

# Hunter-Gatherers (Foragers)

Carol R. Ember

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## Abstract

The hunter-gatherer way of life is of major interest to anthropologists because dependence on wild food resources was the way humans acquired food for the vast stretch of human history. Cross-cultural researchers focus on studying patterns across societies and try to answer questions such as: What are recent hunter-gatherers generally like? How do they differ from food producers? How do hunter-gatherer societies vary and what may explain their variability? In this revised summary, we focus on what cross-cultural researchers have found about hunter-gatherer lifestyles.

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### Hunter-Gatherers (Foragers)

In the quest to explain human culture, anthropologists have paid a great deal of attention to recent hunter-gatherer, or forager, societies. A major reason for this focus has been the widely held belief that knowledge of hunter-gatherer societies could open a window into understanding early human cultures. After all, it is argued that for the vast stretch of human history, people lived by foraging for wild plants and animals. Indeed, not until about 10 thousand years ago did societies in Southwest Asia (the famous Fertile Crescent) begin to cultivate and domesticate plants and animals. Food production took over to such an extent that, in the past few hundred years, only an estimated 5 million people have subsisted by foraging. But while the numbers of recent hunter-gatherers may be relatively small, that does not mean that food production inevitably becomes the dominant economic strategy. Many such societies continue to forage ([Kramer and Greaves 2016, 15](#)).



Figure 1: Two San hunter-gatherers starting a fire with the friction created by rubbing a stick. Pictured in Deception Valley, Botswana, in 2005. Credit: Ian Sewell, CC BY-SA 2.5.

What can we infer about our distant ancestors by looking at a few well-known hunter-gatherer societies of recent times? To draw reliable inferences, we would need to believe that pockets of human society could exist unchanged over tens of thousands of years—that hunter-gatherers did not learn from experience, innovate, or adapt to changes in their natural and social environments. Even a cursory look at the [ethnographic record](#), however, reveals that many foraging cultures have changed substantially over time. Both in the archaeological record and more recently, hunter-gatherers have not only interacted with food producers

through trade and other exchanges, but many have also added cultivated crops to their economies that integrate well foraging wild resources (Kramer and Greaves 2016, 16). Moreover, recent hunter-gatherer cultures share some traits but are also quite different from one another.

How can we draw better inferences about the past? Cross-cultural researchers ask how and why hunter-gatherer societies vary. By understanding what conditions predict variation and also using the paleoanthropological record to make educated guesses about past conditions in a particular place, anthropologists may have a better chance of inferring what hunter-gatherers of the past were like (Hitchcock and Beisele 2000, 5; C. R. Ember 1978; F. W. Marlowe 2005).

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*Because cultures change through time, we cannot simply project ethnographic data from the present to the past*

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Below we summarize the cross-cultural literature in the last half century on hunter-gatherers. We generally restrict the discussion to statistically supported hypotheses based on samples of 10 or more cultures. We also discuss what is not yet known and questions that invite further research.

But before we turn to what we know from cross-cultural research, let us first talk briefly about the term “hunter-gatherers”. Hunter-gatherers has become the commonly-used term for people who depend largely on food collection or foraging for wild resources. Foraged wild resources are obtained by a variety of methods including gathering plants, collecting shellfish or other small fauna, hunting, scavenging, and fishing. This is in contrast to *food production*, where people rely on cultivating domesticated plants and breeding and raising domesticated animals for food. Unfortunately, the common term hunter-gatherers overrates the importance of hunting, downplays gathering, and ignores fishing. Yet, in one cross-cultural sample of hunter-gatherers (foragers), fishing appeared to be the most important activity in 38 percent of the societies, gathering was next at 30 percent, and hunting was the least important at 25 percent (C. R. Ember 1978). So, if we were being fair, such societies should be called “fisher-gatherer-hunters” or, more simply, “foragers.” But because the term “hunter-gatherers” is so widely used, we will use it here.

## What We Have Learned

We know about hunter-gatherers of recent times from anthropologists who have lived and worked with hunting and gathering groups. Some of the recent and frequently discussed cases are the Mbuti of the Ituri Forest (central Africa), the San of the Kalahari Desert (southern Africa) and the Copper Inuit of the Arctic (North America). These hunter-gatherers live in environments that are not conducive to agriculture.



Figure 2: Copper Inuit spearing salmon at Nulahugyuk Creek, Northwest Territories (Nunavut), 1916. Credit: Diamond Jenness, CC BY-SA 4.0.

### What Are Hunter-Gatherers of Recent Times Generally Like?

Based on the ethnographic data and cross-cultural comparisons, it is widely accepted ([Textor 1967](#); [Elman R. Service 1979](#); [Murdock and Provost 1973](#)) that recent hunter-gatherer societies generally

- are fully or semi-nomadic.
- live in small communities.
- have low population densities.
- do not have specialized political officials.
- have little wealth differentiation.
- are economically specialized only by age and gender.
- usually divide labor by gender, with women gathering wild plants and men fishing and almost always doing the hunting.
- have animistic religions—that is, believe that all natural things have intentionality or a vital force that can affect humans ([Peoples, Duda, and Marlowe 2016](#)).

### Complex Hunter-Gatherers

Not all hunter-gatherers conform to this list of traits. In fact, ethnographers of societies in the Pacific Coast of North America (largely northwestern U.S. and southwestern Canada) have given us a very different picture. These hunting-gathering societies, many of whom depended largely on fishing in their traditional economies, had larger communities, stationary villages, and social inequality. For a long time, many scholars thought of them as anomalous hunter-gatherers. But the picture is rapidly changing, largely as a result of archaeological research on the Upper Paleolithic period, prior to the emergence of agriculture. During this period hunter-gatherers in many areas of the globe appear to have developed inequality. Such complex hunter-gatherers were found in North America in the Interior Northwest Plateau, the Canadian Arctic, and the American Southeast, as well as in South America, the Caribbean, Japan, parts of Australia, northern Eurasia, and the Middle East ([Sassaman 2004, 228](#)). Archaeologists infer inequality from the presence of prestige items such as ornamental jewelry, or major differences in burials indicative of “rich” and “poor” individuals ([Hayden and Villeneuve 2011, 124–26](#)).

Complex hunter-gatherer societies, in contrast to simpler hunter-gatherers generally have the following traits ([Hayden and Villeneuve 2011, 334–35](#)):

- higher population densities (.2 to 10 people per square mile)
- fully sedentary or seasonally sedentary communities
- more complex sociopolitical organization primarily based on economic production
- significant socioeconomic differences
- some private ownership of resources and individual storage
- competitive displays and feasts
- elites try to control access to the supernatural
- while almost all hunter-gatherers have some kind of astronomical system, complex hunter gatherer groups generally exhibit some solstice observation or calendars.

### Hunter-Gatherer Childhoods

In a number of ways, childhood in hunter-gatherer societies appears to be more relaxed and easy-going compared with most food-producers. And, hunter-gatherer children appear to receive more warmth and affection from parents ([Rohner 1975, 97–105](#)).

Children in hunting and gathering societies generally have fewer chores assigned to them, such as subsistence work and baby-tending, compared with other



Figure 3: Tlingit Chief Charles Jones Shakes, pictured at home in Wrangell, Alaska, with an array of his possessions, ca. 1907. The Tlingit, a society dependent on fishing, exemplify the hierarchical structure of complex hunter-gatherer societies. Credit: University of Washington Libraries, Special Collections Division, permission granted.



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societies ([C. R. Ember and Cunnar 2015](#)). This means that kids have more time to play and explore their environment. But play does not mean that children are not learning about subsistence. In fact, much of their play involves playing at doing what adults do—boys often “hunt” with miniature bows and arrows and girls commonly “gather” and “cook.” In some hunter-gatherer groups, a lot of real work goes on with these activities. For example, Crittenden and colleagues ([2013](#)) report that among the Hadza of Tanzania, children 5 years of age and younger may be getting half their food on their own and by 6 years of age, 75 percent of their food. At 3, boys receive their first small bow and arrow and hunt for little animals. Perhaps to the amazement of many parents in North America, children as young as 4 build fires and cook meals on their own in their childhood groups. Kids in many hunter-gatherer groups do not do as much as the Hadza though, perhaps because other environments in other places are more dangerous. Dangers may include the presence of large predators, little water, or few recognizable features to help children find their way back home. Children also learn more directly from parents when they accompany them on trips—watching, participating when they can, and receiving explicit instruction. Hunting is one of the most difficult skills to learn and usually requires more direct instruction ([Lew-Levy et al. 2017](#)).



Figure 4: Hadza children on average hunt and gather about half their food; these children pictured above are cooking their meal. Credit: Alyssa Crittenden, permission granted.

Sharing with others is widely agreed to be an important hunter-gatherer value which parents begin to instill as early as infancy; later this teaching is taken up



by older children. In some groups, teaching to share begins as early as 6 weeks to 6 months (Lew-Levy et al. 2018).

Why are hunter-gatherer parents generally more affectionate? Ronald Rohner's (1975, 97–105) research suggests that warmth toward children is more likely when a mother has help in childcare. In the case of hunter-gatherers, fathers are generally much more engaged in infant care compared to food-producing fathers (F. Marlowe 2000; Hewlett and Macfarlan 2010). If fathers or other caretakers provide help, mothers may be less stressed (Rohner 1975). Fathers providing help is consistent with the fact that hunter-gatherer husbands and wives are more likely to engage in all kinds of activities together—eating together, working together, and sleeping together (Hewlett and Macfarlan 2010). Leisure time may also help explain more affection expressed toward children. Leisure time generally decreases with increasing societal complexity, and parents with little leisure time may be more irritable and short-tempered (C. R. Ember and Ember 2019, 60).

Of course, the fact that hunter-gatherer children have more time to play does not mean that parents are not active teachers. In a study of hunter-gatherer social learning, Garfield, Garfield and Hewlett (2016) report that teaching by parents or the older generation is the main form of learning about subsistence. Parents do more teaching in early childhood; other elders do more in later childhood. Teaching religious beliefs and practices is more common in adolescence and is often undertaken by the larger community.

Some research suggests that hunter-gatherers place different emphases on valued traits for children to acquire. Compared to food producers, hunter-gatherers are less likely to stress obedience and responsibility in child training and are more likely to stress independence, self-reliance, and achievement (Barry, Child, and Bacon (1959); Hendrix (1985) finds that high hunting is particularly associated with high achievement). *Why?* Barry, Child, and Bacon argue that child training is adaptive for different subsistence needs. Food producers depend on food accumulation for the long-run, and mistakes made in subsistence are very risky. In contrast, if hunter-gatherers make mistakes, the effects are short-lived, but gains in inventiveness could provide long-term benefits.

## Other Hunter-Gatherer Differences

- Marriages amongst hunter-gatherers are much more likely to be with unrelated individuals or distantly related kin compared with food producers (horticulturalists and agro-pastoralists) who more frequently marry closely-related individuals (Walker 2014; Walker and Bailey 2014). In general, hunter-gatherer groups have low levels of relatedness (Hill et al. 2011).

*Why?* It is theorized that nomadic populations may need a wider network of kin who might be able to provide residential options in times of fluctuating resources.

- The songs of hunter-gatherers are less wordy and characterized by more nonwords, repetition, and relaxed enunciation (Lomax 1968, 117–28).

*Why?* As discussed further in the [Arts module](#), Lomax theorizes that songs reflect the way people in a society work. In less complex societies people learn by observation and gradual instruction, and therefore explicit verbal instruction is not needed.

- Hunter-gatherer languages rarely have the sounds “F” and “V” in their languages contrasted with agriculturalists (Blasi et al. 2019).

*Why?* The researchers find evidence supporting the theory that “F” and “V” sounds emerged with the transition to agriculture, probably because of dietary changes to softer foods. Softer foods lead to the teeth formation most of us are used to—the top front teeth come down in front of the bottom front teeth when the mouth is closed. However, harder foods that hunter-gatherers traditionally ate prevented this overbite; the edge of the top teeth simply met with the edge of the bottom teeth. The “F” and “V” sounds are hard to produce without an overbite.

## Are Hunter-Gatherers More Peaceful Than Food Producers?

It is widely agreed that, compared to food producers, hunter-gatherers fight less (C. R. Ember and Ember 1997). But why? Perhaps it is because in contrast to food producers, hunter-gatherers are less prone to resource unpredictability, famines, and food shortages (Textor 1967; C. R. Ember and Ember 1997, 10; Berbesque et al. 2014). And resource unpredictability is a major predictor of increased warfare in the ethnographic record (C. R. Ember and Ember 1992, 1997).

But fighting less than food producers does not necessarily mean that hunter-gatherers are typically peaceful. For example, Ember (1978) reported that most hunter-gatherers engaged in warfare at least every two years. But another study found that warfare was rare or absent among most hunter-gatherers (Lenski and Lenski 1978; reported in Nolan 2003).

Why are there these contradictory answers to the question about the peacefulness of hunter-gatherers?

How we define terms will affect the outcome of a cross-cultural study. When asking if hunter-gatherers are typically peaceful, for example, researchers will get different results depending upon what they mean by *peaceful*, how they define *hunter-gatherers*, and whether they have excluded societies forced to stop fighting (that is, pacified) by colonial powers or national governments in their analyses.

Most researchers contrast war and peace. If the researcher views peace as



Figure 5: All ages happily gathered together, San men, women, and children, pictured in Botswana in 2011. Credit: AinoTuominen, Pixabay license.

the absence of war, then the answer to whether hunter-gatherers are more peaceful than food producers depends on the definition of war. Anthropologists agree that war in smaller-scale societies needs to be defined differently from war in nation-states that have armed forces and large numbers of casualties. Also, within-community or purely individual acts of violence are nearly always distinguished from warfare. However, there is controversy about what to call different types of socially organized violence between communities. For example, Fry (2006, 88, 172–74) does not consider feuding between communities warfare, but Ember and Ember (1992) do.

In the warfare section below, we discuss predictors of variation in warfare amongst hunter-gatherers.

## How and Why do Hunter-Gatherers Vary?

Hunter-gatherers vary in many ways, but cross-cultural research has focused on variations in the environment and types of subsistence, contributions to the diet by gender, marital residence, the degree of nomadism, and the frequency and type of warfare.

### Variation in Environment and Subsistence Practices

- The closer to the equator, the higher the effective temperature, or the more plant biomass, the more hunter-gatherers depend upon gathering rather

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than hunting or fishing ([Lee and DeVore 1968, 42–43](#); [R. L. Kelly 1995, 70](#); [Binford 1990, 132](#)).

- The lower the effective temperature, the more hunter-gatherers rely on fishing ([Binford 1990, 134](#)).
- As the growing season lengthens, hunter-gatherers are more likely to be fully nomadic ([Binford 1990, 131](#)).
- In New Guinea, foragers with a high dependence on fishing tend to have higher population density and large settlements. Some of the foragers in New Guinea with a high dependence on fishing have densities of 40 or more people/square km and settlements of over 1000 people ([Roscoe 2006](#)).



Figure 6: Hunting tends to be men's work, as it is amongst the Hadza of Tanzania pictured above. Credit: Alexander Strachan, Pixabay license.

### Division Of Labor By Gender

- Males contribute more to the diet the lower the effective temperature or the higher the latitude ([R. L. Kelly 1995, 262](#); [F. W. Marlowe 2005, 56](#)). As we saw above, gathering is a more important subsistence activity closer to the equator. Since gathering is more often women's work, and hunting more often men's work, this may account for the relationship.
- In higher quality environments (with more plant growth), men are more likely to share gathering tasks with women. Greater division of labor by

gender occurs in lower quality environments (F. W. Marlowe 2007).

### Marital Residence

- Amongst hunter-gatherers, how much males and females contribute to primary production predicts rules of marital residence—more specifically, when male contribution is high, [patrilocal residence](#) is likely; when not that high, [matrilocal residence](#) is likely.
  - Not surprisingly, the more a foraging society depends upon gathering, the more likely the society is to be matrilocal. The more dependent upon fishing, the more likely a society is to be patrilocal. However, degree of dependence on hunting does not predict marital residence (C. R. Ember 1975).
  - This finding is contrary to the general worldwide trend when all types of subsistence economies are considered—gender contribution to subsistence does not generally predict marital residence (M. Ember and Ember 1971; Divale 1974; C. R. Ember 1975). Why hunter-gathering societies are different is not clear.
- [Bilocal residence](#), where couples can live with either set of relatives (in contrast to matrilocal or patrilocal residence), is predicted by small (under 50) community size, high rainfall variability, and recent drastic population loss (C. R. Ember 1975).

*Why?* The finding regarding population loss is consistent with previous findings from a broader study (C. R. Ember and Ember 1972) which tested Service's (1962, 137) theory that drastic loss from introduced diseases made it necessary for couples to live with whoever was alive (C. R. Ember and Ember 1972). High rainfall variability is an indicator of resource unpredictability. Theory suggests that residential movement is a way to flexibly adapt to variability of resources over time—couples can move to places that have more abundance (C. R. Ember 1975). Finally, when communities are very small, the ratio of marriageable males to marriageable females can fluctuate greatly. Following a [unilocal residence](#) rule might mean that all marriageable men have to leave if residence were matrilocal, or all marriageable women would have to leave if residence were patrilocal. Small communities would not be able to maintain a consistent size. Bilocality allows flexibility.

### Territoriality

- Hunter-gatherers with richer environments are more likely to make territorial claims over land (Baker 2003).

### Warfare

- Hunter-gatherers with higher population densities have more warfare than those with lower population densities. Similarly, more complex hunter-gatherer societies have more warfare than simpler hunter-gatherers ([Nolan 2003, 26](#); [R. C. Kelly 2000, 51–52](#); [Fry 2006, 106](#)).
- Hunter-gatherers with a high dependence on fishing are more likely to have internal warfare than external warfare ([C. R. Ember 1975](#)).
- Amongst prehistoric hunter-gatherers in central California, resource scarcity predicts more violence as indicated by sharp force skeletal trauma in burial sites ([Allen et al. 2016](#)). This parallels worldwide research on a sample including all subsistence types that finds that unpredictable food-destroying disasters is a major predictor of higher warfare frequency ([C. R. Ember and Ember 1992](#)).
- Among foragers, as in other societies, patrilocal residence is predicted by internal (within society) warfare or a high male contribution to subsistence; matrilocality is predicted by a combination of purely external warfare and a high female contribution to subsistence ([C. R. Ember 1975](#)).

### What We Do Not Know

- Why do some foraging societies share more than others? Is meat consistently shared more than plants? Does sharing differ by gender?
- Why should division of labor predict residence amongst hunter-gatherers, but not among food-producing cultures? (See [C. R. Ember 1975](#))
- Do foragers with a high dependence on fishing tend to have higher population density and large settlements, as is the case in New Guinea? (See [Roscoe 2006](#))
- How different are foragers with a little agriculture from those who lack agriculture?
- Are foragers with horses more like pastoralists than foragers lacking horses?
- How do complex hunter-gatherers differ from simpler hunter-gatherers in the ways we have discussed here—child-rearing values, marital residence, subsistence strategies, division of labor, etc.
- What predicts the emergence of hunter-gatherer complexity?

### Exercises Using eHRAF World Cultures

Explore some texts in [eHRAF World Cultures](#) individually or as part of classroom assignments. See the [Teaching eHRAF Exercise 1.22](#) for suggestions.





## Additional Cross-Cultural Studies of Hunter-Gatherers

Collard, Mark, Briggs Buchanan, Michael J. O'Brien, and Jonathan Scholnick. (2013). Risk, mobility or population size? Drivers of technological richness among contact-period western North American hunter-gatherers. *Philosophical Transactions of the Royal Society B: Biological Sciences* 368, no. 1630: 20120412.

Freeman, Jacob, and John M. Anderies. (2015). The socioecology of hunter-gatherer territory size." *Journal of Anthropological Archaeology* 39: 110-123.

Halperin, Rhonda H. (1980). Ecology and mode of production: Seasonal variation and the division of labor by sex among hunter-gatherers. *Journal of Anthropological Research* 36, 379-399.

Korotayev, Andrey V. & Alexander A. Kazankov (2003). Factors of sexual freedom among foragers in cross-cultural perspective. *Cross-Cultural Research* 37: 29-61.

Langley, Michelle, and Mirani Litster. (2018). Is it ritual? Or is it children?: distinguishing consequences of play from ritual actions in the prehistoric archaeological record. *Current Anthropology* 59(5):616-643).

Lozoff, Betsy and Gary Brittenham (1979). Infant care: Cache or carry. *The Journal of Pediatrics* 95, 478-483.

Marlowe, Frank W. (2003). The mating system of foragers in the standard cross-cultural sample. *Cross-Cultural Research* 37, 282-306.

Thompson, Barton. (2016). Sense of place among hunter-gatherers. *Cross-Cultural Research* 50, no. 4 (2016): 283-324.

## References

- Allen, Mark W., Robert Lawrence Bettinger, Brian F. Coddig, Terry L. Jones, and Al W. Schwitalla. 2016. "Resource Scarcity Drives Lethal Aggression Among Prehistoric Hunter-Gatherers in Central California." *Proceedings of the National Academy of Sciences* 113 (43): 12120-25. <https://doi.org/10.1073/pnas.1607996113>.
- Baker, Matthew J. 2003. "An Equilibrium Conflict Model of Land Tenure in Hunter-Gatherer Societies." *Journal of Political Economy* 111 (1): 124-73. <https://doi.org/10.1086/344800>.
- Barry, Herbert, III, Irvin L. Child, and Margaret K. Bacon. 1959. "Relation of Child Training to Subsistence Economy." *American Anthropologist* 61 (1): 51-63. <https://doi.org/10.1525/aa.1959.61.1.02a00080>.
- Berbesque, J. Colette, Frank W. Marlowe, Peter Shaw, and Peter Thompson. 2014. "Hunter-Gatherers Have Less Famine Than Agriculturalists." *Biology Letters* 10 (1): 20130853. <https://doi.org/10.1098/rsbl.2013.0853>.

- Binford, Lewis R. 1990. "Mobility, Housing, and Environment: A Comparative Study." *Journal of Anthropological Research* 46 (2): 119–52. <https://doi.org/10.1086/jar.46.2.3630069>.
- Blasi, Damián E., Steven Moran, Scott R. Moisik, Paul Widmer, Dan Dediu, and Balthasar Bickel. 2019. "Human Sound Systems Are Shaped by Post-Neolithic Changes in Bite Configuration." *Science* 363 (6432): eaav3218. <https://doi.org/10.1126/science.aav3218>.
- Crittenden, Alyssa N., Nancy L. Conklin-Brittain, David A. Zes, Margaret J. Schoeninger, and Frank W. Marlowe. 2013. "Juvenile Foraging Among the Hadza: Implications for Human Life History." *Evolution and Human Behavior* 34 (4): 299–304. <https://doi.org/10.1016/j.evolhumbehav.2013.04.004>.
- Divale, William Tulio. 1974. "The Causes of Matrilocal Residence: A Cross-Ethnohistorical Survey."
- Ember, Carol R. 1975. "Residential Variation among Hunter-Gatherers." *Behavior Science Research* 10 (3): 199–277. <https://doi.org/10.1177/106939717501000302>.
- . 1978. "Myths about Hunter-Gatherers." *Ethnology* 17 (4): 439–48. <https://doi.org/10.2307/3773193>.
- Ember, Carol R., and Christiane M. Cunnar. 2015. "Children's Play and Work: The Relevance of Cross-Cultural Ethnographic Research for Archaeologists." *Childhood in the Past* 8 (2): 87–103. <https://doi.org/10.1179/1758571615Z.00000000031>.
- Ember, Carol R., and Melvin Ember. 1972. "The Conditions Favoring Multilocal Residence." *Southwestern Journal of Anthropology* 28 (4): 382–400. <https://doi.org/10.1086/soutjanth.28.4.3629318>.
- . 1992. "Resource Unpredictability, Mistrust, and War: A Cross-Cultural Study." *Journal of Conflict Resolution* 36 (2): 242–62. <https://doi.org/10.1177/0022002792036002002>.
- . 1997. "Violence in the Ethnographic Record: Results of Cross-Cultural Research on War and Aggression." In *Troubled Times: Violence and Warfare in the Past*, edited by Debra L. Martin and David W. Frayer, 3:1–20. Gordon and Breach.
- . 2019. *Cultural Anthropology*. Pearson.
- Ember, Melvin, and Carol R. Ember. 1971. "The Conditions Favoring Matrilocal Versus Patrilocal Residence." *American Anthropologist* 73 (3): 571–94. <https://doi.org/10.1525/aa.1971.73.3.02a00040>.
- Fry, Douglas. 2006. *The human potential for peace: An anthropological challenge to assumptions about war and violence*. Oxford University Press.
- Garfield, Zachary H., Melissa J. Garfield, and Barry S. Hewlett. 2016. "A Cross-Cultural Analysis of Hunter-Gatherer Social Learning." In *Social Learning and Innovation in Contemporary Hunter-Gatherers*, edited by Hideaki Terashima and Barry S. Hewlett, 19–34. Springer. [https://doi.org/10.1007/978-4-431-55997-9\\_2](https://doi.org/10.1007/978-4-431-55997-9_2).
- Hayden, Brian, and Suzanne Villeneuve. 2011. "Astronomy in the Upper Palaeolithic?" *Cambridge Archaeological Journal* 21 (3): 331–55. <https://doi.org/10.1017/S0959774311000400>.

- Hendrix, Lewellyn. 1985. "Economy and Child Training Reexamined." *Ethos* 13 (3): 246–61. <https://doi.org/10.1525/eth.1985.13.3.02a00030>.
- Hewlett, Barry S., and Shane J. Macfarlan. 2010. "Fathers' Roles in Hunter-Gatherer and Other Small-Scale Cultures." In *The Role of the Father in Child Development*, edited by Michael E. Lamb, 5:413–34. John Wiley & Sons.
- Hill, Kim R., Robert S. Walker, Miran Božičević, James Eder, Thomas Headland, Barry Hewlett, A. Magdalena Hurtado, Frank Marlowe, Polly Wiessner, and Brian Wood. 2011. "Co-Residence Patterns in Hunter-Gatherer Societies Show Unique Human Social Structure." *Science* 331 (6022): 1286–89. <https://doi.org/10.1126/science.1199071>.
- Hitchcock, Robert K., and Megan Beisele. 2000. "Introduction." In *Hunters and Gatherers in the modern world: Conflict, resistance, and self-determinations*, 1–10. Berghahn Books.
- Kelly, Raymond C. 2000. *Warless Societies and the Origin of War*. The University of Michigan Press.
- Kelly, Robert L. 1995. *The Foraging Spectrum*. Smithsonian Institution Press.
- Kramer, Karen L., and Russell D. Greaves. 2016. "Diversity or Replace. What Happens to Wild Foods When Cultigens Are Introduced into Hunter-Gatherer Diets." In *Why Forage*, 15–42. School for Advanced Research.
- Lee, Richard B., and Irven DeVore. 1968. *Man the Hunter*. Aldine Publishing Company.
- Lenski, Gerhard, and Jean Lenski. 1978. *Human Societies: An Introduction to Macrosociology*. McGraw-Hill.
- Lew-Levy, Sheina, Noa Lavi, Rachel Reckin, Jurgi Cristóbal-Azkarate, and Kate Ellis-Davies. 2018. "How Do Hunter-Gatherer Children Learn Social and Gender Norms? A Meta-Ethnographic Review." *Cross-Cultural Research* 52 (2): 213–55. <https://doi.org/10.1177/1069397117723552>.
- Lew-Levy, Sheina, Rachel Reckin, Noa Lavi, Jurgi Cristóbal-Azkarate, and Kate Ellis-Davies. 2017. "How Do Hunter-Gatherer Children Learn Subsistence Skills?" *Human Nature* 28 (4): 367–94.
- Lomax, Alan. 1968. *Folk song style and culture*. 88. American Association for the Advancement of Science.
- Marlowe, Frank. 2000. "Paternal Investment and the Human Mating System." *Behavioural Processes* 51 (1-3): 45–61. [https://doi.org/10.1016/S0376-6357\(00\)00118-2](https://doi.org/10.1016/S0376-6357(00)00118-2).
- Marlowe, Frank W. 2005. "Hunter-gatherers and human evolution." *Evolutionary Anthropology: Issues, News, and reviews* 14 (2): 56–67. <https://doi.org/10.1002/evan.20046>.
- . 2007. "Hunting and Gathering: The Human Sexual Division of Foraging Labor." *Cross-Cultural Research* 41 (2): 170–95. <https://doi.org/10.1177/1069397106297529>.
- Murdock, George P., and Caterina Provost. 1973. "Factors in the Division of Labor by Sex: A Cross-Cultural Analysis." *Ethnology* 12 (2): 203–25. <https://doi.org/10.2307/3773347>.
- Nolan, Patrick. 2003. "Toward an ecological-evolutionary theory of the incidence of warfare in preindustrial societies." *Sociological Theory* 21 (1): 18–30.

- <https://doi.org/10.1111/1467-9558.00172>.
- Peoples, Hervey C., Pavel Duda, and Frank W. Marlowe. 2016. "Hunter-Gatherers and the Origins of Religion." *Human Nature* 27 (3): 261–82. <https://doi.org/10.1007/s12110-016-9260-0>.
- Rohner, Ronald. 1975. *They Love me, They love me not: A Worldwide study of the effects of parental acceptance and rejection*. HRAF Press.
- Roscoe, Paul. 2006. "Fish, game, and the foundations of complexity in forager society: The evidence from new guinea." *Cross-Cultural Research* 4 (1): 29–46. <https://doi.org/10.1177/1069397105282432>.
- Sassaman, Kenneth E. 2004. "Complex hunter-gatherers in evolution and history: A North American perspective." *Journal of Anthropological Research* 12 (3): 227–80. <https://doi.org/10.1023/B:JARE.0000040231.67149.a8>.
- Service, Elman R. 1979. *The Hunters*. Prentice Hall.
- Service, Elman Rogers. 1962. *Primitive Social Organization: An Evolutionary Perspective*. Random House.
- Textor, Robert B. 1967. *A Cross-Cultural Summary*. HRAF Press.
- Walker, Robert S. 2014. "Amazonian Horticulturalists Live in Larger, More Related Groups Than Hunter--Gatherers." *Evolution and Human Behavior* 35 (5): 384–88. <https://doi.org/10.1016/j.evolhumbehav.2014.05.003>.
- Walker, Robert S., and Drew H. Bailey. 2014. "Marrying Kin in Small-Scale Societies." *American Journal of Human Biology* 26 (3): 384–88. <https://doi.org/10.1002/ajhb.22527>.