because of inexperience. However, in a small-scale society, the teen-agers who become parents will already have been taking care of children for many years (Plate 38).

For example, while I was spending some time in a remote New Guinea village, a 12-year-old girl named Morcy was designated to cook for me. When I returned to the village two years later, I found that Morcy had gotten married in the intervening time and was now, at the age of 14, holding her first child. I at first thought: surely there is a mistake about her age, and she really is 16 or 17? But Morcy's father was the man who kept the village birth and death record book, and he had recorded her date of birth himself. I then thought: how on earth can a girl only 14 years old be a competent mother? In the United States, it would even be forbidden by law for a man to marry such a young girl. But Morcy seemed to be dealing in a self-assured way with her child, no differently from older mothers at the village. I finally reflected that Morcy had already had years of experience

in taking care of young children. At age 14, she was better qualified to be a parent than I had been when I became a father at age 49.

Another phenomenon affected by multi-age playgroups is premarital sex, which is reported from all well-studied small hunter-gatherer societies. Most large societies consider some activities as suitable for boys, and other activities as suitable for girls. They encourage boys and girls to play separately, and there are enough boys and girls to form single-sex playgroups. But that's impossible in a band where there are only a dozen children of all ages. Because hunter-gatherer children sleep with their parents, either in the same bed or in the same hut, there is no privacy. Children see their parents having sex. In the Trobriand Islands, Malinowski was told that parents took no special precautions to prevent their children from watching them having sex: they just scolded the child and told it to cover its head with a mat. Once children are old enough to join playgroups of other children, they make up games imitating the various adult activities that they see, so of course they have sex games, simulating intercourse. Either the adults don't interfere with child sex play at all, or else !Kung parents discourage it when it becomes obvious, but they consider child sexual experimentation inevitable and normal. It's what the !Kung parents themselves did as children, and the children are often playing out of sight where the parents don't see their sex games. Many societies, such as the Siriono and Piraha and New Guinea Eastern Highlanders, tolerate open sexual play between adults and children.

### Child play and education

After the first night that I spent in a New Guinea Highland village, I woke up the next morning to hear the shouts of village boys playing outside my hut. Instead of playing hopscotch or pulling toy cars, they were playing tribal war. Each boy had a small bow, together with a quiver of arrows with tips of wild grass, which hurt but didn't injure a boy when he was struck. The kids were divided into two groups, shooting arrows at each other, a boy in each group advancing to come close to an "enemy" boy before firing an arrow at him, but bobbing and darting from side to side to avoid being hit himself, and quickly running back to attach a new ar-



row. It was a realistic imitation of an actual Highland war, except that the arrows were non-lethal, the participants were boys rather than men, and they belonged to the same village and were laughing.

This "game" that introduced me to life in the New Guinea Highlands is typical of so-called educational play of children around the world. Much child play is imitation of adult activities that the children see, or hear about in stories told by adults. The kids play for fun, but their play serves the function of letting them practise things that they will later have to do as adults. For instance, among the Dani people of the New Guinea Highlands, the anthropologist Karl Heider observed that educational play of children imitates everything that goes on in the world of Dani adults, except rituals reserved for adults. Dani games imitating adult life include fighting battles with grass spears; using spears or sticks to "kill" "armies" of berries, rolled realistically back and forth to imitate warriors advancing and retreating; target practice at hanging moss and at ant hives; hunting birds for fun; building imitation huts and imitation gardens with ditches; dragging around a flower attached to a string, as if it were a pig, and calling it by the Dani words meaning "pig-pig"; and gathering at night around a fire, watching a burning stick fall, and pretending that the person to whom the stick points will become one's future brother-in-law.

Whereas adult life and child's play in the New Guinea Highlands revolve around wars and pigs, adult life among the Nuer people in the Sudan revolves around cattle. Hence the games of Nuer children also center around cattle: children build toy kraals (cattle enclosures) out of sand, ashes, and mud, and they fill the toy kraals with toy mud figures of cattle, which they then play at herding. Among the Mailu people who live on the coast of New Guinea and use sail canoes and catch fish, games of children include sailing a toy canoe, using a toy net, and using a toy fish spear. Yanamamo Indian children in Brazil and Venezuela play at exploring the plants and animals of the Amazon rainforest in which they live. As a result, they become knowledgeable naturalists at an early age.

Among the Siriono Indians of Bolivia, an infant boy only three months old already receives a tiny bow and arrow from his father, although he will not be able to use it for several years. By the time the boy is 3, he begins shooting at non-living targets, then at insects, next at birds, then at age 8 the boy begins to accompany his father on hunting trips, and by age 12 the

boy is a full-fledged hunter. By age 3, Siriono girls begin to play with a miniature spindle, spin, make baskets and pots, and help their mother at household tasks. The boy's bow and arrow and the girl's spindle are the only Siriono toys. The Siriono have no organized games equivalent to our games of tag or hide-and-seek, except that boys wrestle.

In contrast to all those "educational games" that imitate adult activities and prepare children for them, there are other Dani games that Karl Heider considered non-educational, in that they were not obviously training children to execute small versions of eventual adult activities. They included making figures out of string, making designs of knotted grass, somersaulting down a hill, and leading around a rhinoceros beetle by a leash made of a grass stalk forced into the hole made by breaking off the beetle's horns. These are examples of what is termed "child culture": children learning to get along with other children, and playing games that have nothing to do with becoming an adult. However, the line between educational and non-educational games can be blurred. For example, one Dani game of string figures consists of making two loops representing a man and a woman who meet from each side and "copulate," while leading a beetle on a leash could be considered practice for leading a pig on a leash.

A regular feature of the games of hunter-gatherer societies and the smallest farming societies is their lack of competition or contests. Whereas many American games involve keeping score and are about winning and losing, it is rare for hunter-gatherer games to keep score or identify a winner. Instead, games of small-scale societies often involve sharing, to prepare children for adult life that emphasizes sharing and discourages contests. An example is the game of cutting up and sharing a banana that Jane Goodale described for New Britain's Kaulong people and that I related on page 91.

Modern American society differs from traditional societies in the number, source, and claimed function of toys. American toy manufacturers heavily promote so-called educational toys to foster so-called creative play (Plate 18). American parents are taught to believe that manufactured store-bought toys are important to the development of their children. In contrast, traditional societies have few or no toys, and any toys that do exist are made either by the child itself or by the child's parents. An American friend who spent his childhood in rural Kenya told me that some of



his Kenyan friends were very inventive, and used sticks and string to build their own small cars with wheels and axles (Plate 17). One day, my American friend and his Kenyan friend tried to harness a pair of giant Goliath beetles to pull a toy cart that they had built. The two boys spent a whole afternoon at their game, but despite hours of effort they could not get the two beetles to pull in coordination. When my friend returned as a teen-ager to the United States and watched American children playing with their plastic ready-made store-bought toys, he gained the impression that American children are less creative than Kenyan children.

In modern state societies, there is formal education: schools and after-hour classes, in which specially trained instructors teach children material set by school boards, as an activity separate from play. But education in small-scale societies is not a separate activity. Instead, children learn in the course of accompanying their parents and other adults, and of hearing stories told by adults and older children around the campfire. For instance, Nurit Bird-David wrote as follows about southern India's Nayaka people: "At a time where in modern societies children begin schooling, say at age 6, Nayaka children independently go hunting small game, visiting and staying with other families, free from supervision by their own specific parents, though not necessarily from adults. . . . Teaching, additionally, is done in a very subtle way. No formal instruction and memorizing here, no classes, no exams, no cultural sites [schools] in which packages of knowledge, abstracted from their context, are transmitted from one person to another. Knowledge is inseparable from social life."

As another example, among Africa's Mbuti Pygmies studied by Colin Turnbull, children imitate their parents by playing with a tiny bow and arrow, a strip of a hunting net, or a miniature basket (Plate 20), and by building a miniature house, catching frogs, and chasing a cooperative grandparent who agrees to pretend to be an antelope. "For children, life is one long frolic interspersed with a healthy sprinkle of spankings and slappings. . . . And one day they find that the games they have been playing are not games any longer, but the real thing, for they have become adults. The hunting is now real hunting; their tree climbing is in earnest search of inaccessible honey; their acrobatics on the swings are repeated almost daily, in other forms, in the pursuit of elusive game, or in avoiding

the malicious forest buffalo. It happens so gradually that they hardly notice the change at first, for even when they are proud and famous hunters their life is still full of fun and laughter.”

Whereas for small-scale societies education follows naturally from social life, in some modern societies even the rudiments of social life require explicit education. For example, in parts of modern American cities where people do not know their neighbors, and where car traffic and potential kidnappers and a lack of sidewalks mean that children cannot safely walk to play with other kids, children have to be taught formally how to play with other children in classes termed “mommy and me classes.” There, a mother or another care-giver brings her child to a classroom with a trained teacher and a dozen other children and their mothers. The children sit in an inner circle, the mothers and care-givers sit in an outer circle and gain experience of child play, and the children are taught how to take turns speaking, listening, and handing objects back and forth to other children. There are many features of modern American society that my New Guinea friends consider bizarre, but nothing astonished them more than being told that American children need specified places, times, and instruction in order to learn how to meet and play with each other.

### **Their kids and our kids**

Finally, let’s reflect on differences in child-rearing practices between small-scale societies and state societies. Of course, there is much variation among industrial state societies today in the modern world. Ideals and practices of raising children differ between the U.S., Germany, Sweden, Japan, and an Israeli kibbutz. Within any given one of those state societies, there are differences between farmers, urban poor people, and the urban middle class. There are also differences from generation to generation within a given state society: child-rearing practices in the U.S. today are unlike those prevalent in the 1930s.

Nevertheless, there are still some basic similarities among all of those state societies, and some basic differences between state and non-state societies. State governments have their own separate interests regarding the state’s children, and those interests do not necessarily coincide with



the interests of a child's parents. Small-scale non-state societies also have their own interests, but a state society's interests are more explicit, administered by more centralized top-down leadership, and backed up by well-defined enforcing powers. All states want children who, as adults, will become useful and obedient citizens, soldiers, and workers. States tend to object to having their future citizens killed at birth, or permitted to become burned by fires. States also tend to have views about the education of their future citizens, and about their citizens' sexual conduct. Those shared goals of states promote some convergence among states in their policies regarding children; the child-rearing practices of non-state societies vary over a much wider spectrum than do the practices of state societies. Within non-state societies, hunter-gatherer societies are subject to convergent pressures of their own: they share some basic similarities of child-rearing with each other, but as a group they differ from states as a group.

States do have military and technological advantages, and advantages of vastly larger populations, over hunter-gatherers. Throughout recent millennia, those advantages have enabled states to conquer hunter-gatherers, so that the modern world map is now divided completely among states, and few hunter-gatherer groups have survived. But even though states are much more powerful than hunter-gatherer bands, that doesn't necessarily imply that states have better ways of raising their children. Some child-rearing practices of hunter-gatherer bands may be ones that we could consider emulating.

Naturally, I'm not saying that we should emulate all child-rearing practices of hunter-gatherers. I don't recommend that we return to the hunter-gatherer practices of selective infanticide, high risk of death in childbirth, and letting infants play with knives and get burned by fires. Some other features of hunter-gatherer childhoods, like the permissiveness of child sex play, feel uncomfortable to many of us, even though it may be hard to demonstrate that they really are harmful to children. Still other practices are now adopted by some citizens of state societies, but make others of us uncomfortable—such as having infants sleep in the same bedroom or in the same bed as parents, nursing children until age three or four, and avoiding physical punishment of children.

But some other hunter-gatherer child-rearing practices may fit readily

into modern state societies. It's perfectly feasible for us to transport our infants vertically upright and facing forward, rather than horizontally in a pram or vertically upright but facing backwards in a pack. We could respond quickly and consistently to an infant's crying, practise much more extensive allo-parenting, and have far more physical contact between infants and care-givers. We could encourage self-invented play of children, rather than discourage it by constantly providing complicated so-called educational toys. We could arrange for multi-age child playgroups, rather than playgroups consisting of a uniform age cohort. We could maximize a child's freedom to explore, insofar as it is safe to do so.

I find myself thinking a lot about the New Guinea people with whom I have been working for the last 49 years, and about the comments of Westerners who have lived for years in hunter-gatherer societies and watched children grow up there. A recurring theme is that the other Westerners and I are struck by the emotional security, self-confidence, curiosity, and autonomy of members of small-scale societies, not only as adults but already as children. We see that people in small-scale societies spend far more time talking to each other than we do, and they spend no time at all on passive entertainment supplied by outsiders, such as television, video games, and books. We are struck by the precocious development of social skills in their children. These are qualities that most of us admire, and would like to see in our own children, but we discourage development of those qualities by ranking and grading our children and constantly telling them what to do. The adolescent identity crises that plague American teen-agers aren't an issue for hunter-gatherer children. The Westerners who have lived with hunter-gatherers and other small-scale societies speculate that these admirable qualities develop because of the way in which their children are brought up: namely, with constant security and stimulation, as a result of the long nursing period, sleeping near parents for several years, far more social models available to children through allo-parenting, far more social stimulation through constant physical contact and proximity of caretakers, instant caretaker responses to a child's crying, and the minimal amount of physical punishment.

But our impressions of greater adult security, autonomy, and social skills in small-scale societies are just impressions: they are hard to measure and to prove. Even if these impressions are real, it's difficult to estab-



lish that they are the result of a long nursing period, allo-parenting, and so on. At minimum, though, one can say that hunter-gatherer rearing practices that seem so foreign to us aren't disastrous, and they don't produce societies of obvious sociopaths. Instead, they produce individuals capable of coping with big challenges and dangers while still enjoying their lives. The hunter-gatherer lifestyle worked at least tolerably well for the nearly 100,000-year history of behaviorally modern humans. Everybody in the world was a hunter-gatherer until the local origins of agriculture around 11,000 years ago, and nobody in the world lived under a state government until 5,400 years ago. The lessons from all those experiments in child-rearing that lasted for such a long time are worth considering seriously.