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The Prehistory of Warfare

Misled by Ethnography

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Warfare is not an endemic condition of human existence but an episodic feature of human history (and prehistory) observed at certain times and places but not others.

KELLY, 2000, *p. 75*

Recent years have witnessed a resurgence of archaeological and anthropological studies of warfare. One of the critical issues is a fundamental question about the origins and ubiquity of war in human history. There are basically two schools of thought on this issue. One holds that warfare has origins that go into the deep history of humanity. In this interpretation warfare, as an integral part of human culture, goes back at least to the time of the first thoroughly modern humans and even before then to the primate ancestors of the hominid lineage. The second position on the origins of warfare sees war as much less common in the cultural and biological evolution of humans. Here, warfare is a latecomer on the cultural horizon, only arising in very specific material circumstances and being quite rare in human history until the development of agriculture in the past 10,000 years.

The question of how, why, and when warfare first started in human populations and even in primate populations is not a trivial one. Indeed, it has immediate relevance to understanding warfare in the contemporary world and to policy makers who wage that war. If the first school of thought is correct and warfare is and always has been a prevalent part of human existence and may have biological roots in our primate ancestors, then it becomes less incumbent on us to look for the "root causes of war" (Berenson, 1996). In an analysis Berenson did for the Pentagon of the root causes of war, he used the archaeological and anthropological literature on warfare to argue that warfare is inherent to the human species. If the Pentagon and other policy makers consider warfare to be innate, then there is no fundamental reason to look for the immediate cause of war on the ground. (This is certainly an oversimplification, but it does promote the notion

that much of human behavior is based on biology and thus inherent and not in need of further explanation or understanding.) On the other hand, if warfare is *not* an inherent component to humanity, but rather, an irregular cultural phenomenon that comes and goes as material circumstances change, then it becomes much more important to understand the reasons *why* people come to fight at some points in human history and don't fight at others. The question of the intensity, chronology, and frequency of warfare in humanity is ultimately an empirical one that can be answered only by research and not by theorizing, speculation, or assertion. To address the issue empirically, we must ultimately turn to the archaeological record of the human past, as it is only in prehistory that we find the actual record of the origins of war.

For more than 15 years now, the archaeology of warfare has been co-opted by overreliance on both ethnography and primate ethology. Scholars have tried to supplement an absence of archaeological evidence of warfare with implied parallels between ancient hunters and gatherers and contemporary hunters and gatherers as well as primates, primarily chimpanzees. Archaeologists have long used ethnography to fill in perceived gaps in the archaeological record, sometimes successfully and sometimes not. In 1978, Martin Wobst addressed the problems of relying too heavily on ethnography:

> If archaeologists consume ethnographically derived theory without prior testing, there is a great danger that they merely reproduce the form and structure of ethnographically perceived reality in the archaeological record. This form and structure may spuriously confirm the ethnographically derived theoretical expectations, in a never ending vicious circle (Wobst, 1978, p. 303).

He goes on to point out that hunters and gatherers recorded in the "ethnographic present," that is, the nineteenth and twentieth centuries "were intimately tied into continent-wide cultural matrices, be it through the world market or through other direct and indirect contacts with more complex societies" (Wobst, 1978, p. 303). The main point of Wobst's article is that historic and contemporary ethnographies of hunters and gatherers are not appropriate models for the vast majority of human history when hunters and gatherers lived without the influence of colonial powers or other more complex polities.

Wobst's warning came at a time of intellectual upheaval in archaeology, when archaeologists were searching for ways to bring more "life" to the archaeological record. They were using ethnoarchaeology, ethnographic analogy, and experimental archaeology to make inferences about the nature of prehistoric peoples. Indeed, such bridging arguments have proved very valuable in interpreting some kinds of phenomenon in the archaeological record. Binford's study of Nunamiut hunters, for example, gave archaeologists insights into the distribution of artifacts in temporary campsites (Binford, 1978). Unfortunately, there was also rampant misuse of the ethnographic record as well. Archaeologists finding inevitable gaps in the archaeological record turned to the ethnographic record to fill in the holes. One of the best instances of this would be the effort to define the social organization

of past hunters and gatherers. Archaeologists jumped onto the evolutionary models of Steward (1956), Service (1962), and Fried (1967), which provided very convenient models for pigeonholing prehistoric societies. Hunters and gatherers nicely fit into the Patrilineal/Patrilocal Band category of Steward and Service or the Egalitarian category of Fried. With these ethnographically derived models in hand, archaeologists felt confident in inferring whole suites of characteristics for their prehistoric societies. At the most basic level, for example, prehistoric hunters and gatherers, inferentially, were patrilocal, patrilineal, and egalitarian. Wobst was then one of the first to call such blanket inferences into question. Others followed as archaeologists found that the ethnographic models didn't "fit" the archaeological data and that there was far greater diversity in the archaeological record than was seen in the ethnographic present of the late nineteenth and twentieth centuries. The ethnographic models also failed to either consider or successfully filter out the influence of centuries of colonialism and contact with state-level societies on historically known hunters and gatherers.

Since the 1970s, most archaeologists working on hunters and gatherers have moved beyond ethnographic analogies for making inferential statements about the nature of hunting and gathering societies. There is one glaring exception to this understanding of a major disconnect between past and present hunters and gatherers, and this is in the realm of warfare. Since Keeley (1996) published *War Before Civilization: The Myth of the Peaceful Savage*, archaeologists, anthropologists, and other social scientists studying the origins of warfare have found the archaeological record somehow lacking in their efforts to understand the beginnings of warfare in the ancient past. To fill in the perceived gaps, they have persistently turned to the historic record of hunters and gatherers, and in doing so have fallen into the trap of ethnographic tyranny.

The Tyranny of the Ethnographic Record of Warfare

The impact of this misuse of modern ethnographic and ethological studies has been significant in recent considerations of the origins of warfare in the archaeological past. In *War Before Civilization*, Keeley (1996) was updating the long-neglected field of the archaeology of warfare. He develops an excellent methodology for looking at warfare in the archaeological record and uses diverse data sets to present multiple case studies of prehistoric warfare in different parts of the world. He is also able to show unequivocally that there was significant warfare at different times and places in the archaeological record of prehistory. This was highly significant at the time, as there had been a 30–40 year hiatus in the anthropological literature looking at possible patterns of warfare in prehistory. His attack on the "myth of the peaceful savage" was a considered one, given an implicit sense in the discipline that warfare was a malady of the modern world. It is intellectually interesting that in the first half of the twentieth century prehistoric warfare was accepted as a given, but in the second half the study of conflict in the ancient past slowed to a trickle. Keeley starts out with good intentions: "If uncivilized societies were very peaceful before literate observers could record them, archaeology should be able to provide

the documentation" (Keeley, 1996, p. 23). But in the very next sentence he succumbs to the allure of the rich ethnographic literature: "The evaluation of these ideas (and, of course, any ideas contrary to them) requires careful surveillance of both ethnographic and archaeological data, with special attention to questions of how recent tribal and ancient prehistoric warfare was actually conducted and what the direct results of such conflicts were" (Keeley, 1996, p. 24).

He then goes on to cite three different cross-cultural ethnographic studies of "tribal and state" societies, all of which describe the ubiquity of warfare. Keeley subsequently reinforces his conclusion that "several cross-cultural ethnological and historical surveys indicate that more than 90 percent of all known societies have been at war at least once a generation" (Keeley, 2001, p. 334). Interestingly, for the few societies that lack warfare, Keeley brings in the effects of outside states and imposed conflict: "Most of these peaceful societies were recently defeated refugees living in isolation, lived under a 'king's peace' enforced by a modern state, or both" (Keeley, 1996, p. 28).

The surrounding context of the non-peaceful societies, however, is never questioned. Yet all the societies in these cross-cultural surveys have been heavily impacted in similar ways and such impacts must be accounted for in such analyses.

More recently, Otterbein (2004; see also, 1970 and 2009) undertook another extensive review of archaeological and ethnographic literature in *How War Began*. Otterbein specifically mentions the prevalence of two kinds or periods of warfare-related "military organizations" in the history of humankind:

> . . . one of which can be found two million years ago, at the dawn of humankind, and the other five thousand years ago. It is the thesis of this book that early warfare arose first among hunting peoples, who sometimes had lethal encounters with other hunting peoples, and later among peaceful agricultural peoples, whose societies first achieved statehood and then proceeded to embark on military conquests (Otterbein, 2004, p. 3).

Both of these theories are scientifically testable. For the first, one must go back in time and look in the archaeological record for evidence of that "military organization" and "lethal encounters" two million years ago. The second is a bit more complex in that one would want to find archaeological evidence of those "peaceful agricultural peoples" antecedent to states and then evidence for military organizations embarking on conquest. Of particular interest in the present context is the effort by Otterbein to argue for the presence of warfare at the "dawn of humankind."

Rather than going back and looking first at the archaeological record from two million years ago, he instead looks at the ethnography of hunters and gatherers in the ethnographic present. Like Keeley, Otterbein looks at comparative literature and concludes that warfare is closely correlated with big game hunting. Using this simple correlation, he goes back into the past and notes that there was heavy reliance on big game hunting

through much of that two-million-year period and therefore there was an abundance of warfare. Only with this up-front confirmation of his initial hypothesis does he then turn to look for empirical evidence in the archaeological record. First, he looks at rock art, and cites two somewhat ambiguous cases in French caves from the Upper Paleolithic—a period of 30,000+ years—of unarmed individuals punctured by shafts. His other evidence of warfare comes from depictions of armed conflict in rock art from Spain, which does appear to represent armed conflict, and from more ambiguous scenes of violence from Australia (see Fry, 2006), comes from significantly later times, after the Upper Paleolithic in the last 10,000 years, a time closing in on Otterbein's second period and kind of warfare. This latter period of warfare corresponds to the post-agricultural revolution, about which all scholars tend to be in general agreement that there is empirical evidence of a global increase in conflict, except, perhaps, in Australia, where agriculture was not adopted.

Next, in his global survey of the archaeological evidence of early warfare during the two-million-year period, Otterbein (2004, p. 73) cites but a single article (Bachechi, Fabbri, & Mallegni, 1997) to come up with only six instances worldwide where individuals were found with imbedded projectile points (Otterbein states there are seven cases, but Bachechi et al. [1997] only list six instances of embedded tools in human bone and two in non-human bone). From this scant archaeological evidence, he goes on to conclude: "The presence of points in bones, I believe, confirms that the rock art does indeed represent actual killings, whether they be executions, ambushes, or battles" (2004, p. 73). Based then on two depictions in rock art, and six cases of projectile points in human bones, Otterbein concludes "What has been found suggests widespread killing in the Upper Paleolithic" (2004, p. 75). He goes on to make a huge presumptive leap from killing to warfare: "The majority of hunting and gathering bands have warfare; those with the greatest reliance on hunting engage in warfare more frequently than those that are primarily gatherers. This pattern probably also holds true for the Upper Paleolithic" (Otterbein, 2004, p. 77).

More recently, Otterbein (2011, p. 439; see also Carbonell et al., 2010) has made the argument that evidence for cannibalism at one site in Spain from 800,000 years ago constitutes "the earliest known evidence for warfare." Ultimately, Otterbein's argument that warfare has characterized humankind for the past two million years is based on extremely scant archaeological evidence and almost complete reliance on contemporary hunting bands.

One of the biggest concerns with such ethnographically-based cross-cultural comparisons can be seen in the way it is used by other scholars trying to interpret the archaeological record. As but one example of the misuse of existing cross-cultural comparisons, Tuggle and Reid (2001) discuss conflict and defense at the fourteenth century A.D. site of Grasshopper Pueblo in the American Southwest. Specifically, they cite Keeley and other cross-cultural summaries to declare armed conflict as "virtually a human universal." They then go on to actually *assume* the presence of conflict: "... we take a simple approach

to the problem: we assume that conflict of some sort was a component of the prehistoric social system and thus we develop a model based on the evidence that is consistent with this assumption" (Tuggle & Reid, 2001, p. 85). There would seem to be an inherent danger of such an argument in that if we can *assume* the presence and ubiquity of warfare, we never have to actually *explain* why warfare and conflict start or stop (cf. Haas and Creamer 1993).

In making these assessments, Keeley, Otterbein, and others rely on the same cross-cultural studies that have been carried out using mostly the comparative database of the Human Relations Area Files (HRAF) (see Otterbein, 1989; Ember & Ember, 1992; Ember, 1978; Ross, 1983, 1985; see also Naroll, 1966). These comparative works using hunting and gathering groups, as well as other kinds of more sedentary agricultural groups, have been cited frequently by archaeologists studying warfare. Indeed, they all provide valuable information about the nature and frequency of warfare in historically known societies. One of the positive qualities of HRAF is that the data format makes it possible to review a particular attribute, such as warfare, across many cultures and world areas. What this format does not facilitate is placing these individual and independent cases in context. Thus, while such studies do a reasonable job of surveying a broad spectrum of ethnographic literature, they make no effort to place any of the different societies into a broad, global, historical context.

We would not say that there is no value in studying warfare amongst historic and modern hunters and gatherers. In general, contemporary and historic ethnographic information can offer great insights into why people—in simple or complex societies—engage in warfare and make peace. Recent comparative ethnographic studies of warfare in historic societies, such as those by Kelly (2000) or Fry (2007), contribute greatly to our understanding of why people come to fight in the contemporary world. They have also demonstrated that the supposed ubiquity of warfare in hunting and gathering societies is itself a "myth"—to turn Keeley's words around. These studies, however, do not go beyond the data to make sweeping inferences about the past based on the present. The problem with using ethnographic and ethnohistoric comparisons to make inferences about the past, no matter how many cultures are included and how prevalent warfare may or may not be, is that no historically known societies reasonably reflect conditions that prevailed over the vast majority of human existence on earth.

Keeley, Otterbein, and followers (see LeBlanc, 1999; Chacon & Mendoza, 2007; Bowles, 2009; Smith, 2009; Guilaine & Zammit, 2005; Nielsen & Walker, 2009), in turning to the historic ethnographic record to support their claims of the ubiquity of warfare in the prehistoric past, fail to consider how hunters and gatherers of the "ethnographic present" may be profoundly different from hunters and gatherers of the more distant archaeological past. How many of these societies were surrounded and circumscribed by existing states; pushed by the rippling effects of other refugees; armed by traders; provoked, directly or indirectly, by missionaries; cut off from traditional lands? The short answer to this question is that *all of them*, by the very fact of having been described and published by

anthropologists, have been irrevocably impacted by historic and modern colonial nation states (see Dickson, 1990).

Many tribal type societies (meaning here any society without the formal bureaucratic organization of a state) have been affected by state societies for at least 5000 years. The early incursions of ancient Egypt into northern Africa, for example, impacted much of North Africa. They were followed by the waves of Islamic conquests in the seventh and eighth centuries AD. These expanding states had significant direct impact on tribal people throughout northern Africa and unknown, indirect rippling effects in other parts of the continent. There were also expansive states and Empires well before European contact in the Americas. The Wari, Chimu, and Inca of South America, as well as the Maya, Toltecs, and Aztecs of Mesoamerica, for example, all had economic, political, and religious tentacles extending far out into distant tribal societies in both North and South America. While some effort has been made to look at the possible influence of Mesoamerican and Andean polities in adjoining areas, such studies have only minimally addressed the impact of these states on local patterns of warfare.

One illustrative example of this kind of precontact state influence is the pattern of cannibalism manifested in the American Southwest, during the eleventh and twelfth centuries AD. Both Keeley (1996, p. 105) and LeBlanc (1999, pp. 169–176) conclude it is an important period of tribal violence in their discussions on the archaeological evidence of cannibalism. But neither considers the extent to which it may have been influenced or provoked by the contemporaneous Toltec empire of Mesoamerica (cf. Turner & Turner, 1999, (pp. 464–469). Yet Turner and Turner (1999, 464–469), who have studied cannibalism extensively in the Southwest, specifically consider possible influences of Mesoamerican state polities on cannibalism. In their analysis, they find that a majority of the cannibalism is associated with the florescence of the renowned culture of Chaco Canyon. They then point to the strong connections between Chaco and Mesoamerica and conclude that this connection had a major impact on the cannibalism in Chaco.

Beyond such influence of early states, the colonial expansion of European polities in recent centuries encompassed the entire inhabitable planet. Literally no cultures, no matter how isolated, have been immune to the touch and influence of colonialism. Indeed, anthropology itself is the social science of colonialism, arising as an intellectual discipline to address the diverse peoples and cultures encountered throughout the non-Western world. The process of colonialism around the world had profound impacts on every tribal society encountered. Some of the impact came directly from the effects of conquering armies, epidemic diseases, voracious traders, and evangelical missionaries. More indirect influence, much harder to assess, came from the removal of vast tracts of land previously available in the expansion and contraction of Native peoples, circumscription of Native peoples by colonial powers or adjuncts, introduction and spread of foreign domesticated plants and animals, spread of foreign trade goods and weapons, and simply through contact with colonized peoples.

The Actual Archaeological Record

Looking across the vast landscape of the past 200,000 years (or even the last 2,000,000 years for that matter) for most of that time, humans existed in extremely low densities across the continents. The emergence of modern *Homo sapiens sapiens* in Africa some 200,000 plus years ago is not marked anywhere in the archaeological record by an explosion of population. There have indeed only been a handful of human remains and archaeological sites that date more than 20,000 years old in Africa, an area of 30,000,000 sq km. While negative evidence is not by itself proof of an absence of warfare, it nevertheless bears directly on the relative density of humans on the continent during this very long period. There is nothing at all to indicate any kind of population pressure or possible scarcity of resources. There is also a complete lack of evidence of concrete social units above the level of a family or immediate family group for this same period. Who then, exactly, would have been fighting whom and for what possible reason? This question intensifies when the early humans crossed over into Europe, perhaps 60,000 years ago. Once onto the new continent, an area of over 10,000,000 sq km, they encountered small populations of Neanderthals in some parts of Europe and the Middle East. Outside Africa, there was not another living person anywhere on the planet! All of Asia, with another 44,000,000 sq km, was empty. When people finally got to the Western Hemisphere, with 42,000,000 sq km, it too was devoid of people.

Estimating populations and population densities, even in the recent archaeological record, is a notoriously difficult proposition. It depends a great deal on getting a "complete" picture of how many people are living in any given area at any given period of time. Since most archaeological dating techniques rarely allow for specificity beyond 50 years—2.5 generations—most estimates are broad generalizations. Numerous scholars have attempted to estimate population growth of hominids over the past million years or so, but their estimates vary widely. Deevey (1960) estimates that for the period from about 200,000 years ago to 12,000 years ago, the human population density was only .04 people per sq km. Birdsell (1972) gives a similar estimate. Hassan (1981, pp. 196–200), based on modern ethnographic analogs (with all the incumbent problems as discussed above), calculates population estimates from *optimum carrying capacity* of the different environmental biomes as different parts of the world opened to humans. From this he estimates the world could have supported a population of about 6 million people 200,000 years ago and 8 million people 10,000 years ago. These figures yield a population density of .100 for the beginning of this period and .115 for the end. Hassan's estimates are all based on historic/modern hunters and gatherers and represent maximum figures if every environmental niche was filled to capacity the moment it became available as the ice age passed. (See also Binford, 2001 for a similar analysis and similar population estimates.)

More recently an estimate of population in Europe during the upper Pleistocene has been developed based on more than a century of archaeological excavation and survey .(Bocquet-Appel, Demars, Noiret, & Dobrowsky, 2005). Here again, Bocquet-Appel and colleagues use ethnographic analogy, but in this case it is used more productively.

They look at the relationship between site size and resident population of modern hunting and gathering communities. They then use these figures on historic site size and density as a proxy of population for prehistoric densities based on the size of archaeological sites. Bocquet-Appel and colleagues estimate that in the Aurignacian (40,000–31,000 Cal BC) the population of Europe was approximately 4400 individuals and by the Late Glacial (17,000–11,000 Cal BC) that population had grown to approximately 29,000. This latter figure works out to a population density of .003 people per square kilometer. There have been more upper Pleistocene sites found in Europe than any other part of the world. It seems likely that other world areas would have had lower population densities until relatively recently. Conversely, it is highly unlikely that other world areas would have had population densities higher than those found in Europe, again until relatively recently. Using the .003 figure as an average, there would have been upwards of 132,000 people in all of Asia, 126,000 people in the Americas, and 90,000 people in Africa. Adding in smaller populations for Australia and the rest of the world, the total number of humans on the planet would have been something less than 500,000.

Whether one relies on the optimum carrying capacity figures of Hassan (1981) or the archaeologically derived figures of Bocquet-Appel, et al. (2005) the population of the world prior to the onset of the Neolithic was extremely low. Under either scenario, Figure 10.1 represents an accurate chart of the world's population from the emergence of modern *Homo sapiens sapiens* to the present day. This chart illustrates two things clearly: First, for 190,000 years of human existence on the planet, low population densities obviated all the proposed biological or cultural reasons for warfare and intraspecific conflict; second, all of the ethnographic accounts of hunters and gatherers as well as all ethological accounts of primates fall into the final tiny fraction of the demographic chart when the global human population is exponentially greater than the low population densities of the more distant past. Since 8000 BC (10,000 years ago) on all continents, the population of the world has grown exponentially.

In trying to look at warfare in the past, one major question is how to recognize it in the archaeological record. This topic has been addressed extensively by a number of archaeologists (Vencl, 1984; Wilcox & Haas, 1994; Keeley, 1996; LeBlanc, 1999). Generally, warfare is recognized archaeologically by some combination of multiple lines of evidence, including defensive site locations and architectural features, "parry fractures" (fractures to the ulna), blows to the frontal bone, zones of "no-man's-land," art depicting warriors and battles, and systematic burning of sites. The further back you go in time, the more difficult it may be to fully reconstruct combined suites of such characteristics, but warfare, when present, is not invisible in the archaeological record. When the actual archaeological record over the past 200,000 years is examined for empirical evidence of warfare and conflict, the data say a lot about the appearance and frequency of warfare in the past.

In looking for archaeological indicators of warfare, a fairly clearly line can be drawn at approximately 8000 BC (10,000 years ago). After 8000 BC there is evidence of significant, though localized, warfare in several parts of the world (see Keeley, 1996; Otterbein,

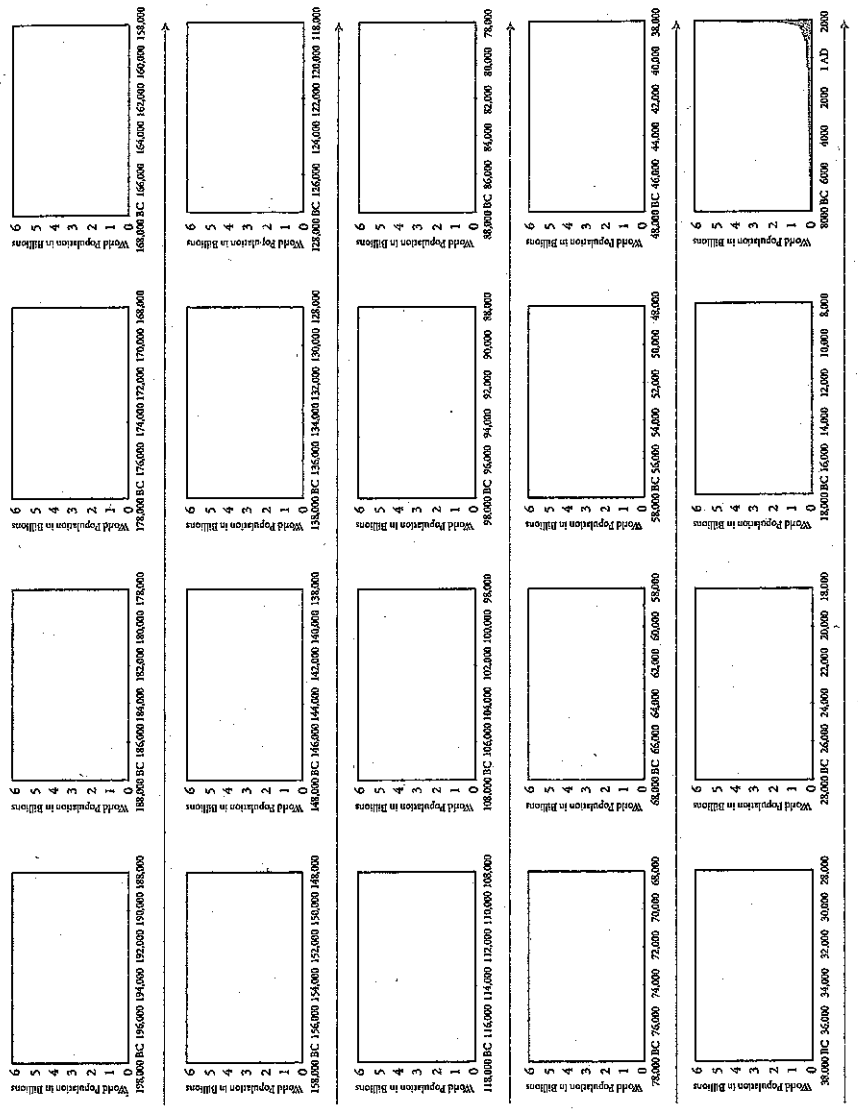

FIGURE 10.1 The relative population density of people on the planet over the past 200,000 years. (Credit: Jonathan Haas).

2004; Bachechi et al., 1997; Bowles & Gintis, 2011; Roper, 1969; Kelly, 2000; Haas, 2001; Thorpe, 2005, 2008; Raaflaub & Rosenstein, 2001; Carman & Harding, 2004; Martin & Frayer, 1998). From 8,000 BC onward, at different times and places around the world, there begins a steady—if episodic—trickle of such indicators of warfare and conflict. In no world area is there an unbroken lineage of warfare with the markers of conflict rising and falling as demographic and economic circumstances change. An important milestone in looking at the origins of warfare in humans is 8000 BC, as it stands at the very end of the Mesolithic and beginning of the Neolithic periods. It also marks major changes in the trajectory of human history, as humankind was reaching the upper demographic limits

of sustainable hunting and gathering around the world. People were in the throes of the transition from a hunting-and-gathering, nomadic lifestyle to an agricultural and settled lifestyle. There is little disagreement over the rising prevalence of warfare and conflict after 8000 BC. For present purposes, however, it is the period *before 8000 BC* that is of greatest interest. Looking back at the very long stretch of time between 200,000 and 10,000 years ago, the archaeological evidence for warfare melts away.

Generally for this early time period, two types of evidence are used to identify conflict, and more indirectly, warfare in the past: rock art and violence in human skeletal remains. The rock art evidence is particularly telling. Those who argue for the ubiquity of warfare throughout human history all tend to cite the same sources. Three caves in France, Cosquer, Cougnac, and Pech Merle, have rock art that is frequently cited as evidence of violence. A total of four figures are singled out as indicators of humans punctured by spears. None of these figures, however, is clearly human and indeed two of them have tails (Figures 10.2 and 10.3) (see Clottes & Courtin, 1996, pp. 156–158). One of these (Figure 10.3), at Pech Merle, is described by Giedion (1962, pp. 460–462) thusly:

> It is not headless but has a birdlike head; in other respects it is drawn partly as an animal and partly as a human being. Again the body is traversed by long lines. These are so far from being straight that Lemozi [1929] took their curvature to represent a bow and arrows carried by an archer. They certainly do not represent arrows, spears, or any weapons in the ordinary sense. They are irregularly curved and are symbols: magic missiles, magic lines of force, magic emblems of fertility. A curving line to the rear might hint at an animal tail.

Yet another figure, called "The Killed Man" (Figure 10.4) from Cosquer cave, shares more characteristics with a chamois (or "goat-antelope" as shown in Figure 10.5 for

FIGURE 10.2 Figure from Cougnac cave, France. Note the tail. (Credit: Jill Seagard, The Field Museum; redrawn from Clottes and Courtin 1996).

FIGURE 10.3 Figure from Pech Merle cave, France. Note the tail. (Credit: Jill Seagard, The Field Museum; redrawn from Clottes and Courtin 1996).

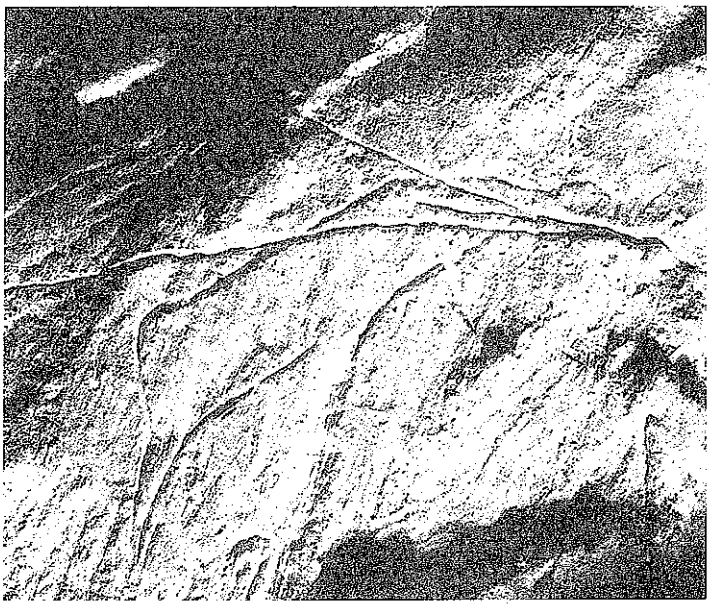

FIGURE 10.4 "The Killed Man" figure from Cosquer cave. (Photo credit: Jean Clottes).

comparative purposes) than with a human figure. Not mentioned in the discussions of warfare/conflict is the fact that two of the four figures repeatedly cited are directly associated with prey animals. Figure 10.2 is integrated within the upper body of an elephant, while Figure 10.6 (from Cougnac) lies within the body of an elk.

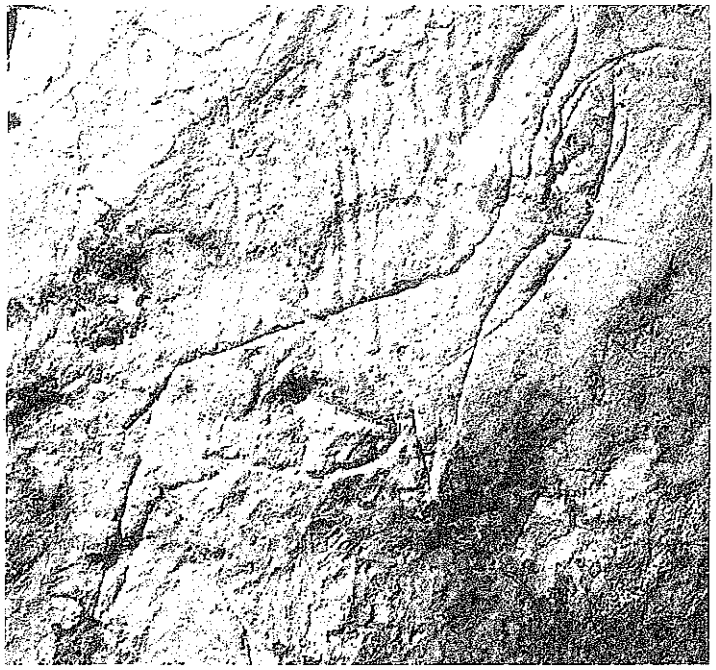

FIGURE 10.5 This figure from Cosquer cave, France, is a chamois, or goat antelope. Compare its features with "The Killed Man" shown in Figure 10.4. (Photo credit: Jean Clottes).

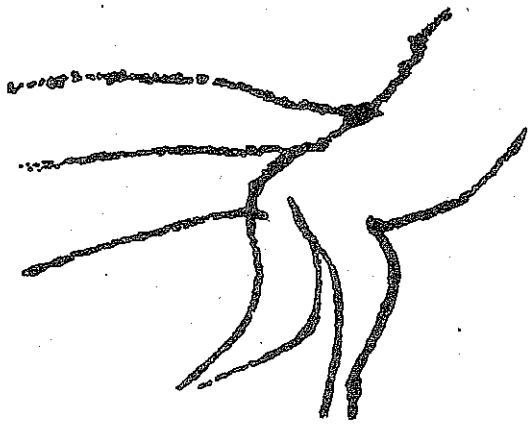

FIGURE 10.6 Figure from Cougnac cave. (Credit: Jill Seagard, The Field Museum; redrawn from Clottes and Courtin 1996).

This ambiguous and extremely limited evidence of violence against or between humans lies in stark contrast to the *thousands* of highly explicit images in many caves of a wide range of animals that were found and hunted by the prehistoric residents (Giedion, 1962; Clottes & Courtin, 1996). They also contrast with a florescence of clear images of warfare, conflict, fighting, and warriors found in cave art *after 8000 BC* (see Nash, 2005). At the same time, even if for the sake of argument the very few examples (Figures 10.2,

10.3, 10.4, and 10.6) are accepted as evidence of violence in cave art, they stand more as a testament to the rarity of conflict rather than to its ubiquity.

Turning from the ambiguous evidence of rock art to more direct evidence of violence in skeletal remains, there is again a but a tiny number of cases of violence in skeletal remains that are mentioned over and over by multiple authors. These would include individual skeletons with imbedded projectile points at two Italian sites of Grotta de San Teodoro (Bachechi et al., 1997) and Grotta dei Fanciulli (Dastugue & de Lumley, 1976), and two Ukrainian sites, Voloshskoe (Danilenko, 1955), and Valil'evka (Telegin, 1961). Dolní Vêstonice in the Czech Republic (Trinkaus & Jelinek, 1997) has multiple individuals (3) in a single burial, which is interpreted by some as a sign of conflict, though there is no sign of violence to the skeletal remains. No attempt was made to distinguish warfare versus disease as equally plausible reasons for three individuals dying at one time.

The single case that goes beyond one or two skeletons with imbedded stone tools/points is the universally cited Jebel Sahaba in Sudan, occupied approximately 12,000–14,000 years ago (Wendorf, 1968). Among the 58 human skeletons recovered from this site, there were multiple examples of "parry" fractures, stone implements embedded in bone, and points found within body cavities (Wendorf, 1968; Anderson, 1968). Jebel Sahaba is of interest to the present discussion in particular as it is clearly not anything like a typical, nomadic hunting and gathering site characteristic of the Upper Paleolithic in other parts of the world (see also Ferguson, chapter 7). The presence of an actual graveyard with 58 excavated burials indicates intensive and long-term use. In discussing possible causes of the conflict at the site, Wendorf makes a case that sounds very much like the causes of warfare in later, more sedentary societies. He states:

> ... population pressures may have become too great with the deterioration of the Late Pleistocene climate and the effects which this had on the herds of large savanna-type animals which were the primary source of food at this time. With this situation, the few localities which were particularly favorable for fishing would have been repeatedly fought over as other sources of food became increasingly scarce (Wendorf, 1968, p. 993).

This description of the causes of warfare at Jebel Sahaba outlines a specific set of circumstances that arose at a particular point in time and brings in increased population pressure with resources scarcity, the two elements that consistently combine to provoke warfare with greater frequency in the later Neolithic and thereafter.

With Jebel Sahaba as a notable exception, the evidence for conflict between humans in the archaeological record appears to be scant. However, it is reasonable to ask whether the sparcity of evidence is merely a factor of the sparcity of human remains from the period before 8000 BC. It turns out there is no comprehensive catalog of all the remains of *Homo sapiens sapiens* that have been excavated around the world. For this chapter, we conducted an extensive—though no claim is made for comprehensive—survey of

skeletal remains listed in existing catalogues or original site reports. This search of multiple sources of data revealed that, globally, at least 2,930 skeletal remains of *Homo sapiens sapiens* have been recovered at over 400 archaeological sites dating prior to 8000 BC/10,000 BP in the following citations (Alexeeva, Bader, Buzhilova, Kozlovskaya, & Mednikova, 2000; Alciati, Delfino, & Vacca, 2005; Anokovich, et al., 2007; Arensburg & Bar-Yosef, 1973; Bachechi et al., 1997; Balout, 1954; Barker et al., 2007; Barton, et al, 2008; Bar-Yosef & Gopher, 1997; Belfer-Cohen, Schepartz, & Arensburg, 1991; Binford, 1968; Boule, Vallois, & Verneau, 1934; Bresson, 2000; Camps, 1974; Chamberlain & Williams, 2001; Chamla, 1970, 1978; Churchill, Franciscus, McKean-Peraza, Daniel, & Warren, 2009; Conard & Bolus, 2003; Danilenko, 1955; Duarte, Pettitt, Souto, Trinkhaus, van der Plicht, & Zilhão, 1999; Einwöger, Friesinger, Handel, Neugebauer-Maresch, Simon, & Teschler-Nicola, 2006; Eshed, Gopher, Galili, & Hershkovitz, 2004; Formicola, Pettitt, Maggi, & Hedges, 2005; Gambier & Houët, 1993; Gambier, Valladas, Tisnerat-Laborde, Arnold, & Bresson, 2000; Garralda, 1991; Grifoni, Borgognini, Formicola, & Paoli, 1995; Grine et al., 2007; Grun, Beaumont, & Stringer, 1990; Hachi, 1996; Henry-Gambier, 2001; Henry-Gambier & Sacchi, 2008; Herschkovitz, Frayer, Nadel, Wish-Baratz, & Arensburg, 1995; Holt & Formicola, 2008; Hovers, 2009; Hublin, 1993; Jacobi & Higham, 2008; Kauffman, 1988; Kennedy, Roertgen, Chiment, & Disotell, 1987; Kennedy & Zahorsky, 1997; Lumley, 1976; Mallegni, Bertoldi, & Manolis, 2000; Mallegni & Fabbri, 1995; Mariotti, Bonfiglioli, Facchini, Condemi, & Belcastro, 2009; Matsumura & Pookajorn, 2002; McDermott, Stringer, Grün, Williams, Din, & Hawkesworth, 1996; Meier, R. J., Sahnouni, Medig, & Derradji, 2003; Meiklejohn, Pardoe, & Lubell, 1979; Meiklejohn, Bosset, & Valentin, 2010; Minellono, Pardini, & Fornaciari, 1980; Morel, 1993; Moser, 2003; Oakley & Campbell, 1967; Oakley, Campbell, & Molleson, 1971, 1975; Orschiedt, 2000; Pardoe, 1995; Perrot, 1966; Pettitt, Richards, Maggi, & Formicola, 2003; Pettitt & Trinkaus, 2000; Pond, 1928; Ramirez Rozzi, d'Errico, Vanhaeren, Grootes, Kerautret, & Dujardin, 2009; Rougier et al., 2007; Sereno et al., 2008; Shackelford, 2007; Shang, Haowen, Shuangquan, Fuyou, & Trinkaus, 2007; Schulting, Trinkaus, Higham, Hedges, Richards, & Cardy, 2005; Soficaru, Petrea, Dobos, & Trinkaus, 2007; Stock, Pfeiffer, Chazan, & Janetski, 2005; Susuki & Hanihara, 1982; Svoboda, 2008; Svoboda, 1997; Telegin, 1961; Trinkaus & Svoboda, 2006; Ullrich, 1992; Vercellotti, Alciati, Richards, & Formicola, 2008; Wendorf, 1968; Wendorf & Schild, 1986; Wu, 1982). While many of the earliest known remains consist of isolated finds with little skeletal material, later archaeological contexts exhibit a greater number of individuals. Like the rock art data, the small number of skeletal finds mentioned above, showing ambiguous signs of conflict (Jebel Sahaba excepted), come from a comparatively small number of sites. (It should also be noted that again with the exception of Jebel Sahaba, none of the often-cited examples in art or skeletal remains would be accepted as evidence of warfare—as opposed to violence or even accidents—in later time periods.) Rather than demonstrating the commonness of ancient warfare amongst humans, consideration of the entire archaeological data set

shows the opposite. Unfortunately, the full body of cave paintings and rock art along with the full body of skeletal remains from hundreds of archaeological sites have not been considered in studies attempting to argue for the prevalence of war throughout human history. Comparing the total number of known individuals before 8000 BC to the small sample of remains showing signs of violence demonstrates the infrequency of warfare or conflict in the ancient past. The archaeological record is *not silent* on the presence of warfare in early human history. Indeed, this record shows that warfare was the rare exception prior to the Neolithic pressures of population densities and insufficient resources for growing populations.

Rather than fighting with each other under extremely low population densities and no viable competitors for an abundance of food and game, humans would have relied on neighbors for cooperative ventures, such as hunting large game, or for the potential pool of mates. It is interesting and relevant to note in this regard that throughout Europe and large tracts of Asia all the way to Siberia, the time period from about 40,000 years ago to 25,000 years ago was all characterized by the same material cultural tradition—the Aurignacian. If you cross over into the Americas, you find a similar pattern of a continent-wide material culture during the period from 13,500 to 13,000 years ago, when all peoples across the entire continent of North America were producing remarkably similar and distinct "Clovis" projectile points. In South America all peoples were producing similar "Fishtail" points. Everyone, across continental spaces and over long stretches of time, was making the same kinds of tools. There is a glaring lack of any kind of analog in the ethnographic record for this kind of continental distribution of remarkably similar material culture. All of the issues of group boundaries, "traditional enemies," different ethnicities, and territoriality are simply incompatible with a model of open continent-wide social networks.

The contrast between the realities of the archaeological record and the notion of the universality of warfare in humans is seen in the recent book by Thayer, *Darwin and International Relations: On the Evolutionary Origins of War and Ethnic Conflict.* Thayer makes broad proclamations about the early origins of conflict:

> "From the Pliocene until very recent history many resources were scarce for all humans. Indeed, people in many parts of the world today face shortages of what may be considered basic resources, such as land and clean water. Resources may be rare or hard to come by, or they may be plentiful enough but access to them is controlled, perhaps by a hostile tribe. The origins of warfare are grounded in one's egoism—the human desire to gain or defend the resources needed to feed and protect a family, other relatives, and then one's group" (Thayer, 2004, p. 108).

Here is the ultimate confusion of the present with the past. Thayer is correct in pointing out that land and water are scarce today in the twenty-first century, with a global population of almost seven billion people, but provides no basis at all for inferring similar

scarcity for the far distant past, when population densities of hominids were a tiny fraction of that number. There is also no evidence at all in the archaeological record of "hostile tribes" controlling water or land. Thayer ultimately wants to attribute warfare to biological foundations of humans, their immediate hominid ancestors, and ultimately to their primate roots as witnessed in the warfare of *Pan troglodytes*, the chimpanzee.

It is worthwhile noting that the ethological data on chimpanzees and other primates are not dissimilar to the ethnographic record in offering minimal insights into the extent and nature of *prehistoric* warfare in *Homo sapiens sapiens*. Primate populations around the world have been contaminated by millennia of predation, circumscription, and contraction of resource zones caused by humans. This topic, however, is beyond the bounds of the present chapter.

Conclusions

So why is it so important to critically examine the relevance of hunter-gatherer ethnographies to studies of the history of warfare in humankind? The biggest problem with using historical ethnographies to make inferences about patterns of *past* human behavior is that they burden us with pictures only painted in the light of the modern, dense, colonial world of nation states. To carry the analogy one step further, it is as if we tried to give a picture of life on earth based only on what could be seen on one rainy day, an hour after sunset. Our view of the world would be gloomy and dim and would never tell us of a sunny morning or a snowy night. Another problem with the major studies based on ethnographies is that lots of other scholars take them as gospel. Declaring that warfare is rampant amongst almost all hunters and gatherers (as well as those cunning and aggressive chimpanzees) fits well with a common public perception of the deep historical and biological roots of warfare (e.g., Smith, 2009; Bowles & Gintis, 2011; Thayer, 2004; Otterbein, 2004; Dennen, 1995; Pinker, 2011). The fact that there is extremely limited empirical evidence of any warfare among past hunters and gatherers is pushed to the wayside as an intellectual inconvenience. Unfortunately, the presumed universality of warfare in human history and ancestry may be satisfying to popular sentiment; however, such universality lacks empirical support. Drawing such false conclusions ultimately does not help us to understand *why humans go to war, why wars start and stop, and what is the role of warfare* in either the biological or cultural evolution of humanity. As scholars of warfare, it is incumbent upon us to not make faulty assumptions about the ubiquity of warfare in humanity based on misleading comparisons between the ancient past and the modern hunters and gatherers and our primate relatives.

To return again to the analysis of Wobst, the study of warfare in the human past is being constrained by the tyranny of the ethnographic record. By confining ourselves only to the record of the modern world and historical depth of written history we are disallowing 98 percent of human history, diversity, and creativity, as well as our incredible uniqueness as primates. Assuming that warfare has been a constant since the beginning

of human history, based on the present, relieves us of responsibility for investigating the causes of war and the potential for peace (Fry, 2007). Yet these are exactly the issues that we need to address in the present world of pervasive warfare. Furthermore, archaeologists are the ones who are going to have to address the epochal period of human history before the advent of agriculture and development of complex polities. In spite of protestations to the contrary by non-archaeologists and even some archaeologists, there is in fact a substantial body of data from around the globe that is relevant to questions about the origins and role of warfare in the long history of modern humans on the planet. Ultimately, we would argue that the root causes of warfare are to be found in demographic and economic pressures on specific populations at specific points in their respective history. Equally, waves of peace can be explained by looking at the material conditions of life in those same historical trajectories.

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