

**“Once the Child is Lost He Dies”:
Monster Stories Vis-a-Vis the Problem of Errant Children**

**Michelle Scalise Sugiyama
and
Lawrence S. Sugiyama**

**Anthropology Department and
Institute of Cognitive and Decision Sciences
University of Oregon, Eugene OR 97403**

In press. *Integrating Science and the Humanities: Interdisciplinary Approaches*. Eds. Slingerland E & Collard M. Oxford University Press.

Abstract: Scalise Sugiyama has argued that forager oral traditions serve as a means of storing and transmitting information useful to survival and reproduction. On this view, however, the widespread presence of monsters (anthropomorphic predators) in forager folklore is puzzling: although human aggressors might have been a recurrent feature of past environments, giants, witches, and ogres clearly were not. Why would adults tell such stories to children? Ethnographic evidence suggests an answer: once children are mobile and weaned, they can travel to places where they are out of sight or earshot of adult protectors, making them vulnerable to injury, abduction, and death from exposure, thirst, hunger, or predation. Parents might use stories about voracious monsters that prey on lone wanderers to frighten children into staying close to camp when they might otherwise wander off. In support of this claim, we present evidence that: (1) errant children are a potential problem in a range of foraging environments; (2) errant children are vulnerable to injury and violent death; (3) forager parents take precautions to prevent their children from wandering; (4) parents tell monster stories to children to frighten them into obedience; and (5) monster stories underscore the dangers of wandering away from camp.

I. Theoretical Foundations

When did humans begin telling stories? This type of inquiry is not normally pursued by literary scholars, nor is it part of their training, yet it is the logical starting point for any theory of narrative function: if we want to understand why storytelling emerged, we need to understand the conditions under which it developed. Multiple lines of evidence indicate that storytelling emerged tens of thousands of years ago—before the development of agriculture, permanent settlements, and writing (Scalise Sugiyama 2005). Thus, our understanding of narrative can be enriched through study of the challenges presented by a foraging lifestyle and the role that oral traditions play in meeting them. On this view, the study of narrative function is, in part, the study of anthropology. However, inquiry regarding the origins and function of storytelling does not typically fall within the parameters of anthropology, either. This omission is striking, especially given our species' highly developed ability to generate and exchange information (Tooby & DeVore 1987; Flinn 1997), and the pan-human use of narrative as a medium of cultural transmission. In short, narrative theorists have an interest in illuminating the function of storytelling, and anthropologists have an interest in illuminating the function of cultural transmission. We believe that these interests meet in, and can be well-served by study of, the oral traditions of foraging peoples.

Making a living as a forager requires extensive, specialized knowledge (Laughlin 1968; Blurton Jones & Konner 1976; Tonkinson 1978; Lee 1984), and ethnographic evidence indicates that much of this knowledge is acquired from others (Hewlett & Cavalli-Sforza 1986; Ohmagari & Berkes 1997). Moreover, comparison of human and non-human primate cognitive abilities indicates that human minds are better equipped for

social learning than those of other primates (Byrne 1995). This is due, in part, to a suite of uniquely human capacities, called *joint attention*, that include the ability to follow another's gaze, direct another's attention (e.g., by pointing), and check to see whether the other person is looking where one has indicated (Scaife & Bruner 1975; Butterworth & Cochran 1980; Tomasello 1995, 1999; Carpenter et al. 1998). These capacities emerge predictably at the end of the first year of life, and are soon followed by language. Thus, by the end of infancy, humans are wired for information exchange.

The development of joint attention and language so early in human ontogeny is a powerful indication that the ability to exchange information conveys a critical fitness advantage. This advantage is summarized by Dawkins as follows:

More than any other species, we survive by the accumulated experience of previous generations, and that experience needs to be passed on to children for their protection and well-being. Theoretically, children might learn from personal experience not to go too near a cliff edge, not to eat untried red berries, not to swim in crocodile-infested waters. But, to say the least, there will be a selective advantage to child brains that possess the rule of thumb: believe, without question, whatever your grown-ups tell you. (2006:203)

A study of children's fears lends credence to the existence of a disposition on the part of juveniles to believe what adults tell them. Field et al. (2001) presented children between the ages of 7 and 9 with either positive or negative information about previously un-encountered monsters. Subjects' fear beliefs regarding the monster for whom they'd

received negative information significantly increased when the information was provided by an adult. However, when a peer provided the negative information, fear beliefs did not change significantly. Field et al.'s study also suggests that, for some kinds of information, narrative may be a more effective medium than direct observation.

Information about the monsters was presented in one of two formats: video (observational) and narrative (verbal). Subjects who received negative information in narrative format reported a greater increase in fear beliefs than subjects who received negative information in video format.

One of the things that grown-ups tell children is stories, which are verbal representations of the experiences of actual or imagined agents. Be they fact or fiction, these representations can provide knowledge that is applicable in real-world situations. In this respect, narrative can serve as a means of passing on accumulated knowledge to subsequent generations. This claim is supported by evidence that pretend play--the ability to participate in fictional worlds with others—begins to appear between 18 and 24 months (Leslie 1994; Baron-Cohen 1995), and that the understanding of pretense is present at 15 months (Onishi et al. 2007). As with joint attention and language, the relatively early emergence of pretense in human development indicates that this faculty is instrumental to survival in the human ecological niche.

The claim that narrative provides useful real-world information is also supported by cross-cultural evidence that forager folklore themes reference recurrent problems of the human ecological niche, such as manipulating and being manipulated by others, subsistence, predator avoidance, cheating, foraging risk, and wayfinding (Scalise Sugiyama 1996, 2001a,b, 2006, 2008; Scalise Sugiyama & Sugiyama in press, under

revision). Although folklore obviously contains fantasy elements, many social scientists posit a link between recurrent themes in oral traditions and real-world problems. A case in point is Hill and Hurtado's (1996) observation that "[f]loods have apparently killed enough Ache in the distant past that they figure importantly in Ache mythology" (152). They further note that dangers such as jaguar attack and snakebite "place important constraints on the lives of Ache foragers, and they permeate Ache mythology" (153). Similarly, in their discussion of the Cinderella motif, Daly and Wilson (1998) argue that the cross-cultural themes of malevolent stepmothers and abused stepchildren "cannot be arbitrary or chance inventions. The characters and their conflicts are too consistent" (4).

These predictable patterns in forager folklore content--and in world folklore content overall (Thompson 1957; Kluckhohn 1959)—are the basis for our claim that oral traditions are cognitive artifacts (Scalise Sugiyama & Sugiyama, in press). Because these traditions are transmitted orally and stored in the minds of storytellers and their audiences, their content is constrained by the bounds of memory--that is, by the kinds of information the mind is designed to attend to, store, and recall. Information that engages our attention may be said to interest us, and interest, like all emotions, is not random. A given stimulus attracts our interest because, in ancestral environments, fitness benefits accrued to individuals who paid attention to the cues associated with it (Tooby & Cosmides 1990, 2001). Thus, narratives that persist in collective memory do so because their content triggers motivational mechanisms designed to respond to the cues associated with the agents, objects, activities, and/or phenomena represented within them. Collectively, then, forager oral traditions may be seen as a subset of information that is important to fitness and that humans are motivated to exchange with each other in

foraging contexts. Although modern forager groups are not directly comparable to ancestral human populations, their oral traditions may nevertheless point to recurrent, cross-cultural information demands of past foraging environments.

It is in this context that we examine the cross-cultural theme of monsters. At first glance, this theme may seem puzzling: anthropomorphic agents that prey on humans obviously were not a recurrent feature of past environments. Although sympatric hominid species might be considered anthropomorphic agents, the only evidence of inter-species predation among hominids--the recent finding of an allegedly cannibalized Neanderthal jawbone at a *H. sapiens* site (Rozzi et al. 2009)—indicates that *H. sapiens* was the predator, not the prey. Thus, one might conclude, as do Field et al. (2001), that the monster figure “has no evolutionary significance” because “it isn’t real” (1266). In contrast to this view, we see the monster figure as a hybrid stimulus that combines two selection pressures: animal and human attack (e.g., raiding, warfare). As such, these figures could theoretically provide information about the *modus operandi* of either or both types of predator. However, this explanation raises the question, how is the audience to determine which of the monster’s habits and characteristics accurately reflect the habits and characteristics of its constituent real-world animal and human predators? A hybrid creature might be more confusing than illuminating in this respect. Moreover, forager folklore is replete with stories about dangerous animals (Scalise Sugiyama 2004, 2006) and warfare (Scalise Sugiyama & Sugiyama, in preparation), which suggests that humans track these problems separately (see Barrett 2005 on adaptations specific to non-human predators, and Duntley 2005 on adaptations specific to human predation). For these reasons, we believe that instead of being used to transmit information about animal

and human predators *per se*, monster stories are used to strategically frighten children. Like dragons, which combine salient characteristics of three major primate predators (raptors, snakes, and felines; Jones 2000), monsters are super-stimuli, simultaneously referencing two recurrent threats to human life: animal and human predators. The monster figure is therefore likely to trigger multiple threat-detection and threat-response modules, making it particularly well-suited to provoking fear in children.

Why would parents want to frighten their children? The answer, in a word, is discipline: informants and observers frequently comment that these stories are told to children to make them behave. Juvenile infractions can be divided into two general categories: violating cultural norms and engaging in life-threatening behaviors. An example of the former is seen in a Kolyma tale about a lazy young man who is captured by a cannibal woman. When he pleads with her to let him return to his parents, she refuses: “I shall not let you go. In former times, whenever your parents sent you for water and for wood, or tried to urge you to go hunting, you were too indolent to follow their advice” (Bogoras 1918:97). Thus, for refusing to fulfill his cultural role as hunter and provider, the young man is threatened with becoming food for others. Because Scalise Sugiyama (2008) has discussed the use of storytelling to inculcate cultural norms elsewhere, we will focus here on the second type of infraction: life-threatening behavior. Anecdotal evidence indicates that the behaviors parents target with monster stories are crying and wandering away from camp. Significantly, both of these behaviors increase vulnerability to human and animal predation: wandering removes an individual from the safety of the group, and crying exposes an individual’s location—and that of his/her companions—to potential assailants. Wandering also carries the risk of getting lost and

dying of thirst, hunger, exposure, or injury. In this paper, then, we argue that one reason foragers tell stories about voracious monsters is to strategically frighten children into staying close to their adult protectors. In support of this claim, we present evidence that: (1) errant children are a potential problem in a range of foraging environments; (2) errant children are vulnerable to injury and death; (3) forager parents take precautions to prevent their children from wandering; (4) parents tell monster stories to children to frighten them into obedience; and (5) monster stories underscore the dangers of wandering away from the group.

II. The Problem of Errant Children: Accidental Death

The problem posed by a lost child is neatly spelled out by Hill and Hurtado (1996): “In theory parents can lower offspring mortality by locating their children in environments that contain fewer potential environmental and biological health insults. Conversely, they can actively eliminate health hazards in small areas or eliminate contact with such hazards” (295). Preventing young children from wandering off is one way of “eliminating contact with”—or, more accurately, reducing children’s chances of coming into contact with—environmental hazards. Although close contact between mother and infant “results in an attachment which prevents the newly mobile toddler from getting lost” (Konner 1976:244), this attachment tends to wear off as the child gets older: fear of strangers emerges at around seven months and lasts until sometime between 18 and 24 months (Heerwagen & Orians 2002:39). Like attachment behavior, infants’ preference for playing with small objects may have “evolved in part because it reduces their tendency to wander” (Heerwagen & Orians 2002:37), but this preference also wanes by

24 months. Animal phobias, in contrast, emerge rather late, tending to appear between age seven and nine (Öst, 1987; Field & Davey 2001). Thus, as any parent knows, there is a phase of development, beginning in the toddler years and ending in early childhood, when a child's ambulatory abilities and curiosity far exceed its appreciation and knowledge of the life-threatening opportunities afforded by its environment. It is also during this period that the costs of taking a child on foraging excursions begin to outweigh the benefits: the child has too little endurance to walk long distances on its own, yet is too heavy (i.e., calorically expensive) to carry. In response to this problem, many forager women opt to leave their young children in camp under the care of older children or aged relatives. However, this system offers no guarantee that the child will not slip away when its caretaker is not looking.

Evidence suggests that the degree to which errant children are a problem varies with the intensity of warfare (see Section III) and ecological risk. For example, the Paraguayan forest inhabited by the Ache is rife with environmental hazards, and accidents--including drowning, snakebite, and getting lost--are one of the main causes of death among children between the ages of four and fourteen. Simply crossing a river or falling behind the group can be fatal: in their discussion of causes of mortality among the Ache, Hill and Hurtado (1996) report that one girl was swept away when she fell off a log bridge into a river, and several adolescent boys wandered off from the adults while hunting and were "either never seen again or found dead several days later" (162). Exposure is another hazard: temperatures can fall below freezing, and the combination of cold and rain can kill a person who happens to get lost without fire (Hill & Hurtado 1996). Due to this high level of environmental risk, Ache children between the ages of

three and four are supervised continuously, and spend nearly all of their daylight hours less than one meter from their mother (Hurtado et al. 1992; Hill & Hurtado 1996).

Indeed, the environmental risk to which Ache children are exposed is so great that Kaplan and Dove (1987) believe it might account for their pronounced delay in motor development. Ache children do not walk independently until between 21-23 months, which is nine months later than American children and a year later than !Kung children. Kaplan and Dove suggest that this delay might be due to parents discouraging and/or children curbing their environmental exploration until they are older and less vulnerable.

The vulnerability of Ache children reaches a crisis point at age five or six, when they become too heavy to carry and thus must walk on their own when adults forage or when camp is moved. The difficulties and discomforts of traveling through thick jungle make this an arduous task, and children use a variety of tactics to encourage their parents to carry them, including refusing to walk. Adults respond by leaving the child behind, which

leads to a dangerous game of “chicken” in which parents and children both hope the other will give in before the child is too far behind and may become lost. We observed one small boy to be lost for about half an hour during a parent-child transportation conflict. When the boy was finally located it was unclear whether he or his parents were more frightened. A small child cannot survive long in the Paraguayan forest, and if not found within one day is unlikely to survive. (Hill & Hurtado 1996:222)

For a young child in the Paraguayan forest, getting lost means almost certain death. Tellingly, one of the most important skills Ache children learn is how to read the signs that adults leave when they walk through an area (e.g., bent leaves and twigs). The ability to follow these “trails” is acquired by approximately age eight, and “enables children to navigate between camps without always being within sight of adults, and it allows boys to begin small hunting forays without getting lost” (Hill & Hurtado 1996:223).

Like the Ache, the !Kung occupy an environment that is hazardous to small children. In their comparative study of !Kung and Hadza children’s foraging, Blurton Jones et al. (1994) interviewed !Kung adults in several villages (6 women and 3 men), ranging in age from 40-80. These informants reported that children were discouraged from foraging alone in the bush, and were expressly warned about the dangers this presented. When informants were asked whether these dangers were real or just something adults said to make children obey, informants said they were afraid that children would get lost if they left camp, and that getting lost is very dangerous for children. Informants were then asked what adults fear will happen to children if they leave camp: ““Getting lost. They think that if the children are alone together they will get lost. Once the child is lost he dies”” (1994:201). When asked what lost children die from, informants reported, ““Hunger, thirst and cold”” (1994:201). Informants were then asked if they knew of any children who had gotten lost. Eight cases were reported (age range 5 to 10), in which two children died. According to the authors, the informants did not seem to think that predators were a serious threat to children; however, in one out of the two deaths the child was killed by a predator (a leopard at a waterhole). Moreover,

the !Kung claim that lions, leopards, and wild dogs will all take children who wander off unattended (Blurton-Jones & Konner 1976) and, on account of this danger, !Kung women are reported to carry children as old as six when they go foraging in the bush (Low 1998).

!Kung fear of children wandering off is very intense: according to Blurton Jones et al. (1994), “It is impossible to overstate the degree of panic expressed by !Kung on these occasions” (Blurton Jones et al. 1994:204). Draper (1976:207) gives a detailed account of one such incident:

The women are especially mindful of the 5- and 6-year-olds who are old enough to wander but too immature to keep oriented in the bush. One hot afternoon . . . I was sitting with five women and a few infants. . . . It was almost too hot to talk; we all sat listlessly, waiting for the sudden lifting of the heat which came everyday at about 5:30 PM. Suddenly one woman jerked herself to a sitting position, neck arched, eyes darting to all directions. “Listen . . . listen!” she whispered. “Where are the children?” All the women leapt to their feet, looking about and calling to other people sitting farther off in the village. About that time we heard a child’s voice calling in the distance and looking in that direction we saw the missing children . . . who were walking through the bush toward the camp. The wave of alarm which had galvanized the women, raised them from torpor, and scattered them twelve or more meters in a few seconds, subsided immediately. (Draper 1976:207)

As the authors conclude, the “risks to children who do get lost are extremely high (two deaths out of eight cases), and thus worth the adults’ efforts to ensure that the children do not get lost” (Blurton Jones et al. 1994:203). One step that !Kung parents take is to indoctrinate their children with the fear of getting lost if they leave camp. Although Blurton Jones et al. (1994) do not mention the use of storytelling to accomplish this, telling stories about monsters that will attack you when you are alone is certainly one way of indoctrinating children. Significantly, Khoisan peoples are reported to tell stories about monsters, such as ogres and cannibals (Biesele 1993:36).

Although they did not conduct similar interviews among the Hadza, Blurton Jones et al. (1994) report that Hadza adults evince no fear when children are out of camp, out of sight, or at an unknown location. According to Blurton Jones (1993), “Hadza children are neither supervised nor confined to camp while the women are out gathering” (316), and may spend several hours a day away from camp. Blurton Jones et al. (1994) attribute this parenting style to specific features of the Hadza environment: ample shade, “expansive vistas” with salient landmarks, and “many small dry season water sources dotted over the hills” (197). The varied, hilly terrain, with views of a mountain, a lake, and the rift valley escarpment, makes it easy for a forager to see where she is headed and where she has been, greatly reducing the chances of becoming lost. The ready availability of shade and water reduces the danger of heat exhaustion. In contrast, water holes in !Kung territory are few and far between, shade is nonexistent, visibility is limited by the flat terrain and thick brush, and orientation is difficult due to a lack of salient topological features. In short, due to differences in their respective habitats, Hadza children are less likely than !Kung children to get lost and suffer from heat exhaustion if

they wander away from camp. This does not mean, however, that Hadza children forage alone or that they wander far afield. Although they may spend hours away from camp, they typically play in “sizable mixed-sex groups” (Blurton Jones 1993:316), and “mostly forage within a quarter mile of camp and usually much closer, within sight, or at least within earshot” (Blurton Jones et al. 1994:204). Moreover, although lost children do not appear to be a problem, adults nevertheless take precautions that reduce the likelihood of children being taken by predators. Hadza women take their infants with them on foraging trips until the age of weaning (between 2 and 3 years of age), and after weaning leave them in camp under the care of the older children they are playing with (Crittenden & Marlowe 2008). However, “it is still necessary that some adult be in camp within earshot, otherwise lions, leopards, and hyenas would eventually lose their fear of camps during the day and these children would become easy prey. Toddlers are never left in camp without an adult there” (Marlowe 2005:188)

Like the Hadza, the Martu of the Western Australian occupy an environment that is conducive to children’s foraging. Yuka Napanangka, a Martu woman, describes her childhood foraging experiences as follows:

“Mothers and fathers gone out hunting and leave us kids in camp. When we got hungry we go hunting for little lizard, get him and cook it and eat him up. Me little bit big now, I go hunting myself, tracking goanna and kill him. . . . Soon as mother leave him, little ones go hunting, kill animals, blue tongue, mountain devil, take them home before mother and father come back, cook and eat it” (Napanangka 1995:143).

Martu children appear to minimize the risk of heat exhaustion by going on short (average length 48 ± 7 minutes) forays close to camp (average distance 1.8 km), and concentrating their foraging efforts on areas of higher prey density (Bird & Bliege Bird 2005).

The area of the Congo Basin inhabited by the Mbuti also appears to be conducive to children's foraging. It is described by Turnbull as "a cool, green wonderland where you can walk with ease, comfort, and safety. The leafy canopy high overhead protects you from the heat and glare of direct sunlight, and the leaves and twigs underfoot protect you against snakes and any predators that might be sleeping nearby, warning them well in advance of your approach. . . . Just about the only animal that might attack unprovoked in the forest buffalo, and even it will not attack if there is too much noise" (1983:26-27). From the age of three onward, children spend much of their day playing in the *bopi*, "a tiny camp perhaps a hundred yards from the main camp, often on the edge of a stream" (Turnbull 1983:41). Baka pygmy children play at *ngbasa* (going on a safari with a dog) and building huts in the forest (Kamei 2005), apparently without incident.

To the best of our knowledge, Blurton Jones et al. (1994) and Hill and Hurtado (1996) are the only studies of contemporary foragers that document the number of lost children. However, some studies make indirect reference to the dangers that newly weaned, mobile children can get into if not adequately supervised. For example, in his time-allocation study of childcare among the Ye'kwana, Hames recorded the percentage of time children under 41 months spent outside the village while their caretakers were engaged in economic tasks. He was interested in this measure because it "gives one an idea of the constraints that children place on caregivers in locations up to 6 kilometers

away (i.e., forest, garden, or river) from the village where high-quality care or monitoring is necessary because of the elevated risk of environmental trauma” (1988:243).

Interestingly, of all children under 41 months, children between the ages of 27 and 40 months spent the least amount of time outside the village. Hames attributes this to children of this age having been weaned, which means they can be left in the village under the care of someone other than their mother. From a mother’s perspective, there are many reasons for wanting to forage unencumbered by childcare; Hames’ comment on the increased risk of environmental trauma suggests that the problem of children wandering off while mother is foraging might be among those reasons.

The picture that emerges from these studies is that environments vary in the degree of danger they pose to a lost child, and that--this variation notwithstanding--a lost child can be vulnerable to death from a variety of sources, including exposure, thirst, hunger, injury, and/or animal attack. Thus, regardless of environment, a variety of circumstances that are potentially fatal to a child can be avoided simply by preventing that child from wandering off. Unfortunately, the dearth of empirical data on frequencies with which children get lost makes it impossible to determine the extent to which errant children are a problem for forager parents. Clearly, the tendency of young children to wander was not sufficiently costly in ancestral environments for selection to have eliminated it: on balance, the benefits of exploratory forays (e.g., learning resource locations, observing animal behavior, building wayfinding skills, developing strength and stamina) must have outweighed the risks of being injured or killed while engaging in them. However, these studies also show that, in some environments, the risks associated with wandering are sufficiently high that parents take measures to reduce them (e.g.,

!Kung parents indoctrinating their children with the fear of getting lost). We propose that monster stories are one of these measures: these stories may activate threat-detection modules specific to the dangers of human and non-human predation. Periodic re-telling of such stories would recurrently activate these modules, bombarding them with the message that the threats of human and non-human predation loom large in their surroundings. This in turn might provoke re-calibration of mechanisms that gage environmental danger levels, boosting assessments of threat and, consequently, increasing aversion to exploratory behavior.

III. The Problem of Errant Children: Warfare

Compared with life as a citizen of the modern industrialized state, life as a hunter-gatherer involves relatively frequent contact with animals that can bite, crush, gore, kick, scratch, and/or sting. Children are particularly vulnerable to animal attack due to their small size, slow speed, and lack of experience. In modern environments, tragic accidents periodically remind us of the vulnerability of young children to predation: in February 2009, the remains of a missing five-year-old boy were found inside a crocodile in North Australia (www.dailymail.co.uk/news/worldnews/article-1148502/Pictured-The-boy-5-eaten-alive-crocodile-brother.html). The animal grabbed the unsupervised boy, who was accompanied only by his seven-year-old brother, when he followed his puppy into a mangrove swamp behind his house. Because Scalise Sugiyama (2004, 2006) has previously discussed the theme of animal predation in folklore, we will focus here on the second adaptive problem evoked by the monster figure: human predation.

Attachment behavior in infants is believed to be an evolved defense against not only animal (Bowlby 1972) but also human predation (Dickemann 1984; van Schaik & Dunbar 1990; Hrdy 1999). Sadly, humans can and do maim, torture, rape, enslave, kill, and even eat other humans. Many of these behaviors occur in the context of feuding and warfare, and primatological (Goodall 1986; Nishida et al.1985; Wrangham 1999), archaeological (Martin & Frayer 1997), and ethnographic evidence (Chagnon 1997; Chagnon & Hames 1979; Ember & Ember 1997; Wadley 2003a, b) indicate that coalitional aggression may have been a recurrent feature of ancestral human environments. The practice of trophy-taking (the taking of body parts in the course of battle) is widespread across cultures (including foraging peoples; Chacon & Dye 2007), and evidence of cannibalism is widespread as well (e.g., Villa 1992; White 1992; Turner 1993; Askenasy 1994; Turner & Turner 1995; Aguadé & Lory 1997; Arsuaga et al. 1997; Defleur et al. 1999; Kantner 1999; De Gusta 2000; Marlar et al. 2000; Petrinovich 2000).

In forager and other small-scale societies, the surprise attack is favored (LeBlanc 2003). A common tactic is to attack at dawn when people are still asleep or when they leave camp to relieve themselves (e.g., Burch 1974; Chagnon 1997). Significantly (with regard to the problem of errant children), another method is to attack people when they are alone or in small groups away from the comparative safety of camp. The Dusun of North Borneo are a case in point: “After the first raid and counterraid full-scale fighting between large war parties becomes difficult because of the preparations on both sides for defense. Attacks then tend to be made by war parties on older women gathering food alone in the jungle, a solitary hunter, or children playing at the edge of a village” (Rhys Williams 1965:67).

As this last example indicates, children are not necessarily spared in these conflicts, and may be abducted, enslaved, tortured, or killed. Chagnon describes a raid in which a Yanomamö headman was killed and his ten-year-old son abducted. The boy was later shot by a man who couldn't stand to see the boy persecuted and tormented by the other children (1997:189). Biocca's (1971) account of a Yanomamö raid describes the systematic killing of child captives: "Then the men began to kill the children; little ones, bigger ones, they killed many of them. They tried to run away, but they caught them, and threw them on the ground, and struck them with blows which went through their bodies and rooted them to the ground. Taking the smallest by the feet, they beat them against the trees and rocks." According to Burch (1974), Inuit groups sought to annihilate their enemies, including women and children. Among the forest-dwelling Ache, "Dozens of men, women and children were shot by Paraguayans who raided their camps to capture slaves or in retaliation for the theft of a cow or horse" (Hill & Hurtado 1996:165). In all Ache age groups except unweaned children, most deaths (including individuals who were captured and never seen again) were caused by raids and warfare: "Only one of the individuals captured alive was over fifteen years of age, and very few of those captured are known to have survived. Among infants and children, being captured accounted for about one-fourth of all 'deaths' to both sexes. Individuals in all age-sex categories were shot and killed by non-Ache enemies" (Hill & Hurtado 1996:163). Among the Dusun of Borneo, raiders took women and children captive and also took heads and hands as trophies. An analysis of 35 trophy skulls at the village of Sensuron indicated that "much recent head-hunting warfare was directed against the aged, adolescents, and females; at least half of the skulls were female, the majority being either young or very old, while

some 10 percent of the remainder were adolescent boys” (Rhys Williams 1965:67). The present-day Mikea of Madagascar are the descendants of people who, over the last four centuries, escaped into the forest “to resist tribute demands and threats of slavery and livestock loss” or “to avoid interpersonal disputes and accusations of witchcraft” or “as an alternative to French colonial policies of forced relocation, taxation, and mandatory labor” (Tucker & Young 2005:152). Tellingly, Mikea children fear “encounters with *oloraty*, ‘bad people,’ including cattle thieves, evil sorcerers, brain stealers, and *vazaha*, a term referring collectively to foreigners, white people, policemen, military, gendarmes, and other representatives of authority” (Tucker & Young 2005:164). Mikea children also fear encounters with monsters, but whether this fear is related to their fear of thieves and outsiders, Tucker and Young do not say.

The archaeological and historical records also attest to the vulnerability of children in warfare. For example, in a survey of Anasazi (AD 700 – 1700) skeletal remains exhibiting severe perimortem trauma, the remains of children were present at 21 out of 29 (72%) sites, and the remains of adolescents were present at 19 out of 29 (66%) sites (Kantner 1999). At the Saunaktuk site (AD 1370±57) in the Mackenzie River Delta, archaeologists have found the remains of women and children who appear to have been massacred, dismembered, and eaten (Walker 1990; Melbye & Fairgrieve 1994). Historical accounts attribute these actions to the Athapaskan Indians, who attacked the village while the men were away. Hints of this and other conflicts can be seen in the oral traditions of the inheritors of these enmities. For example, the story of “Kumagdlat and Asalok” describes an attack that, according to Rink, is rooted in historical fact, referring to “conflicts and meetings of the Eskimo with the Indians, which in recent times have still

taken place on the banks of the Mackenzie and Coppermine Rivers” (1875/1997:109). In this story, three Inuit cousins (Kumagdlat, Asalok, and Merak) attack a settlement of Indians who are rumored to be rich and have knives in abundance. After killing all the adults, the cousins dispatch the children (whom they kill by piercing them through the ears), sparing only one boy and one girl, and then proceed to loot the camp (Rink 1875/1997:114). Farther south, along the Pacific Northwest Coast, slavery was practiced by several tribes; these slaves were largely war captives, and both adults and children were taken (McDowell 1997). Tribes of the American Southeast also killed children in warfare: in an address to the Choctaw and in talks with other tribes, Shawnee chief Tecumseh declared that “the Indian custom of killing women and children in war” should be abandoned (Halbert & Ball 1969:44).

Although entire camps or villages might be massacred, as at the Saunaktuk site, the Crow Creek site on the upper Missouri, and the Cave 7 site in southeastern Utah (LeBlanc & Register 2003), children were sometimes able to save themselves. For example, Rink recorded an Inuit war story about two brothers who elude their attackers by hiding. In this tale, which “seems to have its origin in historical facts” (Rink 1875/1997:132), two orphaned brothers are fetching water by moonlight when they see a premonition: the older brother, Kunuk, looks into the water and sees a group of armed men advancing toward them. The boys run back to camp to warn the people, but no one believes them, so they hide their little sister in a pile of chips next to the window, and hide themselves in the rafters beneath the roof of the house-passage: “they were keeping hold of one beam with their hands, and supported their feet against the next, and thus lay

at full length, with their faces turned downwards” (Rink 1875/1997:133). The boys thus witness the entire massacre:

Presently a large man with a spear made his way through the entrance; after him another one appeared; and all told, they counted seven, who came rushing into the house. But as soon as they got inside a fearful cry was heard from those who were put to death by them. While they were still lingering inside Kunuk’s brother was losing strength and was nearly giving way, when the aggressors came storming out, fighting about, right and left, and flinging their spears everywhere, and likewise into the heap of chips, where their little sister was lying. When the last of them had disappeared the younger boy fell to the ground, and Kunuk after him. . . . on entering the house the floor was all covered with blood, every one of the inmates having been killed, besides one of the assailants. (Rink 1875/1997:133-134).

Although their sister is killed, the boys survive. After the attack, they set about making themselves into more formidable opponents: they begin boxing and lifting large stones to build their fighting skill and strength, eventually becoming so accomplished that they can kill a bear with their bare hands. The boys are later adopted by an older couple who encourage them “never to forget their enemies, but always to be exercising themselves in order to strengthen their limbs” (Rink 1875/1997:135). The moral of the story is clear: be prepared. As we will see in the next section, stories about monsters might serve as a means of encouraging children to exercise vigilance and caution.

IV. Monster Stories

According to Turnbull, the Mbuti use stories about monsters to dissuade their neighbors from venturing into their territory: “It was an almost universal belief among all villagers . . . that the forest was filled with dangerous and malevolent spirits, to whom the Mbuti were closely allied. As a matter of fact, it was the Mbuti themselves who were largely responsible for these beliefs, always telling the villagers about the grotesque monsters that even they had to contend with in the forest. It was one of their many techniques for making sure that the villagers stayed outside the forest world” (Turnbull 1983:31). In a similar vein, a Yanomamö headman used the specter of *raharas* (water monsters) to try to talk Chagnon out of visiting a rival village (Chagnon 1997). In this section, we present ethnographic evidence that parents use monster stories to discourage children from wandering off, and that monster stories underscore the dangers of wandering away from camp.

Although the evidence that parents tell monster stories to children to frighten them into obedience is anecdotal, it has been reported by numerous anthropologists and folklorists from a variety of small-scale societies occupying a range of habitats. In some cases, informants report only that adults tell these stories in order to make children “behave,” without reference to specific infractions. For example, Smith reports that the Aboriginal story of the Yara-ma-yha-who was “one of the stories told to naughty children to teach them that if they do not behave the Yara-ma-yha-who will come and take them and make them become one of themselves” (1930:342). This creature is described as a little man about four feet tall, with a huge head, mouth, throat and stomach. He has no

teeth, so he swallows humans whole. First, however, he drains their blood until there is just enough left to keep them alive “while he walks around and gets an appetite” (1930:343). Similarly, the Bimin-Kuskusmin of Papua New Guinea tell of animal-man monsters who “are said to eat their firstborn children at whim and even to gnaw on their own limbs. . . . Unwary travelers who fall prey to their lust for blood and flesh may be eaten alive, for they are known to delight in torture” (Poole 1983:12). These monsters are “portrayed largely in tales that are told at night around the flickering hearth fires to frighten unruly children” (Poole 1983:12).

When specific reference is made to the desired end of these stories, it is typically to prevent children from wandering off. For example, the Yiwara tell of *mamus*—cannibalistic spirits (ghosts) that attack humans in the night. They can only be seen by dogs and sorcerers. Their presence is indicated by a low whistling sound in the bush. According to Gould (1969), adults use fear of *mamus* to keep children away from sacred areas and to keep them from wandering away from camp at night. With their predilection for attacking “unwary travelers” (Poole 1983:12), the Bimin-Kuskusmin cannibal monsters, too, reference the dangers of leaving the village. Among the Ahtna, “Unruly children were threatened by the Owl, by huge monsters . . . underground or in deep lakes, by Bush Indians who kidnap those who stray, or by . . . an abductor of naughty children” (de Laguna & McClellan 1981:657). Rhys Williams (1965) reports that, among the Dusun, children are considered to be “incurable wanderers” (87), and “are threatened constantly by parents with being eaten alive, carried off, injured, or damaged by disease givers, souls of the dead, or animals of the jungle” (88). Although Rhys Williams does not mention the use of narrative in this context, he argues that these threats are reflected

Errant Children/Scalise Sugiyama and Sugiyama

in the lullabies sung to babies, of which he provides two examples. The first references human predation in the form of “souls of the dead,” who are human beings condemned to “an eternity of wandering and cannibalism because of evil deeds [done] while alive” (1965:18):

Sleep, sleep, baby,
There comes the *rAgun* (soul of the dead)
He carries a big stick,
He carries a big knife,
Sleep, Sleep, baby,
He comes to beat you!

The second references animal predation:

Bounce, Bounce, baby
There is a hawk,
Flying, looking for prey!
There is the hawk, looking for his prey!
He searches for something to snatch up in his claws,
Come here, hawk, and snatch up this baby! (1965:88)

The dangers referenced in these songs appear to be rooted in genuine parental fears:

Dusun mothers typically take their youngest children with them when they go to work in

the field or garden, and leave their older children at home in the care of an adolescent or elderly relative. Significantly, when no babysitter is available, “it is not uncommon for a mother to lock her young children in the household while she spends the day at work” (1965:81).

Silencing crying children is also mentioned as a motive for telling monster stories. For example, among the White Mountain Apache (who tell stories about a cannibal figure named Big Owl), “Owl will carry you off” is a common threat to silence crying children” (Goodwin 1939:15). The Iglulik, Greenland, and Netsilik Eskimos tell of an ogress who attacks humans and puts them in her huge amaut, from which none can escape without help. In some versions, she specifically targets children: in a Netsilik variant, for example, she is described as a “giant woman who steals children” (Rasmussen 1931:248; see also Rasmussen 1930:110). This ogress is so feared that the “naughtiest children *can be made to stop crying* at the mere mention of her name” (Rasmussen 1929:212, emphasis added). Like wandering away from camp, crying increases vulnerability to predation, particularly if one is trying to hide from attackers (as in the story of the two orphan boys cited above).

Because peasants often live at the periphery of woods, mountains, or jungle, their children are vulnerable to the many of the same threats that forager children are: getting lost, exposure, injury, accident, and predation. Tellingly, peasant folklore is replete with monsters and other agents that prey on lone wanderers (Scalise Sugiyama 2004). A classic example is the *nøkk* or water sprite (also called *grim*), which appears throughout Scandinavian folklore, and lives waterfalls, rivers, and lakes. The *nøkk* takes the shape of a horse in order to lure people, especially children, to a watery death by tempting them to

ride it and then jumping into a lake (Christiansen 1964:xxxii; Kvideland & Sehmsdorf 1988:252, 257). Another common motif in Scandinavian folklore is being “taken into the mountain” by the *huldre* (invisible) folk, which refers to getting lost in the mountains or woods. Tellingly, this expression is also used to refer to a sudden psychological change in a person caused by “a traumatic experience such as getting lost on a mountain or in a forest” (Kvideland & Sehmsdorf 1988:212). Presumably, if getting lost did not have potentially dangerous consequences, it would not be considered a traumatic experience.

Tellingly, one message that reverberates through monster stories is that there is safety in numbers: people are more likely to be attacked when they are away from camp, and a camp is more likely to be attacked when a large subset of its members--especially the adult males--is away. For example, the Bella Bella tell of Cannibal-of-the-North-End-of-the-World, who eats three brothers and their dogs as they are hunting in the mountains (Boas 1932:155). In a similar vein, the Salishan tell a story about a cannibal who uses an elk decoy to lure his victims into arrow-range: while the hunter is stalking the elk, the cannibal shoots and eats him (Teit 1917:9). The Caribou Eskimo tell of the *kukilialuit*, trolls with sharp claws: “When they come upon human beings, they fall upon them and eat them up, picking the meat off their bones with their sharp claws. Many people who have disappeared and been carried off have been attacked and eaten up by these trolls with the long claws” (Rasmussen 1930:114). The Pueblo peoples of Taos tell of a hairy giant that attacks and eats the people, one or two at a time:

Long ago, when the pueblos were first where they are now, everything was wild.

They were always on the lookout, they never made fire at night, they did all their

cooking in the daytime. They went out in the daytime for firewood. Someone noticed that some people were missing, one or two every day. They wondered why. They did not know what became of them. The old men kept watch to see if it was enemies hiding. (Parsons 1940:13)

The Kiowa tell a similar tale about the *k'ozapot'o* or mountain ogres that may reflect the same threat. In this story, Sendeh “was going along anywhere. Some people began to run after him. . . . They were the *k'ozapot'o*, mountain *zapot'o* (ogres). . . . They were hairy all over. They had big eyes and big mouths. . . . They were cannibals” (Parsons 1929:40).

V. Discussion

In this essay we have discussed one possible factor contributing to the ubiquity of the monster story. In arguing that the monster figure evokes the adaptive problems of human and non-human animal predation, we are not suggesting that it has no other resonances or referents, or that it is only used to frighten children. Nor do we deny that specific monster characters or types (e.g., Big Owl, the Cyclops, Grendel) embody the history, world-view, and regional particularities of their parent cultures. Narrative is inherently polysemous: its ability to transmit many messages simultaneously may account for its mass appeal and accessibility, both within and across cultures.

The argument that adults use monster stories to frighten children into obedience does not preclude the possibility that (at least some) adults believe in the existence of monsters themselves: cross-culturally, adult humans believe in a variety of supernatural

and/or hybrid agents (Boyer 2001). It is also true, however, that there is a lot of variation in credulity both across and within cultures. Western society is a case in point: some people believe in ghosts, guardian angels, and/or extraterrestrials; others do not. Some forager parents may truly believe in the monsters they describe to their children, while others may simply participate in a fiction that serves their interests. This brings us back to our original question: given that there is no exact real-world correlate of the monster, what is the impetus for this concept? Fear of monsters cannot be exploited unless at least some people accept the possibility of their existence.

Asking what would cause people to believe in the existence of part-human, part-animal predators is similar to asking what would cause people to believe in the existence of a talking tree (part human, part plant) or a weeping stone (part sentient being, part inanimate object). Boyer (2001) argues that supernatural entities are conceptually compelling because they violate one (or a few) of the assumptions of their ontological domain, while conforming to the rest. In other words, aside from one or two anomalous features, supernatural entities are representations of real-world agents, objects or phenomena. Monsters follow this formula in that they tend to have one or two anomalous, animal-like characteristics, but an otherwise human anatomy and psychology. These conceptual hybrids beg the question of why people believe that such violations of ontological domain can occur. These concepts ultimately must be rooted in conclusions (however farfetched) drawn from real-world observations. What real-world phenomenon would cause people to believe in the existence of humans with animal characteristics?

We believe that one likely source of the monster concept is warfare and its concomitant horrors: torture, trophy taking, corpse mutilation, and cannibalism.

Cannibalism appears to have occurred in a number of forager and other small-scale societies (Oswalt 1967; Melbye & Fairgrieve 1994; Hearne 1958; Burch 2005), and torture is known to have been practiced by the Northern Iroquoian tribes (Willimason 2007) and Inuit (Burch 2005). Trophy-taking occurred in a wide range of cultures, from the Sub-Arctic and Arctic (Maschner & Reedy-Maschner 2007), to the American Plains and Southwest (Parsons 1939; LeBlanc 1999; Owsley et al. 2007; Schaafsma 2007), the American Southeast (Jacobi 2007), the Amazon Basin (Chacon 2007), and coastal Peru (LeBlanc 2003). Mutilation of enemy corpses was practiced from the Arctic (Burch 2005) to the Plains (Quaife 1950) and the Southwest (LeBlanc 2003). Kantner (1999) argues that cannibalism was used strategically by some groups to inspire terror in their enemies. Torture, trophy taking, and corpse mutilation are likely to have had the same effect. Consider the following description of techniques used by the Crow and other Plains peoples:

Eyes torn out and laid on rocks; noses cut off; ears cut off; chins hewn off; teeth chopped out; joints of fingers; brains taken out . . . hands cut off; feet cut off; arms taken out of sockets . . . eyes, ears, mouth, and arms pierced with spearheads, sticks, and arrows; ribs slashed to separation with knives; skulls severed in every form from chin to crown. (Quaife 1950:335)

The same practices are evident in prehistoric Arctic and Sub-Arctic North America, where raiding was a regular feature of life (Oswalt 1967; Hearne 1958; Burch 2005; Maschner & Reedy-Maschner 2007). Nowhere and no one was safe: men were attacked

when they went out on hunting trips (Hearne 1958), and villages were attacked while the men were away (Burch 2005). For example, in the course of hostilities between the Kanjigmiut of the Buckland River valley and the Kiitaagmiut of the lower Selawik River valley, the Kanjigmiut avenged the gang-rape and torture of one of their women by killing two elderly Kiitaagmiut women: “According to the Buckland version . . . they cut the bodies into strips, and hung them on a drying rack, like so many pieces of fish or caribou meat. According to the Selawik version, they inserted a spear into each of their rectums, elevated their bodies over a fire, and roasted them to death” (Burch 2005:113).

It is easy to see how stories about monsters could grow out of such practices. Regardless of whether a group engaged in such practices itself, these behaviors would have appeared “monstrous” when performed by its enemies: extreme in viciousness, excessive in appetite, and terrifying in force. It would not be illogical to attribute the strength and ferocity of powerful beasts (e.g., bears, jaguars, wolves) to people capable of committing such acts, or to conclude that they were part animal. Ethnographic evidence suggests that at least some foraging peoples characterize their enemies or potential enemies in this manner. According to Tonkinson, for example, the Mardudjara traditionally divided their social world in to three general categories--kin, strangers, and “distant people”--the latter of whom are people who “are never encountered and who are thought to possess many less than human characteristics and behaviors, such as long teeth, cannibalistic habits, huge sexual organs, and depravities to match” (1978:44).

Between-group aggression is probably not the only source of the monster concept, but it is a plausible one, and goes a long way toward explaining the ubiquity of this motif. What we hope to have shown here is that, as evidence of the thoughts and worries elicited

by occupation of the foraging niche, and of the kinds of information hunter-gatherers share with each other, patterns in the content of forager folklore can help illuminate the design and uses of cultural transmission. The oral traditions of foraging peoples are the Laetoli footprints of narrative theory: it is up to us to trace their logical implications.

REFERENCES

- Aguadé, C. & Lory, J. 1997. Evidence for human sacrifice, bone modification and cannibalism in ancient México. In D. Martin & D. Frayer (Eds.), *Troubled Times: Violence and Warfare in the Past* (pp. 217-239). Amsterdam: Gordon & Breach.
- Arsuaga, J. L., Martinez, I., Gracia, A., Carretero, J. M., Lorenzo, C., Garcia, N., & Ortega, A. I. 1997. Sima de los Huesos (Sierra de Atapuerca, Spain). The Site. *Journal of Human Evolution*, 33, 109-127.
- Askenasy, Hans. 1994. *Cannibalism: From Sacrifice to Survival*. Amherst, New York: Prometheus Books.
- Baron-Cohen, S. 1995. *Mindblindness*. Cambridge, MA: MIT Press.
- Barrett, H. Clark. 2005. Adaptations to predators and prey. In D. Buss (Ed.), *Handbook of Evolutionary Psychology* (pp.200-223). New York: John Wiley and Sons.
- Biesele, M. 1993. *Women Like Meat*. Bloomington: Indiana University Press.

Errant Children/Scalise Sugiyama and Sugiyama

Biocca, E. 1971. *The Yanoama: The Narrative of a White Girl Kidnapped by Amazonian Indians*. New York: Dutton.

Bird, D. & Bliege Bird, R. 2005. Martu children's hunting strategies in the Western Desert, Australia. In B. Hewlett & M. Lamb (Eds.), *Hunter-Gatherer Childhoods* (pp. 129-146). Piscataway, NJ: Aldine Transaction.

Blurton Jones, N. & Konner, M. eds. 1976. *Kalahari Hunter-Gatherers*. Cambridge, MA: Harvard University Press.

Blurton Jones, N. 1993. The lives of hunter-gatherer children: Effects of parental behavior and parental reproductive strategy. In M. Pereira & L. Fairbanks (Eds.), *Juvenile Primates: Life History, Development, and Behavior* (pp. 309-326). New York: Oxford University Press.

Blurton-Jones, N., Hawkes, K. & Draper, P. 1994. Differences between Hadza and !Kung children's work: Original affluence or practical reason? In E. S. Burch (Ed.), *Key Issues in Hunter-Gatherer Research* (pp. 189-215). Oxford: Berg.

Boas, Franz. 1932. *Bella Bella Tales*. New York: American Folk-Lore Society.

Errant Children/Scalise Sugiyama and Sugiyama

Bogoras, Waldemar. 1918. Tales of Yukaghir, Lamut, and Russianized Natives of Eastern Siberia. In Clark Wissler (Ed.), *Anthropological Papers of the American Museum of Natural History, Vol. XX* (pp. 1-148). New York: American Museum Press.

Bowlby, John. 1972. *Attachment. Attachment and Loss, Vol. 1*. London: Hogarth Press.

Boyer, Pascal. 2001. *Religion Explained*. New York: Basic Books.

Burch, E. S. 1974. Eskimo warfare in northwest Alaska. *Anthropological Papers of the University of Alaska, 16*, 1-14.

Burch, E. S. 2005. *Alliance and conflict: The world system of the Inūpiak Eskimos*. Lincoln: University of Nebraska Press.

Butterworth, G. E. & Cochran, E. C. 1980. Towards a mechanism of joint attention in human infancy. *International Journal of Behavioural Development, 3*, 253-272.

Byrne, Richard. 1995. *The Thinking Ape*. Oxford: Oxford UP.

Carpenter, M., Nagell, K., & Tomasello, M. 1998. Social cognition, joint attention, and communicative competence from 9 to 15 months of age. *Monographs of the Society for Research in Child Development, 63*.

Errant Children/Scalise Sugiyama and Sugiyama

Chacon, R. & Dye, D. eds. 2007. *The Taking and Displaying of Human Body Parts as Trophies by Amerindians*. New York: Springer.

Chacon, R. 2007. Seeking the headhunter's power: The quest for arutam among the Achuar of the Ecuadorian Amazon and the development of ranked societies. In R. Chacon & D. Dye (Eds.), *The Taking and Displaying of Human Body Parts as Trophies by Amerindians* (pp. 523-546). New York: Springer.

Chagnon, Napoleon. 1997. *Yanomamo*. 5th ed. New York: Harcourt.

Chagnon, N. & Hames, R. 1979. Protein deficiency and tribal warfare in Amazonia: New data. *Science*, 203, 10-15.

Christiansen, Reidar ed. 1964. *Folktales of Norway*. Chicago: University of Chicago Press.

Crittenden, A. & Marlowe, F. 2008. Allomaternal care among the Hadza of Tanzania. *Human Nature*, 19, 249-262.

Daly, M. & Wilson, M. 1998. *The Truth About Cinderella*. New Haven: Yale University Press.

Dawkins, R. 2006. *The God Delusion*. Boston: Houghton Mifflin.

Errant Children/Scalise Sugiyama and Sugiyama

Defleur, A., White, T., Valensi, P., Slimak, L., & Crégut-Bonnoure, É. 1999. Neanderthal cannibalism at Moula-Guercy, Ardèche, France. *Science*, 286, 128-131.

De Gusta 2000

de Laguna, Frederica & McClellan, Catharine. 1981. In June Helm (Ed.), *Ahtna. Handbook of North American Indians, Vol. 6* (pp. 641-663). Washington, D.C.: Smithsonian.

Dickemann, Mildred. 1984. Concepts and classification in the study of human infanticide: Sectional introduction and some cautionary notes. In G. Hausfater & S. Blaffer Hrdy (Eds.), *Infanticide: Comparative and Evolutionary Perspectives* (pp. 427-437). Hawthorne, New York: Aldine.

Draper, P. 1976. Social and economic constraints on child life. In R. B. Lee & I. DeVore (Eds.), *Kalahari Hunter-Gatherers* (pp.199-217). Cambridge, MA: Harvard University Press.

Duntley, Joshua. 2005. Adaptations to dangers from humans. In D. Buss (Ed.), *Handbook of Evolutionary Psychology* (pp.224-249). New York: John Wiley and Sons.

Errant Children/Scalise Sugiyama and Sugiyama

Ember, Carol & Ember, Melvin. 1997. Violence in the ethnographic record: Results of cross-cultural research on war and aggression. In D. Martin & D. Frayer (Eds.), *Troubled Times: Violence and Warfare in the Past* (pp. 1-20). Amsterdam: Gordon & Breach.

Field, A. P., Argyris, N. G., & Knowles, K. A. 2001. Who's afraid of the big bad wolf: A prospective paradigm to test Rachman's indirect pathways in children. *Behaviour Research and Therapy*, 39, 1259-1276.

Field, A. P. & Davey, G. C. L. 2001. Conditioning models of childhood anxiety. In W. K. Silverman & P. A. Treffers (Eds.), *Anxiety disorders in children and adolescents: research, assessment and intervention* (pp. 187-211). Cambridge: Cambridge University Press.

Flinn, M. 1997. Culture and the evolution of social learning. *Evolution and Human Behavior*, 18, 23-67.

Goodall, Jane. 1986. *The Chimpanzees of Gombe: Patterns of Behavior*. Cambridge, MA: Harvard University Press.

Goodwin, G. 1939. *Myths and Tales of the White Mountain Apache*. Memoirs of the American Folk-Lore Society, Vol. XXXIII. New York: J. J. Augustin.

Gould, R. A. 1969. *Yiwara: Foragers of the Western Desert*. New York: Scribner.

Halbert, H. & Ball, T. 1969. *The Creek War of 1813 and 1814*. Southern Historical Publications No. 15. University: University of Alabama Press.

Hames, R. 1988. The allocation of parental care among the Ye'kwana. In L. Betzig, M. Borgerhoff Mulder, & P. Turke (Eds.), *Human Reproductive Behavior* (pp. 237-251). Cambridge: Cambridge University Press.

Hearne, S. 1958. In R. Glover (Ed.), *A Journey from Prince of Wales's Fort in Hudson's Bay to the Northern Ocean, 1769-1772*. Toronto: McMillan.

Heerwagen, J. H. & Orians, G. H. 2002. The ecological world of children. In P. H. Kahn & S. R. Kellert (Eds.), *Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations* (pp. 29-63). Cambridge: MIT Press.

Hewlett, B. & Cavalli-Sforza, L. 1986. Cultural transmission among Aka Pygmies. *American Anthropologist*, 88, 922-934.

Hewlett, B., van de Koppel & van de Koppel. 1986. Causes of death among Aka pygmies of the Central African Republic. In L. Cavalli-Sforza (Ed.), *African Pygmies* (pp. 45-63). Orlando, FL: Academic Press.

Hill, K. & Hurtado, M. 1996. *Ache Life History: The Ecology and Demography of a Foraging People*. Hawthorne, NY: Aldine de Gruyter.

Hrdy, Sarah Blaffer. 1999. *Mother Nature: A History of Mothers, Infants, and Natural Selection*. New York: Pantheon Books.

Hurtado, M., Hill, K., Kaplan, H. & Hurtado, I. 1992. Trade-offs between female food acquisition and child care among Hiwi and Ache foragers. *Human Nature*, 3, 185-216.

Jacobi, K. 2007. Disabling the dead: Human trophy-taking in the prehistoric Southeast. In R. Chacon & D. Dye (Eds.), *The Taking and Displaying of Human Body Parts as Trophies by Amerindians* (pp. 299-338). New York: Springer.

Jones, David E. 2000. *An Instinct for Dragons*. New York: Routledge.

Kantner, J. 1999. Survival cannibalism or sociopolitical intimidation? Explaining perimortem mutilation in the American Southwest. *Human Nature*, 10, 1-50.

Kaplan, H. & Dove, H. 1987. Infant development among the Ache of Paraguay. *Developmental Psychology*, 23, 190-198.

Kluckhohn, C. 1959. Recurrent themes in myth and mythmaking. *Daedalus*, 88, 268-279.

Errant Children/Scalise Sugiyama and Sugiyama

Konner, Melvin J. 1976. Maternal care, infant behavior and development among the !Kung. In R. B. Lee & I. DeVore (Eds.), *Kalahari Hunter-Gatherers* (pp. 218-245). Cambridge: Harvard University Press.

Kvideland, Reimund & Sehmsdorf, Henning K. eds. 1988. *Scandinavian Folk Belief and Legend*. Minneapolis: University of Minnesota Press.

Laughlin, W. 1968. Hunting: An Integrating Biobehavior System and its Evolutionary Importance. In R. B. Lee & I. DeVore (Eds.), *Man the Hunter* (pp. 304-320). New York: Aldine.

LeBlanc, Steven. 1999. *Prehistoric Warfare in the American Southwest*. Salt Lake City: University of Utah Press.

LeBlanc, Steven & Register, Katherine. 2003. *Constant Battles: The Myth of the Peaceful, Noble Savage*. New York: St. Martin's Press.

Lee, Richard B. 1984. *The Dobe !Kung*. New York: Holt, Rinehart and Winston.

Leslie, A. M. 1994. ToMM, ToBy, and Agency: Core architecture and domain specificity. In L. Hirschfeld & S. Gelman (Eds.), *Mapping the Mind: Domain Specificity in Cognition and Culture* (pp. 119-148). Cambridge: Cambridge University Press.

Errant Children/Scalise Sugiyama and Sugiyama

Low, Bobbi S. 1998. The evolution of human life histories. In C. Crawford & D. L. Krebs (Eds.), *Handbook of Evolutionary Psychology: Ideas, Issues, and Applications* (pp. 131-161). Mahwah, NJ: Lawrence Erlbaum Associates.

Marlar et al., 2000

Marlowe, Frank. 2005. Who Tends Hadza Children? In B. S. Hewlett & M. E. Lamb (Eds.), *Hunter-Gatherer Childhoods* (pp.177-190). Piscataway, NJ: Aldine Transaction.

Martin, D. & Frayer, D. eds. 1997. *Troubled Times: Violence and Warfare in the Past*. Amsterdam: Gordon & Breach.

Maschner, H. & Reedy-Maschner, K. 2007. Heads, women, and the baubles of prestige: Trophies of war in the Arctic and Subarctic. In R. Chacon & D. Dye (Eds.), *The Taking and Displaying of Human Body Parts as Trophies by Amerindians* (pp. 32-43). New York: Springer.

McDowell, J. 1997. *Hamatsa: The Enigma of Cannibalism on the Pacific Northwest Coast*. Vancouver: Ronsdale Press.

Melbye, J. & Fairgrieve, S. 1994. A massacre and possible cannibalism in the Canadian Arctic: New evidence from the Saunaktuk site (NgTn-1). *Arctic Anthropology*, 31, 57-77.

Errant Children/Scalise Sugiyama and Sugiyama

Napanangka, Y. 1995. Kid left behind in camp. In J. Crugnale (Ed.), *Footprints Across Our Land*. (pp. 143-144). Broome, Western Australia: Magabala.

Nishida, T., Hiraiwa-Hasegawa, M., Hasegawa, T. & Takahata, Y. 1985. Group extinction and female transfer in wild chimpanzees in the Mahale National Park, Tanzania. *Z. Tierpsychol*, 67, 284-301.

Ohmagari, K. & Berkes, F. 1997. Transmission of indigenous knowledge and bush skills among the Western James Bay Cree women of Subarctic Canada. *Human Ecology*, 25, 197-222.

Onishi, K., Baillargeon, R. & Leslie, A. 2007. 15-month-old infants detect violations in pretend scenarios. *Acta Psychologica*, 124, 106-128.

Öst, L.-G. 1987. Age of onset in different phobias. *Journal of Abnormal Psychology*, 96, 223-229.

Oswalt, W. 1967. *Alaskan Eskimos*. San Francisco: Chandler.

Owsley, D. W., Bruwelheide, K. S., Burgess, L. E., & Billeck, W. T. 2007. Human finger and hand bone necklaces from the Plains and Great Basin. In R. Chacon & D. Dye (Eds.), *The Taking and Displaying of Human Body Parts as Trophies by Amerindians* (pp. 124-166). New York: Springer.

Errant Children/Scalise Sugiyama and Sugiyama

Parsons, Elsie Clews. 1929. *Kiowa Tales*. Memoirs of the American Folklore Society, Vol. XXII. New York: American Folk-Lore Society.

Parsons, Elsie Clews. 1939. *Pueblo Indian Religion, 2 vols*. Chicago: Chicago University Press.

Parsons, Elsie Clews. 1940. Taos Tales. *Memoirs of the American Folklore Society, Vol. XXXIV*. New York: J. J. Augustin.

Petrinovich, Lewis. 2000. *The Cannibal Within*. New York: Aldine de Gruyter.

Poole, Fitz John Porter. 1983. Cannibals, tricksters, and witches: Anthropophagic images among Bimin-Kuskusmin. In P. Brown & D. Tuzin (Eds.), *The Ethnography of Cannibalism* (pp. 6-32). Washington, D. C.: Society for Psychological Anthropology.

Quaife, Milo. 1950. *Absaroka, Home of the Crows*. Chicago: Lakeside Press.

Rasmussen, Knud. 1929. *Intellectual Culture of the Iglulik Eskimos. Report of the 5th Thule Expedition 1921-24, Vol. VII, no. 1*. Copenhagen: Gyldendalske Boghandel, Nordisk Forlag.

Errant Children/Scalise Sugiyama and Sugiyama

Rasmussen, Knud. 1930. *Observations on the Intellectual Culture of the Caribou Eskimos. Report of the 5th Thule Expedition 1921-24, Vol. VII, no. 2.* Copenhagen: Gyldendalske Boghandel, Nordisk Forlag.

Rasmussen, Knud. 1931. *The Netsilik Eskimos: Social Life and Spiritual Culture. Report of the 5th Thule Expedition 1921-24, Vol. VIII, no. 1-2.* Copenhagen: Gyldendalske Boghandel, Nordisk Forlag.

Rink, Hinrich. 1875. *Tales and Traditions of the Eskimo.* London: Blackwood and Sons. Republished in 1997 by Dover Publications: Mineola, New York.

Rhys Williams, Thomas. 1965. *The Dusun: A North Borneo Society.* New York: Holt, Rinehart and Winston.

Rozzi, F., d'Errico, F., Vanhaeren, M., Grootes, P., Kerautret, B. & Dujardin, V. 2009. Cutmarked human remains bearing Neanderthal features and modern human remains associated with the Aurignacian at Les Rois. *Journal of Anthropological Sciences*, 87, 153-185.

Scaife, M. & Bruner, J. 1975. The capacity for joint visual attention in the infant. *Nature*, 253, 265-266.

Errant Children/Scalise Sugiyama and Sugiyama

Scalise Sugiyama, M. 1996. On the origins of narrative: Storyteller bias as a fitness-enhancing strategy. *Human Nature*, 7, 403-25.

Scalise Sugiyama, M. 2001. Food, foragers, and folklore: The role of narrative in human subsistence. *Evolution and Human Behavior*, 22, 221-240.

Scalise Sugiyama, M. 2004. Predation, Narration, and Adaptation: “Little Red Riding Hood” Revisited. *Interdisciplinary Literary Studies*, 5, 108-127.

Scalise Sugiyama, M. 2006. Lions and tigers and bears: Predators as a folklore universal. In H. Friedrich, F. Jannidis, U. Klein, K. Mellmann, S. Metzger & M. Willems (Eds.), *Anthropology and Social History: Heuristics in the Study of Literature* (pp. 319-331). Paderborn: Mentis.

Scalise Sugiyama, Michelle. 2008. Narrative as Social Mapping--Case Study: The Trickster Genre and the Free Rider Problem. *Ometeca*, XII, 24-42.

Scalise Sugiyama, Michelle & Sugiyama, Lawrence. In press. A frugal (re)past: Use of oral tradition to buffer foraging risk. In Anja Müller-Wood & Katja Mellmann (Eds.), *Studies in the Literary Imagination*.

Scalise Sugiyama, Michelle & Sugiyama, Lawrence. Under revision. Humanized topography: Storytelling as a wayfinding strategy. *American Anthropologist*.

Errant Children/Scalise Sugiyama and Sugiyama

Scalise Sugiyama, Michelle & Sugiyama, Lawrence. In preparation. War stories: A survey of warfare methods and tactics described in forager oral traditions. In L. Sugiyama, M. Scalise Sugiyama, D. Kennett & F. White (Eds.), *Warfare in Human Evolution: An Interdisciplinary Perspective*.

Schaafsma, Polly. 2007. Head trophies and scalping: Images in Southwest rock art. In R. Chacon & D. Dye (Eds.), *The Taking and Displaying of Human Body Parts as Trophies by Amerindians* (pp. 90-123). New York: Springer.

Smith, William Ramsay. 1930. *Aborigine Myths and Legends*. London: George G. Harrap.

Teit, James A. 1917. *Folk-tales of Salishan and Sahaptin Tribes*. Lancaster, PA: American Folk-lore Society.

Thompson, S. (1957). *Motif Index of Folk Literature*. Bloomington: Indiana UP.

Tomasello, M. 1995. Joint attention as social cognition, In C. Moore & P. Dunham (Eds.), *Joint Attention: Its Origins and Role in Development*. Hillsdale, NJ: Erlbaum.

Tomasello, M. 1999. *Cultural Origins of Human Cognition*. Harvard: Harvard University Press.

Tonkinson, R. 1978. *The Mardudjara Aborigines: Living the Dream in Australia's Desert*. New York: Holt, Rinehart & Winston.

Tooby, John & Cosmides, Leda. 1990. The past explains the present: Emotional adaptations and the structure of ancestral environments. *Ethology and Sociobiology*, 11, 375-424.

Tooby, John & Cosmides, Leda. 1992. The psychological foundations of culture. In J. Barkow, L. Cosmides & J. Tooby (Eds.), *The Adapted Mind* (pp. 19-136). New York: Oxford University Press.

Tooby, John & Cosmides, Leda. 2001. Does beauty build adapted minds? Toward an evolutionary theory of aesthetics, fiction and the arts. *Substance*, 94/95, 6-27.

Tooby, J. & DeVore, I. 1987. The reconstruction of hominid behavioral evolution through strategic modeling. In W. G. Kinzey (Ed.), *The Evolution of Human Behavior: Primate Models* (pp. 183-237). Albany: SUNY Press.

Tucker, B. & Young, A. 2005. Growing up Mikea: Children's time allocation and tuber foraging in southwestern Madagascar. In B. Hewlett & M. Lamb (Eds.), *Hunter-Gatherer Childhoods* (pp. 147-171). Piscataway, NJ: Aldine Transaction.

Errant Children/Scalise Sugiyama and Sugiyama

Turnbull, Colin. 1983. *The Mbuti Pygmies: Change and Adaptation*. New York: Holt, Rinehart and Winston.

Turner, Christy. 1993. Cannibalism in Chaco Canyon: The charnel pit excavated in 1926 at Small House Ruin by Frank H. H. Roberts, Jr. *American Journal of Physical Anthropology*, 91, 421-439.

Turner, C. & Turner, J. 1995. Cannibalism in the prehistoric American Southwest: Occurrence, taphonomy, explanation, and suggestions for standardized world definition. *Anthropological Science*, 103, 1-22.

Van Schaik, Carel & Dunbar, Robin. 1990. The evolution of monogamy in large primates: A new hypothesis and some crucial tests. *Behaviour*, 115, 30-62.

Villa, Paola. 1992. Cannibalism in prehistoric Europe. *Evolutionary Anthropology*, 1, 93-104.

Wadley, Reed. 2003a. Lethal treachery and the imbalance of power in warfare and feuding. *Journal of Anthropological Research*, 59, 531-554.

Wadley, Reed. 2003b. Treachery and deceit: Parallels in tribal and terrorist warfare? *Studies in Conflict and Terrorism*, 26, 331-345.

Errant Children/Scalise Sugiyama and Sugiyama

Walker, Phillip. 1990. *Appendix 5: Tool Marks on Human Bone from Saunaktuk*.
Yellowknife, NWT: Prince of Wales Northern Heritage Center.

White, Tim D. 1992. *Prehistoric Cannibalism at Mancos*. Princeton: Princeton
University Press.

Williamson, Roy. 2007. "Otinontsiskiaj ondaon" ("The House of Cut-Off Heads"): The
history and archaeology of Northern Iroquoian trophy taking. In R. Chacon & D. Dye
(Eds.), *The Taking and Displaying of Human Body Parts as Trophies by Amerindians*
(pp. 190-221). New York: Springer.

Wrangham, R. 1999. Evolution of coalitionary killing. *American Journal of Physical
Anthropology*, 110, 1-30.