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War Before History: A Critical Survey

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War Before History: A Critical Survey

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ABSTRACT

War features prominently in history, that is, in the records of literate societies. This paper addresses the issue of prehistoric warfare, that is, whether human societies without writing fight wars, and if so how often, under what circumstances, what tactics and technology they use, and how their warfare differs from that of literate societies.

As background, the paper reviews theoretical perspectives on prehistoric warfare and considers categories of data and problems with their interpretation in the absence of primary documents. In particular, researchers continue to invoke the perspectives of the philosophers Thomas Hobbes and Jean-Jacques Rousseau as touchstones of their thoughts on the topic of prehistoric warfare.

The author has no particular training or expertise in anthropology or archeology, but from reviewing the literature suggests that available data supports neither the Hobbesian nor the Rousseauian extreme. Societies without writing sometimes fight and sometimes do not, just as societies with writing do. Hobbes’ war of all against all is as mythical as Rousseau’s peaceful savage. The paper ends with a call for continuing more nuanced interdisciplinary research into the issue of prehistoric warfare and its implications.
INTRODUCTION

Nature, Human Nature, and War

War is a well-known phenomenon but its causes are difficult to discern. Even greater mystery cloaks the issue of “war before history.” In the absence of written records, questions such as when or whether war occurred and how it was fought necessarily rest on indirect and inferential evidence.

The topic of ancient or primitive war interests observers that are convinced that it sheds light on “human nature.” This concept touches on the “nature/nurture” controversy over which so much ink has been spilled. Political scientist Bradley Thayer provides what I take to be a sensible perspective on this dichotomy. “[The opposition between ‘nature’ and ‘nurture’] is a false dichotomy. Human behavior cannot be neatly categorized into such a division. Rather than thinking in bifurcated concepts, we must think of human behavior as the product of the interaction of the genotype and the environment.” 1 Thayer goes on to develop a metaphor of human behavior as a piece of cake: just as all of the ingredients and handling (the right baking temperature, for instance) are necessary to produce any cake at all, so “Both [nature and nurture] are necessary and intertwined” in any particular pattern of behavior.2

To my mind, another valid metaphor for causal analysis of behavior is a decision procedure or computer algorithm. From a cognitive science viewpoint a particular behavior can be represented as the outcome of a decision tree. The branches of the decision tree are set jointly by inheritance, environment (such as nutrition), and learning. Specific inputs choose a branch at each decision point. Just as both program and input data are required to produce a particular output from a computer, so nature (biological heredity) and nurture (environmental stimuli) are necessary to produce a particular behavioral response.

2 Ibid.
According to traditional thinking, if human aggression is innate, then war is inevitable; but if war does not invariably occur then it may result only from specific cultural and social conditions. These observers turn to evidence of ancient or primitive war (or peace) to extend the empirical record of human nature known from written history.

Notions of human nature connect with the modern science of biology. In general, biologically motivated theories of human nature, including war, fall into four styles of explanation.

First is the idea that human beings have inherited innate drives from their ancestors that regularly build up, almost in a hydraulic manner, until they must be discharged in some sort of grounding behavior. How this concept relates to war is that a drive for violence and aggression is postulated, which manifests itself in war and other forms of brutality, such as hunting and violent sports. Many theorists of this school argue that such a drive has resulted from man’s long evolution as a relatively defenseless primate on the African plains inhabited by deadly predators, where aggressiveness and a willingness to kill were necessary for sheer survival. Such a concept of aggression as an inborn drive appears to have first turned up in the psychoanalytic writings of Sigmund Freud (although Freud did not connect this drive with man’s underlying biology or evolutionary history); more recently, paleoanthropologist Raymond Dart and popular writer Robert Ardrey have developed this idea into the thesis that man is a “killer ape.”

Zoologist Richard Dawkins has developed a style of explanation for a wide range of biological phenomena in which “replicators” compete to outcopy each other in their common environment. His paradigmatic example of replicators is genes, hence the label “selfish gene” theory (the title of his seminal book first published in 1976); he explains many details of animal behavior and evolution as effects of natural selection for genes.

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3 War inevitably results from theological and philosophical assumptions about human nature in two classic political theories: Reinhold Niebuhr’s Christian concept that the evil inherent in human beings manifests itself in violence and Hans Morgenthau’s claim that conflict comes from an inborn human *animus dominandi* or drive to dominate. Thayer provides summaries of Niebuhr’s and Morgenthau’s ideas in ibid., 11, 61-63.
that are “selfish” in his technical sense. Although Dawkins provides an entire chapter on “aggression” in which he analyzes many examples of aggressive behavior among animals, he avoids explicit reference to human aggression; however, he appears to invite the reader to apply the analysis to human beings as a species alongside other species.

Although Dawkins fills most of the book with example after example of selfish genes, he shows that his style of analysis is not restricted to genes by adding another level of replicators which applies specifically to human beings: memes. A meme is an idea or a behavior that can spread from one person to another by teaching or imitation. Just as genes compete to replicate from cell to cell or organism to organism, memes compete to replicate from mind to mind. In some cases, memes can propagate themselves from one mind to another in opposition to the genes that propagate themselves from one body to another, as Dawkins’ example of celibacy shows: even though celibacy is suicide for genes, the celibacy meme can spread in human minds and influence people’s behavior.

Dawkins does not examine war specifically, but it is clear that it is possible to analyze war as a meme. From this perspective, war spreads itself as a behavior pattern in association with other memes, such as security, nationalism, or religion. Dawkins’ example of celibacy shows that it is not necessary to find a biological or genetic advantage to war; war as a behavior pattern may sustain itself because of other memes that it is linked with. Even so, Dawkins always looks for relative genetic advantage first and tries to reduce all other levels of explanation to the genetic level; only in cases where he is unable to do so does he bring in the separate level of memes.

In contrast to Dawkins, biologist Edward O. Wilson views genetics as only one among several independent interacting levels of causality. Human behavior results from an interplay of genetics, environment, and culture. “Which behavior particular human beings display depends on what they experience within their own culture, but the total array of human possibilities, like the monkey array or the termite array, is inherited.” Also in contrast to Dawkins, Wilson has included warfare in his analysis of “human nature” from the viewpoint of evolutionary biology. In his book On Human Nature, he at

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first seems to give an unequivocal answer to the question of war as a component of an “innate human nature.”

Are human beings innately aggressive?...The answer...is yes. Throughout history, warfare, representing only the most organized technique of aggression, has been endemic to every form of society, from hunter-gather bands to industrial states….Most significant of all, the human forms of aggressive behavior are species-specific: although basically primate in form, they contain features that distinguish them from aggression in all other species. Only by redefining the words ‘innateness’ and ‘aggression’ to the point of uselessness might we correctly say that human aggressiveness is not innate.⁹

However, he then goes on to remind us of the subtleties in the definitions of these terms as biologists use them. “[I]nnateness refers to the measurable probability that a trait will develop in a specified set of environments, not to the certainty that the trait will develop in all environments.”¹⁰ Even with his emphasis on the causal efficacy of genes, Dawkins concurs with Wilson’s stress on the conditionality and malleability of genetic influence on behavior. “It is a fallacy—incidentally a very common one—to suppose that genetically inherited traits are by definition fixed and unmodifiable.”¹¹

Wilson’s emphasis on the interplay of multiple causal levels in human behavior is an application of the same viewpoint in analyzing animal behavior in general. For example, “[A]ggression in any given species is actually an ill-defined array of different responses.”¹² It is a capacity for aggression and war (just like a capacity for peace or conjugating subjunctive verbs) that is inherited, and that capacity may be manifested in some environments and not in others. As Wilson poetically summarizes his view, “[H]uman aggression cannot be explained as either a dark-angelic flaw or a bestial instinct. Nor is it the pathological symptom of upbringing in a cruel environment.”¹³

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⁹ Ibid., 99.
¹⁰ Ibid., 100.
¹¹ Dawkins, Selfish Gene, 3.
¹³ Ibid., 119.
Aggression and war do not spring from original sin or a fatal character flaw; they are potentially adaptive responses, like many other aspects of human social behavior.

In the chapter on human beings in his book *Sociobiology*, Wilson notes that the high degree of plasticity in social organization is a basic biological fact about “human nature,” and that the variation from one culture to another appears not to be based on genetic differences between populations. Historical episodes in which “aspects of culture have altered in the space of a single generation, too quickly to be evolutionary in nature” support this view, and, as Wilson points out, “Such examples can be multiplied endlessly—they are the substance of history.”

Lastly, biologist Jared Diamond emphasizes that human culture adapts to local ecological conditions. In contrast to Dawkins and even Wilson, he explicitly downplays genetic influence on behavior, especially social behavior. For example, about the idea that cultural differences among peoples arise from intrinsic disparities in their intelligence, Diamond writes, “Sound evidence for the existence of human differences in intelligence that parallel human differences in technology is lacking.” He provides a summary of his approach in a sentence: “History followed different courses for different peoples because of differences among peoples’ environments, not because of biological differences among peoples themselves.”

As a microcosm of this adaptive process, Diamond points to the arrival in the Chatham Islands of a few hundred Maori warriors from New Zealand in 1835, which proved sufficient to annihilate the local Moriori culture, despite the much larger numbers of Moriori. The Moriori had so little experience of combat or weapons they were unable to mount any resistance at all, even in self-defense; after the initial assault, the Maori systematically hunted down and killed or enslaved the few Moriori who were able to flee and hide. Diamond stresses that these two groups diverged from common Polynesian ancestors and developed such distinct habits in the space of only a dozen or so

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14 Edward O. Wilson, *Sociobiology: The Abridged Edition* (Cambridge, MA: Harvard University Press, 1980). The discussion of the plasticity of human social organization is on 272-74; the quotes are from 274. Even though the rest of the book is abridged, the chapter on human beings in this edition is identical to the corresponding chapter in the original (1975) edition of Wilson’s *Sociobiology: The New Synthesis*.
16 Ibid., 25.
generations (too rapidly for significant genetic divergence to have taken place), in adaptive response to differences in local ecological conditions.¹⁷

Biologists’ conceptions of “human nature” and how that nature explains war span a significant range. War results from man’s legacy as a “killer ape,” or from selfish genes (or perhaps memes), or from a multilevel interaction of various factors, or from cultural adaptation for survival in local ecological circumstances.

Within this context of theoretical diversity and the apparently wide boundaries of human behavioral plasticity and cultural variation, the question of prehistoric warfare can be framed as a correlation between a culture’s literacy level and its propensity for warfare. Little doubt exists as to the occurrence and importance of war among literate societies, as war makes up a large portion of their records that historians study. Does the absence of literacy prevent a society from waging war? Or do illiterate societies engage in war as often as literate societies do?

This thesis reviews the literature of war among illiterate societies. It is not comprehensive or authoritative. The literature on the subject of prehistoric war is vast and varied. Much of it is written by specialists in anthropology and archeology, fields in which I have no particular training or competence. This paper only skims the surface of that deep pool. From the viewpoint of a historian interested in studying wars, this literature is all “secondary sources” since by definition there are no written accounts by direct participants in prehistoric wars. However, it appears possible to reach certain conclusions by studying these sources.

The evidence of prehistoric war is necessarily indirect and inferential. As a result, one recurring theme in this thesis is the question of evidence. What kinds of evidence count as relevant? How much interpretation does the evidence require? How ambiguously or directly does the evidence indicate war, or peace? However, the thesis will not entirely shirk the question of war itself. It will draw some tentative conclusions about the incidence and implications of prehistoric warfare.

¹⁷ Ibid., 53-57.
The Philosophical Tradition

As noted above, views of prehistoric warfare have traditionally been tied to views of “original human nature,” and the views about human nature of the philosophers Thomas Hobbes and Jean-Jacques Rousseau have provided polar touchstones for Western thought for over two centuries. Each of them constructed an imaginary anthropology based on his intuition of what man was like in the original “state of nature”—that is, before living within modern social relations and political structures. Their intuitions, however, presented them with exactly opposite pictures of man in the original state of nature.

Hobbes is famous for asserting that the natural state of man is “the war of all against all.” His horror at the prospect of society regressing to this state of maximum individualism and bellicosity led him to propose his famous “Leviathan,” an all-powerful political authority that would suppress this spontaneous universal civil war. “Hereby it is manifest, that during the time men live without a common Power to keep them all in awe, they are in that condition which is called Warre; and such a warre, as is of every man, against every man.”

Thus Hobbes’ view of human history resembled what today we would call progressionism: humanity has ascended from savagery to achieve the fruits of civilization. One of these fruits is freedom from constant fear, for he perceptively added that war consists of more than actual fighting; it also includes fear of attack. “For WARRE, consisteth not in Battell onely, or the act of fighting; but in a tract of time, wherein the Will to contend by Battell is sufficiently known…So the nature of War, consisteth not in actuall fighting; but in the known disposition thereto, during all the time there is no assurance to the contrary. All other time is PEACE.”

For Rousseau, by contrast, man was originally free and friendly. His description of man in the state of nature is positively idyllic. “I see him eating his fill under an oak tree, quenching his thirst at the first stream, making his bed at the base of the same tree

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19 Ibid., 88-89 [62].
that supplied his meal, and behold, his needs are met.”

In this Edenic existence, no one had any reason to attack or subjugate anyone. Rousseau explicitly rejected Hobbes’ picture of the primordial universal war and saw original man as cooperative. The development of civilization, therefore, has been a descent into de facto slavery.

It is worth noting that both Hobbes and Rousseau took care to avoid turning their philosophical speculations into testable scientific hypotheses. Each offered his version of man in the state of nature as a thought experiment and denied that his account should be used to make empirical predictions. Hobbes wrote, “It may peradventure be thought, there was never such a time, nor condition of warre as this; and I believe it was never generally so, over all the world,” and in the next paragraph he admitted “…there had never been any time, wherein particular men were in a condition of warre one against another.” Rousseau was even more explicit about the hypothetical nature of his exposition. “Let us begin by setting aside all the facts, for they have no bearing on this question. This kind of enquiry is not like the pursuit of historical truth, but depends solely on hypothetical and conditional reasoning, better suited to illuminate the nature of things than to show their actual origin.”

Despite these caveats, the stark contrast between Hobbes’ and Rousseau’s pictures of prehistoric man leads researchers of prehistoric war to use their names as shorthands for the opposite extremes of bellicosity and pacifism. In a Hobbesian view, prehistoric warfare should be widespread, if not universal; in a Rousseauian outlook, prehistoric warfare should be nonexistent, or at least extremely rare. They form opposite poles that bracket the landscape of the issue of prehistoric warfare.

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21 Ibid., 44-45.
22 Hobbes, *Leviathan*, 89 [63].
23 Ibid., 90 [64].
CHAPTER 1

ISSUES

What is Prehistory?

The term “prehistory” refers to human social and cultural events that are not recorded in writing, usually because the cultures involved lack literacy. It typically carries connotations of “ancient” and “primordial.” It is possible, however, to separate several aspects that make up “prehistory.”

One issue is, When was prehistory? “Prehistory” denotes vastly different periods in different parts of the world and among different groups and cultures. In some parts of the world, prehistory ended thousands of years ago. In parts of the Eurasian heartland, such as China and the Middle East, we have more or less continuous written records of events reaching back to several thousand years BC. At the other extreme, some native peoples in areas such as New Guinea, the Amazon basin, and the Arctic acquired a written history only within the last century. The issue of prehistoric warfare deserves a detailed review, beyond the scope of this thesis, of each cultural and geographic area.

Another issue is, When were records written in relation to the events chronicled? Historians consider a “primary source” something written during or immediately after, or at least within living memory of, the event it describes. Some historically valuable documents, however, record oral history traditions that relate events from previous generations, before the society became literate. Examples include the Hebrew Bible, the Homeric epics, and Scandinavian sagas. These stories might be considered part of “prehistory” on the grounds that the society in question was illiterate and the events were not recorded at the time.

A third issue is, Who wrote the records? It is possible to construct a descending scale of directness in reportage.

1. Written by a direct participant, such as letters and orders by decision makers like military commanders and government officials
2. Written by an observer who belongs to the same culture as the participants, such as accounts by scribes or reporters
3. Written by descendants of participants or observers from oral histories or family memories
4. Written at the time by observers from outside the culture
5. Written later by observers from outside the culture

This list omits secondary accounts and analyses produced by scholars from primary sources.

The interesting point about this scale is that, though it ranks written records, only the first two categories unambiguously narrate events that belong to history instead of prehistory. The other three categories can provide information about unrecorded events or preliterate societies, that is, societies that are still in prehistory as far as their own traditions are concerned. As previously mentioned, category 3 contains things such as the Hebrew Bible and the Homeric epics that tell stories from when the culture was illiterate. Category 4 incorporates not only modern ethnographies written by anthropologists, but many classic accounts of other cultures, including illiterate ones, by writers such as Herodotus and Tacitus as well as explorers, travelers, and traders. Category 5 consists of stories and oral histories written down by outside visitors or observers; modern ethnographies typically include a significant amount of this material.

Category 4 in particular includes sometimes extensive accounts of the habits and actions of illiterate societies written by their trading partners or military opponents. In particular, we have detailed reports of a number of classic warrior societies from their literate enemies or victims, including Gauls, Germans, Slavs, Vikings, Mongols, and others. All of these societies eventually acquired literacy, but during their classic periods of conflict with settled civilizations, they were illiterate. As far as we know, writing had no effect on their actions. We know about these societies and their behavior during these periods from descriptions left by the likes of Roman historians, medieval monks, and Chinese scribes.

The point is that, though the information comes from written records, these societies fall under the study of prehistoric warfare because they were prehistoric by their
own standards at the time. Such considerations increase the range of the sample of human societies and social behavior beyond what is available purely from archeology and anthropology.

The line between history and prehistory is also harder to draw in cases where a culture stands outside history, not because they were illiterate, but because their records are unavailable for our study. The Carthaginians, for example, appear to have been as literate as the Romans, yet their records were destroyed in the razing of Carthage after the Third Punic War. There are several cultures that made inscriptions whose writing we cannot read because the script or the language has proven so far indecipherable, including Etruscan, Minoan Linear A, Easter Island rongorongo, the ancient Nubian Meroitic script, and the writing of the ancient Harappan civilization of the Indus River valley. It is worth remembering also that a number of cultures have entered the historical record only recently when their scripts were deciphered by modern scholars, including cuneiform records of several ancient Middle Eastern civilizations, Egyptian hieroglyphics, Minoan Linear B, and Mayan glyphs.

Prehistory, it turns out, is a slippery concept. Most of the chronology and cultures of the human race have never been recorded at all; voluminous historical records are available for some cultures, particularly recent ones; some cultures and periods span dividing lines like the ones described above. This paper adopts an expansive view according to which cultures such as the medieval Vikings are included in the database of prehistoric behavior because their behavior at the time was not influenced by a tradition of literacy.

What is War?

Despite the volume of ink expended on the topic of war, no universal definition exists. Each investigator uses his or her own definition, usually tied to that researcher’s theory about its causes, frequency, consequences, correlations with other aspects of culture, or nature of the data that person is most familiar with.


It is important to keep in mind the distinction between definition and diagnosis or recognition. Separately from how one defines war, one needs criteria for recognizing its occurrence, especially in anthropological or archeological data. A definition that includes political relations as a necessary condition of war, for example, renders much archeological data ambiguous, since political relations are difficult and often impossible to reconstruct from physical remains. Some researchers eschew giving war a precise definition and concentrate on collecting data.

Anthropologist Keith F. Otterbein, who has been publishing research on prehistoric war for over three decades, illustrates these ambiguities. “I have numerous times defined war as armed combat between political communities. I now have more and more trouble applying the definition.”28 He comments on the theory dependence of both definitions and diagnoses of war.

The definition of war, as well as when war first occurred, may depend upon the theory employed by the scholar. For example, sociobiologists or evolutionary psychologists believe that the acquisition of mates is critical to the survival of the group. Men, as members of groups, fight over women...war may have occurred early, as soon as weapons were used for hunting. Materialists, on the other hand, use a model that employs an assessment of resource availability...With this model it is hard to “see” war in early times when populations were small and resources presumably abundant. Thus, various definitions of war, as well as theories of war, influence when war is thought to have begun.29

Archeologist Steven A. LeBlanc has published results from numerous excavations of ancient sites he has participated in or directed. He professes to bypass definitional conundrums by concentrating on war’s effects rather than its causes or means.

I think it’s more useful to approach warfare with such questions as, Does conflict between independent political units lead to significant deaths and loss of territory,

29 Ibid.
or result in some territory being rendered useless because it’s too dangerous to live in? Are people spending a great deal of time and energy defending themselves? The answers to these questions reveal a very different concept of warfare. If fighting results in significant impacts on people, it is war regardless of how the fighting is conducted.30

Otterbein, too, exempts his own analysis from theoretical difficulty. “My approach does not have theories built into it. Warfare is armed combat between political communities. I look for evidence of armed combat, and I find it in prehistoric times.”31

Nevertheless, some definitional effort is needed to distinguish war from other activities that resemble it but are not war. Otterbein lists homicide, political assassination, feuding, capital punishment, human sacrifice, and dueling as activities that are often difficult to distinguish from war in the absence of context or written records.32

Otterbein’s list can be expanded into a comparison of a number of activities on several characteristics. (See Table 1 on pages 54 and 55.) The distinguishing feature of war is that it is the only activity that is undertaken by an entire collective against another collective that necessarily involves the sanctioned use of violence.

LeBlanc and Thayer provide a counterexample to Otterbein’s emphasis on combat with weapons by describing a form of unarmed aggression that primatologists have observed among chimpanzee groups. Chimpanzees move through their territory in troops, but each individual spends a considerable part of its time foraging for food by itself. This recurrent isolation provides opportunities for a group of adult males from one troop to ambush an individual male from an adjacent troop; two or three chimps hold down the victim while the rest of the attackers kick, punch, bite, and jump on him. Such an attack rarely suffices to kill the target immediately, but he is usually so badly crippled that he dies of his injuries within a day or two. Thayer describes cases documented by field primatologists in which the aggressors repeat attacks like this sporadically over a period of as much as fifteen years, until all the males of the targeted troop are gone or

31 Otterbein, How War Began, 10.
32 Ibid., 9.
crippled, at which point the males of the victorious troop take control of the former troop’s territory and females.\textsuperscript{33}

This example provides a challenging illustration both of what constitutes war and of what evidence is needed to recognize it. If this description is accurate, chimpanzees manage to “conquer” adjacent territory without continuous violence or aggression and without the benefit of writing, weapons, or even language. A conquest like this would be impossible to detect without direct observation.

In addition to distinguishing war from other activities, it is necessary to indicate which subactivities compose war. Many theorists focus on line battles, but they ignore the significance of raids, ambushes, massacres of non-combatants, sieges, and burning and destruction of infrastructure.\textsuperscript{34} Stockpiling of weapons and building defensive fortifications also indicate war, or at least an expectation or fear of hostilities.

**How Does Prehistoric War Compare to Other Phenomena?**

One reason people are interested in warfare (and other cultural traits) among recent band and tribal societies is the assumption that such societies represent our ancient ancestors. In other words, many people perceive a correlation between certain cultures today and cultures in the ancient past, typically based on an assumption that human societies develop through a more or less fixed sequence of cultural stages.

This view prevailed in the Victorian era, as war studies researcher Johan van der Dennan summarizes.

These views [the Great Chain of Being and Eurocentric racism] were translated [in the late nineteenth and early twentieth centuries] in the new evolutionary framework as orthogenesis toward predetermined goals. Secondly, by the same logic, preliterate cultures and primitive peoples were considered to be at the lowest rung of the orthogenetic ladder, and by implication living fossils…our ‘contemporary ancestors,’ as they were called…Thirdly, if primitive people were

\textsuperscript{33} LeBlanc, *Constant Battles*, 81-82; Thayer, *Darwin and International Relations*, 165-78. Otterbein himself briefly mentions this phenomenon in *How War Began*, 41.

our contemporary ancestors, would not their appearance and conduct be similar to our real ancestors…?\textsuperscript{35}

According to sociologist Peter Meyer, such attitudes helped foster the development of the field of ethnography.

Regarding the development of theories on the nature of war and even on the nature of society, ethnographic accounts on these more primitive societies progressively gained more importance. It seemed that ethnography could in fact provide knowledge about very distant historical phases which all human societies had passed through in their evolution.\textsuperscript{36}

Animal behavior researcher J.A.R.A.M. Van Hooff provides a contemporary justification for assuming a correlation between recent tribal societies and ancient humans, on the basis of adaptation rather than survival of living fossils.

If one examines the phenomena of group aggression and war from a comparative perspective, then primitive war deserves special attention, that is war fought in human communities who still live under socio-ecological conditions not too different from those to which our species must have been subjected during its million year long evolutionary process. These conditions undoubtedly most resemble those of the present-day primitive hunter-gatherers.\textsuperscript{37}

Whether on the basis of societies progressing through a fixed \textit{scala naturae} or on the basis of common adaptive response to similar circumstances, the assumption that study of recent band and tribal societies tells us anything definite about the traits of ancient prehistoric societies, including the frequency and nature of war or peace, is


questionable. The examples that Jared Diamond provides of cultural adaptation to
different ecological zones, epitomized by the rapid divergence of the Maori and Moriori
from common Polynesian ancestors (see pages 5-6), renders suspect any assumption that
the observed features of recent hunter-gatherer and tribal societies are survivals from an
ancient condition. To take an extreme example, no one believes that the adaptations of
Arctic peoples to their frigid environment, such as fur clothes, ice houses, and a diet of
sea mammal blubber, represent the habits of our hominid ancestors on the tropic plains of
Africa. More generally, when two societies have split some time in the past (analogous
to speciation in biological evolution), without further data it is invalid to infer from the
characteristics of one society to those of the other or of their common ancestor. This is
exactly the fallacy that many researchers committed in the past (and that some continue
to commit) when they assumed that study of “primitive” peoples sheds light on man’s
primeval nature and habits. Nevertheless, the desire to make such inferences has
provided and continues to provide considerable impetus for research into primitive and
prehistoric societies, including the issue of prehistoric war.

Another issue is how prehistoric war compares to the wars of states and empires
that historians know in greater detail from written documents. A number of differences
are commonly listed, such as that, when states emerge, war shifts from a basis in kinship
groups to state-defined nonkin groups, and the state actively suppresses the previous
military role of the kinship groups.38 There is also a common perception that state-based
warfare is wider-scale, more intense, and consumes a larger portion of a culture’s
resources, including human capital, than nonstate conflict. Anthropologist R. Brian
Ferguson assets that as a society develops into a state, “military activity dramatically
increases in scale and organizational complexity.”39 Military historian John Keegan
argues that war has become progressively less restrained (by logistics, for example) and
more destructive as cultures have evolved toward modernity. He contrasts the “self-

38 R. Brian Ferguson, “Introduction: Studying War,” in R. Brian Ferguson, ed., Warfare, Culture, and
39 Ibid., 59.
restraint” of primitive cultures with the “extremity” of modern warfare, a development he credits to the ancient Greeks for inventing the “face-to-face battle to the death.”

Archeologist Steven A. LeBlanc questions this consensus on the greater intensity of state-based warfare. He agrees that warfare in state societies is more highly organized, but he believes that warfare among bands and tribes has just as great, if not greater, effects on the societies waging it. States typically can apply better technology to logistics, weapons, etc. On the other hand, they also segregate a warrior elite to specialize in fighting, so only a fraction of the populace fights on the battlefield, in contrast to tribal societies where almost every male participates. Warfare among states, moreover, tends to be episodic, separated by periods of peace, whereas tribal groups tend to be in almost constant low-level conflict. Only one or two men might be injured or killed in each encounter, but since encounters happen more often, the butcher’s bill adds up over time. The upshot of all this for LeBlanc is that in tribal societies, according to ethnographic studies, a much higher portion of males—as much as 25 percent—die of war injuries in tribal societies than die of such injuries in states, even in states that are in the midst of fighting intense wars against each other.

Political scientist Bradley A. Thayer sides with LeBlanc in questioning the common assumption that “primitive” warfare is less destructive to the people involved than that of states. “Studies of war in the ancient world reveal that it was absolute for those populations involved, and often included massacres of surviving males. So warfare in the past could be no less total than it is today, although clearly modern technology makes it easier to kill more people more efficiently.” Thayer spends several pages reviewing casualty rates in tribal warfare documented by ethnographers and concludes

[Tribal warfare] can be just as deadly for the participants and as catastrophic for the societies affected by it as the modern, industrialized warfare characterized by

41 LeBlanc dramatizes this point by saying that the horrific casualties of the two World Wars were followed by decades of almost no battlefield deaths for many of the combatant nations, so if the loss rate is averaged over the entire century it turns out to be much lower than it first appears. LeBlanc, *Constant Battles*, 194.
42 LeBlanc, *Constant Battles*, 193-94.
43 Thayer, *Darwin and International Relations*, 99.
World Wars I and II. In the modern era, only nuclear or biological warfare could unambiguously exceed the casualties, on a per capita basis, that are often associated with warfare in tribal societies.\textsuperscript{44}

I have been unable to obtain a copy of Lawrence Keeley’s book \textit{War Before Civilization}, but archeologists John Carman and Anthony Harding provide a summary of some of the themes of his book. Keeley apparently agrees with LeBlanc that war among tribal groups, when averaged over time, is just as deadly as it is among more technologically advanced and highly organized states. Carman and Harding summarize Keeley’s view with the sentence “All war is total war.”\textsuperscript{45}

Anthropologist Keith F. Otterbein makes a distinction between the typical results of tribal versus state-based war: displacement and conquest. Conquest is the typical result of many wars waged by states and empires known to history as well as some prehistoric ones. (Otterbein provides a summary of the conquests of the illiterate Moche, Inca, and related cultures in South America and the archeology that our knowledge of their history is based on.\textsuperscript{46}) Conquering powers kept the enemy populace in place in order to control its labor as well as its other economic resources. Otterbein contrasts this situation with societies that have less flexible social and political structures that are unable to incorporate foreign peoples. If such a society is militarily successful, it pushes the enemy off the land and gains exclusive control of the area in question for its own people. As examples of this process, Otterbein cites the case of the Nuer expansion against the Dinka in East Africa during the nineteenth century and the Iroquois expulsion of the Huron from their traditional hunting grounds in eastern North America during the seventeenth. In neither case was the enemy population incorporated into Nuer or Iroquois society; instead, the Dinka and Huron were largely wiped out and the survivors were enslaved or driven off. Otterbein emphasizes the contrast between conquest and displacement in his commentary on the Iroquois-Huron conflict.

\textsuperscript{44} Ibid., 145.
\textsuperscript{46} Otterbein, \textit{How War Began}, 130-42.
The Iroquois defeat of the Huron was no more a conquest than was the Nuer defeat of the Dinka. No political incorporation occurred; the Huron were annihilated. Huron were killed and some were taken captive, their villages were burned, and the small numbers of survivors fled the lands of the Huron, known as Huronia. Huronia became an Iroquois hunting territory.47

Incidentally, both of these cases are examples of category 4 of evidence on page 10 above. All of the societies involved were illiterate at the time these conflicts occurred. Their clashes are known from contemporary descriptions by outsiders, specifically European explorers and missionaries.48 These cases provide two examples of warfare that was prehistoric in relation to the societies involved even though our knowledge of them derives primarily from written accounts.

Sociologist Peter Meyer connects this distinction between conquest and displacement to the previous point about the emergence of warrior elites. He believes that this emergence is a crucial component of a society’s ability to incorporate other societies; as long as a society remains undifferentiated, it can expand only by displacing its neighbors and cannot incorporate them.49

**Theoretical Perspectives**

Researchers have advanced a huge diversity of theories and explanatory models not only for war in general but specifically for prehistoric war.50 A number of people have attempted to group this vast variety into a few basic categories.

J.A.R.A.M. Van Hooff, an animal behavior researcher, provides a table of over a dozen proposed motives or causes of war. He divides this assortment into two broad categories by applying the biological distinction between proximate causes (social and

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47 Otterbein, *How War Began*, 208. His accounts of the Nuer-Dinka and Iroquois-Huron cases occur in *How War Began*, 203-207 and 208-213, respectively.
48 Ibid., 204, 210-211.
psychological motives) and ultimate causes (larger-scale or longer-term ecological and demographic effects) which operate simultaneously in any given instance of war.  

Archeologist Pavel M. Dolukhanov remarks, “Anthropological theory envisages three main groups of factors which are likely to lead to armed conflicts: sociobiological, where aggression is instinctively antagonistic behavior; cultural, where the motives are dominance and kin warfare; and materialistic, which involve group competition for material resources.” He goes on to opine that sociobiological factors, being universal to the human species, do not explain individual instances of warfare (and are not detectable in the archeological record), and that cultural factors are normally expressed “under the conditions stipulated for competition for resources.” Thus for Dolukhanov, competition for material resources provides the immediate cause for the expression of his other two factors of biological instinct and cultural tradition.

Anthropologist R. Brian Ferguson provides a larger perspective by distinguishing between theories that emphasize motive (corresponding to Van Hooff’s proximate causes), timelessly operating functions (such as population control), and origins or development over time. This last type of theory tries to trace the steps by which the institution of war emerged from a hypothesized war-free condition. Ferguson comments that these factors permit a huge array of complex theoretical permutations, which various analysts and schools of thought have actually postulated. War studies researcher Johan van der Dennan similarly contrasts theories of war as a dynamic process with those that view war in functionalist terms as timelessly serving to maintain certain parameter values (such as population density or male-female ratios).

Political scientist Bradley A. Thayer tries to provide a Darwinian evolutionary basis for neorealist political theory. That is, Darwinian evolution (or its Richard Dawkins “selfish gene” variant) as an ultimate cause explains the egoism that neorealist political theory posits as a proximate cause of much individual and state behavior.

The use of evolutionary theory allows realism to be scientifically grounded for the first time, because evolution explains egoism. Thus a scientific explanation provides a better foundation for their arguments than either theology or metaphysics….I argue that theorists of international relations must recognize that human evolution occurred in an anarchic environment and that this explains why leaders act as offensive realism predicts. Humans evolved in anarchic conditions, and the implications of this are profound for theories of human behavior.55

Thayer believes that one strength of his theory is that it combines two of Ferguson’s factors, function and origin, into a single analysis, while at the same time furthering a materialist approach. “What evolutionary theory and human ecology allow students of warfare is a grasp of the interconnections between the origins of warfare and the functions of warfare. That is, warfare originates in the need to gain and defend resources against competitors.”56 “What an evolutionary perspective allows students of warfare to understand is that the origins of warfare and the functions of warfare are interconnected.”57 That is, the origins of warfare stem from the requirement for resources that are needed for survival and reproduction.

One account of war among hunter-gatherer tribes that distinguishes effects from motives is biologist Edward O. Wilson’s summary of headhunting raids by the Mudurucú of the Brazilian Amazon. A war party stealthily surrounds a target village during the night and suddenly attacks at dawn, trying to decapitate as many villagers as quickly as possible before speedily disappearing back into the jungle. Anthropologists have documented material effects of these raids (increasing the attackers’ Darwinian fitness and access to resources). However, when these observers ask the Mudurucú warriors why they carry out such raids, they show no awareness of such effects, replying that raiding is their customary way of supplicating evil spirits.58

Thayer, in a lengthier continent-by-continent review of ethnographic accounts, amasses many cases in which war among tribal societies is for control of scarce resources

55 Thayer, *Darwin and International Relations*, 11-12.
56 Ibid., 18.
57 Ibid., 108.
and enhances the inclusive fitness of successful warriors.\textsuperscript{59} For example, Yanomamö men in the Brazilian and Venezuelan Amazon (not far from the Mudurucú) gain a reproductive advantage from warfare, since warriors have more wives and offspring than non-warriors.\textsuperscript{60} Thayer comments, “From a classical Darwinian perspective, warfare contributes to fitness because individuals who wage war successfully are better able to survive and reproduce.”\textsuperscript{61}

Sociologist Peter Meyer attempts to connect separate levels of analysis into a unified view via the concept of mental constructs. “To put it briefly: people do not fight for resources, but for ideas of resources.”\textsuperscript{62} He elaborates on this suggestion.

Man’s metabolic needs are a truism and society and its institutions must somehow provide its members with them. However, it is well known that neither all societies nor all biological species have succeeded in this task. More than 99.99\% of all species once existent on this globe are now extinct and the same is true for innumerable human societies. In most cases of extinction of human societies it can be hypothesized that the gap between mentally constructed resources, the real resources of the physical world, and action patterns to get hold of them, grew too wide.\textsuperscript{63}

War studies researcher Johan van der Dennan appears to be pursuing a similar idea when he says, “War has high opportunity costs, while peace carries with it high existential costs in the form of loss of life, territory, vital resources, cultural integrity, etc. Thus most peoples may be seen manœuvring, ‘cybernating’ between Scylla and Charibdis, in a continual effort to reach an optimal balance.”\textsuperscript{64}

\textsuperscript{59} Thayer, \textit{Darwin and International Relations}, 121-35.
\textsuperscript{60} Ibid., 131-32.
\textsuperscript{61} Ibid., 104.
\textsuperscript{63} Ibid., 233.
\textsuperscript{64} Johan van der Dennan, “Primitive War and the Ethnological Inventory Project” in Dennan and Falger, eds., \textit{Sociobiology and Conflict}, 258.
An example of a developmental theory of war is the idea dubbed the “hunting hypothesis.” This hypothesis notes that warfare and hunting large game animals share several characteristics.

- Both activities involve physical violence against a mobile, uncooperative target that is at least as large and heavy as an adult human being.
- Both activities use many of the same weapons, such as thrusting and throwing spears, and bows and arrows. Another way of putting the same point is that many weapons can be used both against animals and human beings.
- Both activities require advance planning and cooperative behavior from a social group, and in most cases both activities are carried out primarily (though not always exclusively) by adult males.

The hunting hypothesis states that these similarities have a causal basis in a developmental sequence, namely that hunting game animals evolved into hunting (that is, fighting) fellow human beings as prey.\(^{65}\)

According to war studies researcher Johan van der Dennan, a more specific version of this hypothesis is that Stone Age humans learned to hunt, and many groups came to depend on hunting, large game animals in cooperative groups. When such animals became rare or extinct at the end of the last Ice Age, this hunting activity became misdirected against other human beings as a replacement for the missing large game animals.\(^{66}\)

Anthropologist Keith F. Otterbein agrees that the disappearance of large game animals around the end of the Ice Age affected the frequency of war as well as hunting. Unlike Dennan, Otterbein believes that the human species has undergone two waves of two distinct styles of warfare, each with its own origins. Otterbein opposes the common assumption that warfare, once it started, whether that was recently or in the distant past, has been more or less continuous ever since. Otterbein believes there was an initial wave

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65 This idea was originally promulgated by paleoanthropologist Raymond Dart and popularized by writer Robert Ardrey. Johan van der Dennan, “Origin and Evolution of ‘Primitive’ Warfare,” in Dennan and Falger, eds., *Sociobiology and Conflict*, 160-63.
66 Ibid., 163.
of warfare among Ice Age hunter-gatherers when bands of hunters (with experience in cooperatively hunting large animals with weapons) crossed paths and spontaneously attacked each other in order to ensure access to the prey they were stalking. This type of warfare declined as hunting bands grew less and less common after the decline of large prey animals around the end of the Ice Age; for several thousand years after the end of the Ice Age, there was essentially no war at all. Then a second type of warfare arose independently among settled agriculturalists for control of the land they needed to grow crops. Thus, for Otterbein, hunting is related to a type of warfare, but, contra the hunting hypothesis, the warfare that has been typical of human history in the last ten thousand years or so is unrelated to hunting.67

Dennan expresses even more skepticism that there is a causal relation between hunting and any type of war.

Hunting, as practised by primitive hunters at least, is not an aggressive activity at all….There is also no evidence for the assumption that primitive hunters were motivated by sadistic or destructive impulses. On the contrary, there is evidence that they had an affectionate feeling for the killed animals and possibly a feeling of guilt for the kill….Finally, what body of information we have about contemporary hunter-gatherers does not indicate that hunting is conducive to destructiveness, cruelty, or warfare.68

Dennan goes on to remark that carnivory in diverse species of mammals does not correlate very highly with intraspecific aggression or violence—“There is hardly any evidence that carnivores exhibit more, or more intense, intra-specific aggression than other mammals….Herbivores, too, show agonistic behavior”69—and concludes “There is no evidence that big-game hunting specifically requires aggression…The hypothesis that Palaeolithic hunting selected for increasing aggression is therefore very dubious.”70

69 Ibid.
70 Ibid.
In sum, researchers have proposed a bewildering array of theories to explain war, including prehistoric war. Such theories attempt to account for three major types of factors: motive, function, and origin. Some theories ignore one or more of these factors to concentrate on others. For example, one large and influential class of functionalist theories, which might be called “materialist” in a broad sense, focuses on intergroup economic, ecological, and demographic pressures and consequences. This class of theories tends to view social or psychological motives for war as epiphenomena that distract the investigator from the true underlying causes. These theories also tend to assume that war is an adaptive response that is elicited whenever an appropriate combination of variables occurs and thus to neglect the question of how any particular war, or the institution of war in general, arises from a state of peace. As anthropologist R. Brian Ferguson summarizes this approach, a number of researchers “argue against a taxonomic approach to sociopolitical evolution in favor of one envisioning multiple continuous parameters and processes.”^71 He defends a generally materialistic approach to the study of war.

Competition for scarce resources very often is the basis of war. What type of resource may be involved will vary from one war pattern to another, and resources may be scarce due to many processes besides population numbers pressing on absolute supplies….Despite these qualifications, the hypothesis that resource scarcity is a primary cause of war in prestate societies clearly may be contrasted to hypotheses that explain war without any reference to any scarce resource. In its specific applications, the resource scarcity hypothesis has been supported by a substantial amount of data, and it has survived several attempts at refutation.^72

As noted above on pages 20-21, political scientist Bradley A. Thayer has developed a model that connects Darwinian evolutionary theory with neorealist political theory while furthering a materialist approach to the study of war. “Warfare contributes

^72 Ibid., 32.
to fitness in certain evolutionary conditions….People wage war to gain and defend resources. Thus evolutionary theory provides a sufficient cause of war.”

[N]atural selection caused humans to have a strong instinct to preserve themselves, related individuals, and members of the tribe….War is one mechanism that permits preservation in the right circumstances. Successful warfare would serve two purposes: it would increase the absolute fitness of a group by providing them with more resources and it might also increase their relative fitness….Evolutionary theory suggests that warfare is an egoist’s solution to the problem of gaining resources.

“An ultimate causal explanation for warfare based in evolutionary theory begins with the recognition that warfare contributes to fitness in certain circumstances because successful warfare lets the winner acquire resources.”

Thayer claims that a materialist theory of war based on resource scarcity also explains when peace should prevail, such as when resources are abundant or widely distributed or when demand for resources is held in check by factors like high mortality.

It is worth noting that different styles of theorizing about war do not correlate especially closely with disciplinary boundaries. For example, Keith F. Otterbein is an anthropologist who has built a theory of the ancient origins of war around concepts from political theory, while Bradley A. Thayer is a political scientist who grounds his theory of war in Darwinian evolutionary theory. Edward O. Wilson is a biologist who doubts that genetics explains cultural differences and goes out of his way to count culture as an independent force in human behavior, while Peter Meyer is a sociologist who uses the concept of mental constructs from cognitive theory to unify various explanations of war. Theorizing about war, including prehistoric war, is intrinsically multidisciplinary.

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73 Thayer, Darwin and International Relations, 99.
74 Ibid., 107.
75 Ibid.
76 Ibid., 112-13.
Table 2 on pages 56-59 lists a number of theoretical approaches to the study of war. The most salient feature of the list, incomplete though it is, is the range and variety of viewpoints represented.

Of course the most fundamental question about prehistoric war is not what causes it or what consequences it has, but whether it occurs (or occurred) at all. Some researchers believe that no war existed before the rise of settled civilizations, that is, that there is no such thing as prehistoric warfare. Others claim prehistoric warfare is widespread. In order to settle this question, we need to determine what evidence is available, and before using such evidence we need to determine what counts as evidence and how one should interpret it.
CHAPTER 2
EVIDENCE AND INTERPRETATION

In the absence of written records, warfare in ancient or tribal societies must be inferred by analogy from several types of evidence. Each type of evidence taken on its own admits of alternate non-war explanations; the probability that war occurred in any given case increases with each piece of the puzzle, but there is rarely a “smoking gun” that conclusively establishes war.

The major categories of data include the following.

1. Ethnographic descriptions of hunter-gatherer and tribal societies that survived into modern times.
2. Physical remains of warfare.
3. Cultural representations, including rock and cave art as well as stories that survived from preliterate times to be written down by ancient chroniclers or modern anthropologists.

Each of these categories carries handicaps: it is impossible to know how closely category 1 resembles ancient behavior\(^77\) (a difficulty alluded to on pages 15 and 16 above), category 2 needs close interpretation to rule out other possible explanations, and category 3 may represent myths and dreams with no basis in history.

Even if it is impossible to know if any particular representation in category 3 (oral history account or graphic image) depicts a specific event, it is difficult to see how a storyteller or artist could use the theme of war without some previous exposure to the real thing. Thus it seems reasonable to take such representations as at least alluding to a previous warlike episode even if we cannot reliably reconstruct the precise course or outcome of a specific conflict from such data. Similarly, not all weapons and fortifications in the archeological record were necessarily themselves used in violent

\(^{77}\) John Keegan notes with some irony that the inference from modern Stone Age remnant tribes to ancient ancestors is problematic because the modern tribal remnants almost certainly differ from the mainstream of ancient cultural evolution because they are history’s losers, pushed—often recently—from richer ecological zones onto marginal lands that forced them to adopt new technologies and social organizations. Keegan, *History of Warfare*, 120.
conflicts. However, the stockpiling of weapons and the construction of fortifications are typically defensive reactions to previous outbreaks of destructive warfare, so it seems reasonable to infer that groups that built such stockpiles and fortifications had suffered from or at least witnessed previous armed violence in their area.

The major problem with category 2 is that each indication of war, taken on its own, has a possible alternate explanation. In general, even direct evidence of a violent death does not prove the occurrence of war because the violence may not involve organized warfare. As noted above on page 13, it may represent a wide range of activities which fall short of war. Similarly, most (although not all) weapons can be used to hunt animals as well as to fight people.78

Steven A. LeBlanc emphasizes what appears to be a practical rule among working archeologists: even though an individual indicator of violence might signify any of these nonwar situations, a concentration of them from the same time and place almost certainly signifies some form of war. For example, a group of victims killed together, even if it was a form of sacrifice rather than battlefield deaths, almost certainly consisted of prisoners captured after a defeat, since voluntary sacrifice rarely involves more than one or two individuals. The same reasoning applies to other individually ambiguous activities when they occur en masse: Cannibalism, stockpiling more weapons than would be needed for hunting, dishonoring the dead (by not properly burying them), and burning, especially of entire brick or stone villages with the contents of the dwellings intact.79

Archeologists John Carman and Anthony Harding make explicit the general point that archeological knowledge of prehistoric war rests on an inference by analogy from the known to the unknown, and then add their own rough and ready guide to relevant remains.

For an archeologist, what is crucial is a conjunction between observed archeological data (artefacts in the wide sense) and the material remains of known violent encounters in the historical or ethnographic record. Archeologically, what survive are three potential categories of data: artefacts used with aggressive intent

78 LeBlanc, Constant Battles, 62-63.
79 Ibid., 60-64.
(‘weapons’), damage inflicted on other humans in the form of pathological marks on human skeletons (or rarely, soft tissue) and site evidence in the form of constructions for defence or, more rarely, offence.

Carman and Harding add that what do not survive in archeological remains are motives, causes, courses, and outcomes of aggression.\(^{80}\)

Carman and Harding go so far as to suggest that the relation between theory and data is the reverse of the naïve belief that data tests theory, rather that theory helps form data.

The evidence carried by human remains can tell us that violence existed in the past, but it offers little in the way of a firm indication of the prevalence of such violence. The interpretations offered of other evidence—‘defensive’ structures, ‘buffer zones’, the suitability of axes for use as weapons—are predicated on beliefs about past violence, and do not of themselves constitute evidence for it.\(^{81}\)

Even so, they allow that “it is a reasonable presumption that at least some weapons—perhaps the majority—and at least some fortifications were the result of the causes and courses of ancient wars.”\(^{82}\)

Archeologist Steven A. LeBlanc provides personal testimony to the theory dependence of interpretation of archeological remains. He describes how for years he assumed, along with most archeologists and anthropologists, that stone rings that have been found in many sites around the world were attached to digging sticks to add weight to them. Shortly before he wrote his book Constant Battles, he began to doubt this explanation of the use of the stone rings because he could find no reference to observations of such a use among any of the groups documented in the ethnographic literature. Then he realized that the stone rings he had excavated in the Middle East and the American Southwest closely matched known mace heads. Reinterpreting the almost

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81 Ibid., 6-7.
82 Ibid., 3.
ubiquitous stone rings as mace heads caused him to “see” violence and warfare at his sites that he previously had assumed were peaceful.\(^{83}\)

LeBlanc tells a similar story about small pebbles or rounded ceramic pieces that are found in many prehistoric sites. Researchers have long accepted that these are sling missiles, but they thought they were used to defend flocks of domesticated animals like sheep and goats from predators like wolves. LeBlanc again had a revelation when he uncovered regularly spaced piles of sling stones along the interior of a wall enclosing a Neolithic village. As LeBlanc puts it, “Those missiles were not used to herd sheep,” that is, they must have been intended to defend the village from human attackers. Since sling stones inside village walls are found at many sites, the reinterpretation of their purpose prompted LeBlanc to increase his estimate of the prevalence of ancient warfare.\(^{84}\) He tells a similar story of personal revelation about the defensive layouts of ancient houses and villages he excavated in the American Southwest.\(^{85}\) In good empiricist fashion, he claims that his reinterpretations were forced on him by the data. “I arrived at these conclusions not by abstract theory, but by being forced to look at warfare based on conclusive evidence I found in the ground.”\(^{86}\)

LeBlanc attempts to draw the reader into his revelation by arguing for a reinterpretation of the artifacts found with Ötzi, the famous “Ice Man” found in the Alps in 1991. When X-rays revealed an arrowhead embedded in his chest, LeBlanc immediately concluded that the Ice Man had died from being shot and that, rather than carrying tools for farming or woodworking, “he was armed to the teeth.” The bow and quiver of arrows were obvious weapons, but additionally the “hatchet” could have been a battleaxe and the stone knife could have been for last-ditch personal defense.\(^{87}\)

At a more practical level, archeologist Slavomil Vencl provides a classification of weapons and a commentary on their visibility in the archeological record. He divides weapons into five categories based on their degree of specialization.

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\(^{83}\) LeBlanc, *Constant Battles*, 141-42.

\(^{84}\) Ibid., 142.

\(^{85}\) Ibid., 2-3.

\(^{86}\) Ibid., 3.

\(^{87}\) Ibid., 4.
• Non-artifacts used as weapons in an emergency, such as a thrown stone or a tree branch wielded as a club.
• Implements made and normally used for other purposes used as weapons in an emergency, such as farming or building tools.
• Dual-use items, such an axe made both for cutting wood and for hacking at enemies.
• Weapons specialized for fighting, such as swords.
• Weapons that are so specialized that they are only ceremonial or symbolic, such as royal scepters (a symbolic cudgel).

Two factors contribute to lack of visibility of both weapons and fortifications in the archeological record: They did not survive (wooden clubs rotted away, for example) and they have potential non-violent uses (axes and hammers could be construction implements; a fortification could also be used as a marketplace, a religious or ceremonial center, etc.). However, there are some artifacts that are used only in warfare against human beings and so indicate war (or at least preparations for war) even when found singly, such as shields and body armor.

The upshot of these considerations is that coming to conclusions about the frequency and nature of prehistoric war requires a confluence of multiple lines of evidence interpreted in the light of theoretical commitments. As a bare statement, this claim seems like a truism in any field of study; in the study of prehistoric war it takes a specific inferential form.

War and warlike activities are known from direct reportorial and ethnographic records. This record allows historians, anthropologists, and others to determine not only causes, courses, and consequences of specific wars but also what correlates of war look like in the absence of written documentation. One can then use these correlations to identify, however tentatively, evidence of prehistoric warfare.

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88 Slavomil Vencl, “Stone Age Warfare,” in Carman and Harding, eds., Ancient Warfare: Archeological Perspectives, 65-68. Keith F. Otterbein provides an example of the difficulty of interpreting fortress remains: Even though he considers himself a “hawk” on the issue of prehistoric warfare in general (since he believes that prehistoric warfare not only existed but was common), he breaks with other hawks in doubting that two hallmark cases of ancient fortifications—Jericho and northern China—were actually fortifications for war. He thinks it is more likely that they were originally built to protect cities from floods. Otterbein, How War Began, 161-64, 193-94.
89 LeBlanc, Constant Battles, 63.
On the negative side (where prehistoric warfare might be less common than evidence seems to indicate), there are few types of evidence that, by themselves, unambiguously indicate war. Swords, shields, and body armor are used only in combat against other humans, but individual instances of them do not prove the occurrence of a battle. Most other types of evidence have alternate interpretations or uses. Cultural representations, including art and oral traditions, might not signify events that actually happened; many weapons are used in hunting or defending against animals as well as human beings; many purported weapons could be tools used in activities like farming and building; apparent fortifications might have been intended to control floods, protect against animals, or provide a space for rituals or celebrations; violent deaths might have resulted from social activities other than war.

On the positive side (where prehistoric warfare might be more common than the available evidence indicates), most past events have no current record. Undoubtedly, most wars (as most cultural events of all types) were never recorded or remembered in any lasting form at all. Most weapons, fortifications, bodies of casualties, etc., have long since rotted, deteriorated, or scattered so that we cannot recognize or study them.

Recognizing prehistoric war requires correlations among different lines of evidence. We can take the ancient Trojan War as emblematic of this consilience of evidence. Many people doubted that the Homeric epics describe a real war until archeological finds began revealing an ancient war that seemed to correspond to Homer’s descriptions. Other examples of the same idea include how a single violent victim may have died from many different nonwar causes, while a group of violent victims that all died at the same time and place is much more likely to be battlefield casualties or sacrificed captives from a lost battle; oral traditions of violent conflict with a group’s neighbors may be mere boasting or a constructed component of cultural identity unless observation reveals demographic patterns consistent with losses from such conflict.

Keeping appropriate caveats in mind, and acknowledging dependence on expert opinion in areas beyond my competence, I believe it is possible to survey research into war and peace in prehistoric periods and draw conclusions about their nature and prevalence.
CHAPTER 3
WHAT RESEARCH SAYS

Peaceful Prehistoric Societies

There is evidence that many prehistoric societies, both ancient and recent, rarely or never engaged in warfare. To put the same point another way, there is evidence that many prehistoric societies have gone through periods of little or no violent conflict.

One famous case of a peaceful illiterate society is that of the Arapesh of New Guinea, publicized in the early twentieth century by anthropologist Margaret Mead. Her description of Arapesh society, occupying one-third of her popular book *Sex and Temperament in Three Primitive Societies*, was mainly concerned with individual, gender, and family relations. However, she highlighted the essentially peaceful character of Arapesh society. She claimed not only that the Arapesh almost never fight each other, but that Arapesh social structures actively suppress any tendency toward warfare. “Warfare is practically unknown among the Arapesh. There is no head-hunting tradition, no feeling that to be brave or manly one must kill….The feeling towards a murderer and that towards a man who kills in battle are not essentially different. There are no insignia of any sort for the brave.”

Later in the book she went so far as to claim that any aggressive, warlike Arapesh male is treated “as almost insane.”

According to Mead, there are two mechanisms among the Arapesh for checking the outbreak of war: social isolation of aggressive individuals, and the lack of permanent political units or interest groups. Even when a man with a violent personality occasionally arises among the Arapesh, he is always socially isolated and unable to combine with any other like-minded men to form a proto-gang or -army. He is gently ostracized by everyone who knows him. At the same time, Arapesh men do almost all their practical chores (tending gardens and fruit trees, hunting, building houses) in

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91 Ibid., 157.
constantly shifting work groups that cut across residence and kinship lines,\(^93\) thus preventing the emergence of stable interest groups or political units that might oppose each other in organized armed conflict.\(^94\)

According to anthropologist Colin Irwin, the Inuit language contains no term that exactly corresponds to “war,” which seems to indicate that the Inuit lack the concept and the practice of war.\(^95\) More specifically, the Inuit in the central Canadian Artic almost never engage in warfare. This peaceful behavior appears to be because the Inuit have a cultural inhibition against fighting other Inuit; most of the fighting they do is directed against bands of Indian tribes encroaching on their territory from forested lands further south. According both to accounts by the first European travelers in the region and to modern ethnographic studies, the Inuit in the central region have less contact with Indians than do Inuit further west (in Alaska) and further east (around Hudson Bay). Irwin points to this correlation and infers causality: the central Inuit fight less often than Inuit in other regions because they less often have to defend their territory from Indian bands.\(^96\) In any case, Irwin claims, Inuit culture lacks a well-formed concept of war, and only rarely engages in behavior that we might call war.

In a summary account, archeologist Jonathan Haas has traced the waxing and waning of war across prehistoric North America as indicated by archeological remains. According to Haas, in the period from about 13,000 to 7,000 years ago,

The archeological record gives no evidence of territorial behavior on the part of any of these first hunters and gatherers….There is no evidence of competition or ethnic differences of any kind setting one group apart from another….We find no sign anywhere in the archeological record of even a \textit{hint} of conflict or warfare.\(^97\)

\(^93\) Ibid., 15-22.
\(^94\) Mead stated flatly that in Arapesh society “There are no political groups” (ibid., 15). Conflicts between groups of Arapesh men nevertheless do sometimes break out, but, as we will see in the next section, these are not aggressive fights to the death.
\(^96\) Ibid., 199-200.
About the following period in what is now the southwestern United States, Haas says, “We find there is a period of more than 5,000 years when there continues to be not a single manifestation in the archeological record of conflict, violence, or warfare.”98 In tracing the development of the Anasazi culture in more detail, Haas insists that Anasazi groups remained at peace with each other for over five hundred years. Intergroup violence finally broke out among the Anasazi in the middle of the thirteenth century AD, culminating in a mass exodus from the region around 1300. The Anasazi migrated to other areas, where warfare continued among them but at a much reduced level.99

Haas contrasts this pattern with what the archeological remains indicate in eastern North America. Signs of warfare there appear early, starting around 5000 BC. Then, around 2000 BC, these signs become much rarer, and there followed a period of about three thousand years of relative peace. Then around 1000 AD signs of warfare reappear “with a vengeance,” as Haas puts it, and continue up until the period of European contact and colonization.100

Thus, according to Haas, all North Americans were peaceful for thousands of years after arriving in the continent, a pattern that persisted in the Southwest for several thousand more years. Easterners, by contrast, were peaceful in a middle interval sandwiched between periods of violent warfare before and after.

At a higher level of generality, war studies researcher Johan van der Dennan has provided a list of allegedly peaceful cultures known from anthropological data. Dennan admits that his list of not of uniform quality or composition since it combines informal observations by traders, travelers, etc., with modern ethnographic studies. His point is that there is positive evidence from some source or other for the peacefulness of each entity in the list.101 The list includes well over one hundred named cultures and stretches to five pages.102

In sum, there is evidence that many prehistoric periods have seen peaceful coexistence of human societies, sometimes for a long time.

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98 Ibid., 16.
99 Ibid., 18-21.
100 Ibid., 23.
101 Johan van der Dennan, “Primitive War and the Ethnological Inventory Project” in Dennan and Falger, eds., *Sociobiology and Conflict*, 263.
102 Ibid., 264-68.
Ritual War

One idea related to the concept of peaceful prehistoric societies is “ritual war.” It symbolizes the divide on the question of the generality of war. According to this notion, warfare in prestate societies consisted primarily or exclusively of nonlethal ritual. In other words, if this claim is true, then deadly warfare does not extend back beyond the origin of state societies; thus its causes should be sought among cultural situations distinctive to states.

The idea that all primitive or prehistoric warfare was little more than a ritual and rarely involved injury or death is widespread and long-standing. Indeed, Keith F. Otterbein, an anthropologist himself, points out that anthropologists have renamed the warfare of native peoples “ritual warfare,” thus making prehistoric or primitive warfare ritualistic by definition. 103 Otterbein provides a generic description of ritual war.

Historians, and political scientists as well, accept the notion that the warfare of nonliterate peoples is “ritual warfare.”…Ritual warfare is thought to be nonserious, involving few casualties, to be rule bound, and to be viewed by the participants as a game….According to the inventors of ritual war, combat in nonliterate societies consists of two lines of warriors facing each other and throwing spears or shooting arrows. Projectiles fly until someone is wounded. With that injury, the fighting stops. 104

Otterbein refers to promulgators of the ritual war thesis as “inventors” because he believes they advance the claim that all prehistoric warfare is ritual in the face of contrary evidence. In a paper, Otterbein describes such a battle as “tournament-like” and adds “I know of no tribe that fits this description.” 105

103 Otterbein, How War Began, xi. Anthropologist Lionel Tiger makes a related point, noting that the American Anthropological Association adopted a resolution in November 1986 that, in his opinion, effectively defined the study of war, including prehistoric war, as a political program rather than as a subject of scientific investigation. Lionel Tiger, “The Cerebral Bridge from Family to Foe,” in Dennan and Falger, eds., Sociobiology and Conflict, 99-100.
104 Otterbein, How War Began, 34.
Despite Otterbein’s skepticism, there are records of ritual war answering to this description among preliterate peoples. Military historian John Keegan offers a description of this type of warfare, based on accounts by European travelers, as it occurred among the Nguni tribes of southern Africa in the late eighteenth century, before the dramatic rise of the Zulu tribe under their charismatic leader Shaka in the early nineteenth century.

Battles tended to be ritualized, conducted under the gaze of old and young, begun with an exchange of insults and finished when casualties were inflicted. There were natural as well as customary limitations on the level of violence: because metals were scarce, weapons were made of fire-hardened wood, thrown rather than used hand-to-hand; and should a warrior happen to kill an opponent, he was obliged at once to leave the field and undergo purification.106

Margaret Mead observed a similar pattern among her peaceful Arapesh in New Guinea in the early twentieth century.

The beginning of hostilities they regard as an unfortunate accident….All such clashes between hamlets start in angry conversation…An altercation follows; the offenders may justify or excuse their conduct…[T]he meeting may end in a few harsh words. Alternatively, it may progress from reproach to insult, until the most volatile and easily angered person hurls a spear. This is not a signal for a general fracas; instead…the next most volatile person of the opposite party throws a spear back at the man who hurled the first one. Each reprisal is phrased as a matter of definite choice…This serial and carefully recorded exchange of spears in which the aim is to wound lightly, not to kill, goes on until someone is rather badly wounded, when the members of the attacking party take to their heels.

If, as occasionally happens, someone is killed in one of these clashes, every attempt is made to disavow any intention to kill: the killer’s hand slipped; it was because of the sorcery of the Plainsmen [a nearby non-Arapesh tribe].

These descriptions match Otterbein’s summary on the essential points, especially that contestants throw or shoot projectiles at each other rather than closing to engage in hand-to-hand combat, and that, most importantly, the contest does not escalate into a deadly free-for-all but rather ends by mutual agreement before that point is reached.

Clearly ritual war occurs, but are all conflicts among illiterate societies so constrained?

**Evidence for Destructive War**

This paper has already reviewed evidence that indicates the occurrence of deadly combat among prehistoric societies.

- Oral history traditions and observations by Europeans of the conquest of the Chatham Islands by the aggressive Maori of New Zealand in the nineteenth century (pp. 5-6).
- Literary accounts of wars from earlier preliterate periods based on oral history traditions (pp. 9-10).
- Accounts of illiterate warrior societies of the ancient and medieval Old World (Gauls, Germans, Slavs, Vikings, Mongols, and others) recorded by classical authors (p. 10).
- Statistics from ethnographic studies on violent deaths among tribal members (pp. 17-18).
- Reconstructions from archeological data of the conquests of illiterate pre-Columbian societies in South America (p. 18, reviewed in more detail below, pp. 42-43).
- Accounts by European explorers of forceful expansions by illiterate cultures in premodern Africa and North America against their neighbors (pp. 18-19).
- Ethnographic evidence of ongoing (if intermittent) combat between Inuit and Indian tribes in the Canadian Arctic before the twentieth century (p. 35).

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• Reconstructions from archeological data of an outbreak of war among the Anasazi of southwestern North America in the thirteenth century and of two periods of widespread warfare in eastern North America before 2000 BC and after 1000 AD (pp. 35-36).

These examples include evidence from all three categories outlined on page 28: archeological analysis of physical remains, accounts based on direct observation by outsiders (whether ancient scribes or modern ethnographers), and cultural representations from within a given culture (primarily written versions of oral folklore).

One type of evidence not yet considered, falling generally in the category of cultural representations, is visual images that represent war or battle. Such images suffer from the same problem of interpretation as oral histories: in isolation, it is difficult, if not impossible, to know if an image depicts a specific event rather than generalized myths, dreams, etc. However, as noted above on pages 28-29, it is reasonable to infer that such an image stems from memories of a previous warlike episode, so such imagery can be taken as at least alluding to the occurrence of war in a particular cultural area.

Do such images exist from preliterate societies or periods? According to military historian Arther Ferrill, to anthropologist Keith F. Otterbein, and to archeologist Steven A. LeBlanc, they do. Ferrill reproduces and analyzes several well-studied examples of prehistoric art from the Eurasian heartland (the Middle East and southern Europe), some of which date to around ten thousand years ago. The images in question portray groups of human stick figures carrying bows or shooting arrows at each other with bows. Ferrill perhaps overanalyzes one of the images as the earliest surviving depiction of the tactic of “flanking fire” that was actually carried out in a particular battle, but it seems undeniable that the image in question was inspired by a battle between two opposing groups.

Otterbein notes that there is an extensive pictorial record of warfare in northern Australian cave art that, according to standard dating techniques, covers a period of six thousand years (from ten thousand to four thousand years ago). In fact, it is possible to

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109 Ibid., 22.
trace an evolution of weapons and fighting styles during this period from the cave art, from individuals throwing boomerangs at each other (as well as hitting each other with boomerangs used as clubs) to groups throwing both boomerangs and barbed spears at each other, with the bodies of the killed or wounded lying at their feet.\textsuperscript{110}

Similarly, LeBlanc points to the considerable amount of cave art in southern Africa that is usually attributed to the ancestors of today’s San (Bushmen) of the Kalahari Desert. A recurring theme in this art is groups in battle with each other, shooting arrows and throwing spears at each other with (as in the scenes depicted in northern Australia) the bodies of the killed or wounded lying at the feet of the combatants.\textsuperscript{111}

LeBlanc’s practical criteria for recognizing warfare from archeological remains, summarized on page 29 above, emphasize the significance of mass over individual signs of violence. One famous example of such prehistoric mass violence occurred sometime between twelve and fourteen thousand years ago at Jebel Sahaba near the Nile River in what is now northern Sudan (ancient Nubia). Fifty-nine individuals of both sexes and all ages were buried in a mass grave, at least twenty-four of whom show skeletal signs of having died from wounds inflicted by weapons. The presence of women and children in the group bespeaks a massacre rather than a battle, but ambushes and massacres are forms of warfare as characteristic of prehistoric peoples as battles are.\textsuperscript{112}

As an illustration of the point that prehistoric warfare consists of more than battles, anthropologist Keith F. Otterbein surveyed a sample of ethnographic studies for evidence of ritual warfare in prestate, uncentralized cultures. He discovered that most of the societies documented (24 out of 28) normally initiate hostilities against their neighbors by an ambush or surprise attack, not a prearranged ritual or battle.\textsuperscript{113}

\textsuperscript{110} Otterbein, \textit{How War Began}, 73.
\textsuperscript{111} LeBlanc, \textit{Constant Battles}, 113-14. As an aside, Australia seems to be the only major cultural area that never adopted the bow and arrow over the throwing spear (or spear plus atlatl) before European contact in the last several centuries. The bow and arrow’s several advantages over the thrown spear (greater range and accuracy, ability to be fired from a concealed crouch, larger number of smaller and lighter arrows that can be carried) propelled its diffusion from its invention somewhere in the Old World around 15,000 BC to the entire globe, including the Americas, with the major exception of Australia. This provides \textit{prima facie} evidence of the geographical isolation of Australia since human beings first reached it tens of thousands of years ago. Ibid., 64-65.
\textsuperscript{112} Otterbein, \textit{How War Began}, 74-75; LeBlanc, \textit{Constant Battles}, 125.
\textsuperscript{113} Otterbein, \textit{How War Began}, 35.
Another application of archeologist Steven A. LeBlanc’s principle of mass over dribbles in physical evidence of warfare concerns fire. Fire remains are of course one of the commonest associations with human presence going back to several hundred thousand years ago, even to ancestors of modern humans such as *Homo erectus*. Indications of ancient campfires occur in every area that humans have occupied. A campfire is not evidence of war, of course. Neither does destructive fire necessarily indicate war; the fire might be an accident, and groups in a number of areas deliberately burned forests or grasslands to clear land for agriculture or as part of a hunting strategy.

What LeBlanc counts as evidence of prehistoric warfare is when an entire village was destroyed by a general conflagration, especially when constructed of brick or stone, with the contents of the dwellings intact. This general destruction makes it unlikely that it was an accidental fire, since that would have been confined to one area and the inhabitants would have had time to evacuate many or most of their belongings. In such cases the village was evidently burned on purpose, and therefore most likely by outside invaders rather than the local residents. The extensive evidence of such intentional burnings in many parts of the world persuades LeBlanc that warfare—and its concomitant, conquest—must have been common throughout prehistory.\(^{114}\)

In a survey of the archeological record from prehistoric Europe, archeologist John Chapman comments, “When it happened, prehistoric warfare was bloody and dangerous, and…it happened more frequently than most prehistorians were previously willing to accept.” At the same time, his review of signs of violent trauma in skeletal remains in his study area does not support a Hobbesian scenario of continuous and unregulated warfare.\(^{115}\)

It is worth reiterating that several prehistoric empires established themselves by conquest in South America without benefit of writing. Anthropologist Keith F. Otterbein has advanced a sophisticated political theory of how warfare developed in prehistory and early history according to which he distinguishes between pristine and secondary states: a pristine state is the first state to arise in a given area, while other states are secondary because they model themselves on the preceding pristine state (or other secondary

\[^{114}\text{LeBlanc, } \textit{Constant Battles}, 62.\]
\[^{115}\text{John Chapman, “The Origins of Warfare in the Prehistory of Central and Eastern Europe,” in Carman and Harding, eds., } \textit{Ancient Warfare: Archeological Perspectives}, 102.\]
By his criteria he finds only four areas where a state arose without contact with an already existing state, namely, Mesopotamia, northern China, Mesoamerica, and western South America. The first three used writing as an instrument of administration and control from very early stages of state formation if not before. In South America a series of empires (Chauvín, Moche, Chimú, and Inca) succeeded each other by armed conquest, as attested to by physical remains, artistic representations, and oral history traditions. These states engaged in aggressive and violent warfare and administered their empires with no writing at all beyond some rudimentary bookkeeping recorded by tying knots in strings. The pre-Columbian South American empires constitute a clear-cut and well-documented case of state-based warfare waged without writing, that is, war before history.

**Some Observations on Tactics, Technology, and Organization**

The oldest military tactics appear to be the ambush of enemy warriors, the raid to massacre foreign tribal members *en masse*, and the line battle between opposing groups of warriors, all reaching far back into prehistory and all practiced by recent band and tribal societies. According to anthropologist Keith F. Otterbein, “Ambushes and lines form a two-component warfare pattern for bands and tribes, a pattern that probably was developed as early as the Paleolithic. Battles, in which warriors confronted each other along a line, were a means of testing the strength of an adversary, while ambushes and raids on settlements were the means of killing large numbers of enemy.” Political scientist Bradley A. Thayer agrees with the ancientness of these tactics while distinguishing the massacring raid from the ambush. All can be carried out by either hand-held weapons or missile weapons, and none requires more organization than an agreement by a group of armed men to cooperate for up to a day.

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117 Otterbein first finds these four pristine states in *How War Began*, 113-20, and compares them in more detail on 121-76.
118 Otterbein summarizes the (pre)history of these states in *How War Began*, 130-42.
120 Thayer, *Darwin and International Relations*, 100, 136.
The earliest and simplest protective measures were to site one’s village in a naturally defensible spot, such as at the top of a hill or behind a river. Fortifications, like other extended infrastructure such as irrigation systems, require more centralized planning and longer-term commitment than a one-day ambush or battle. So does the primary tactic to overcome an enemy sheltered in fortifications: the siege.

The appearance of fortifications at any time bespeaks the necessary labor, planning, and organization, whether they were constructed for defense, flood control, or protection from animals. Some fortifications date to prehistoric periods and cultures, showing that literacy is not necessary for such construction projects.

Despite the prehistoric emergence of recognizable fortifications in some areas, there is no specific evidence of sieges until later historical times. Perhaps the preparations necessary to build a mobile force that can carry out a protracted siege away from friendly territory require greater effort, social and political organization, and technological development than those needed to throw up passive walls in one’s own back yard. In the organizational hierarchy of band-tribe-chiefdom-state that many social scientists use, it appears that chiefdoms and perhaps even some tribes can build defensive fortifications, but siege armies require states. Specialized siege warfare, using such icons of military history as Roman catapults, Greek fire, and modern heavy artillery, did not come about until well into the era of literate centralized states.
CHAPTER 4
VIEWPOINTS AND CONCLUSIONS

Theoretical Trends

There is a distinct tendency among many researchers to deny that either war or peace is an inherent part of human nature, partly because war and peace are variegated rather than one-dimensional phenomena and partly because they see no unitary “human nature” that carries any explanatory force in their studies. Many of them continue to use the popular images of Hobbes and Rousseau as examples of such failed, simplistic viewpoints.

Sociologist Peter Meyer gives a clear expression to this attitude. “As a social phenomenon war has very different characteristics in various stages of social evolution.”

One result of this variation is that,

An explanatory strategy taking these anthropological requirements into consideration becomes aware of the fact that war is not a unitary phenomenon, consequently there can be no single ‘function’ of war and hence there is no homogeneous human nature which could be blamed for the institution of war.

War studies researcher Johan van der Dennan echoes this emphasis on the heterogeneity of the phenomena in question.

It makes little sense to make the distinction belligerent/peaceful, warlike/unwarlike. It is not a neat, static, and historically fixed dichotomy. Peace and war represent the two extremes of a whole array of collective survival strategies, ranging from collective retreat and cultural isolation to imperialist war. Many adjacent peoples lived or live in what may be termed a state of permanent

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122 Ibid., 240.
peacelessness: not exactly a state of perpetual war but neither a state of perpetual peace.  

Dennan uses this heterogeneity to criticize many mainstream war theorists—“Most contemporary theorists of primitive war still treat it as if it were a unitary and homogeneous concept, and try to devise unitary theories to explain what is in reality a highly heterogeneous and kaleidoscopic set of phenomena”—as well as fixed or universalist theoretical frameworks—“Evidence from case studies raises serious questions about the validity of cross-cultural or cross-societal studies that depend on the fixed assignment of the warfare of various societies to one or another of a limited number of such categories as revenge warfare.”

Political scientist Bradley A Thayer similarly acknowledges the importance of culture in the variations of how warlike activity is organized and expressed.

Warfare has multiple forms and is greatly influenced by culture…[I]t is always important to recall the significant influence of culture—or more broadly the social environment—on warfare….Cultural explanations usefully augment evolutionary explanations for warfare and help explain the particular form that warfare takes for a tribe or a state.

Animal behavior researcher J.A.R.A.M. Van Hooff connects this observed variety with the issue of which kinds of society or social behavior are considered “normal” and which kinds stand in need of special explanation.

In our species there is a great variety in the degrees of belligerence….Ever since Rousseau the idea has been alive that war and intergroup violence are pathological deviations which have been brought about by civilization, i.e. the

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123 Johan van der Dennan, “Primitive War and the Ethnological Inventory Project” in Dennan and Falger, eds., Sociobiology and Conflict, 257.
124 Ibid., 261.
126 Thayer, Darwin and International Relations, 151.
development of organized states, and that war does not occur among peoples who live in harmony with nature.\textsuperscript{127}

Anthropologist Colin Irwin links the adoption of simplistic Hobbesian and Rousseauian categories by contemporary researchers to rhetorical strategies.

Many social scientists fall into the trap of characterizing prehistoric, hunter gatherer man in either Rosseauian ‘noble savage’ terms or Hobbesian ‘brutish’ terms so that they can develop a thesis of civilization that is a fall from the Garden of Eden or a struggle to create an Eden where there never was one. Neither picture of human nature is quite correct.\textsuperscript{128}

The former stance—a Rousseauian view of prehistoric societies in order to develop a theme of increasing brutalization in human history—describes the arc that military historian John Keegan adopts in his book \textit{A History of Warfare}. Anthropologist Keith F. Otterbein discerns a related rhetorical and political motive in ethnographies published around the middle of the twentieth century. “For cultural relativism to succeed as a liberalizing, humanizing point of view, nonliterate peoples had to be gentle and benign, not savage and brutal.” Thus ethnographers succumbed to the “bias of romanticism” by ignoring any nasty behavior of the peoples they described.\textsuperscript{129}

The general conclusion of many of these researchers is that war and peace form part of a toolkit of diverse and more or less adaptive social responses to local circumstances, not parts of a fixed and immutable “human nature.” Archeologist Jonathan Haas uses the fact that recorded history of the past five thousand years is only a tiny slice of the several hundred thousand years that \textit{Homo sapiens} has wandered the

\textsuperscript{127} J.A.R.A.M. Van Hooff, “Intergroup Competition and Conflict in Animals and Man,” in Dennan and Falger, eds., \textit{Sociobiology and Conflict}, 49. Van Hooff goes on to remark that numerous anthropological studies confirm that this image of peaceful tribal peoples is a myth
\textsuperscript{128} Colin Irwin, “The Inuit and the Evolution of Limited Group Conflict,” in Dennan and Falger, eds., \textit{Sociobiology and Conflict}, 199.
\textsuperscript{129} Otterbein, “A History of Research on Warfare in Anthropology,” 797. Otterbein adds that “the evidence from prehistory supports neither of these ideal types,” that is, neither Hobbesian warriors nor Rousseauian pacifists. Ibid., 800.
planet to argue for a “toolkit” model of human behavior as well as the centrality of prehistoric warfare within larger social science studies.

What has happened in the past five thousand years demonstrates the *capacity* of humans for certain kinds of behavior, not the *predisposition* of humans towards certain kinds of behavior. The sequence of human prehistory prior to the development of writing then assumes enormous importance in any effort to understand the fundamental causes of warfare within the human species.\(^\text{130}\)

A good statement of the thesis that war is a normal part of a variegated and adaptable human nature is a passage from a previous investigator that war studies researcher Johan van der Dennan quotes with approval.

‘War is not a maladaptive human trait arising out of a previously adaptive animal instinct of aggression. It is a highly evolved aspect of human political organization which has proved its viability by becoming more highly organized and more murderous as cultural evolution has advanced. It is not derived from the day-to-day aggression balanced by submission that serves an adaptive role in the societies of nonhuman primates. Its source has been the previously untapped potentialities resident in the norm of reaction of the human genotype. Among these potentialities has been the aggressive potential characteristic of all animal species, but this potential has no more forced the evolution of war than some mythical killer instinct has.’\(^\text{131}\)

Anthropologist R. Brian Ferguson links a defense of the kind of comparative approach to the study of war implied by these passages with a critique of doctrinaire Hobbesianism.


Even without reference to evidence, two problems can be identified in the
Hobbesian approach. First, it equates the lack of formal institutions of conflict
resolution with the absence of any means of regulating conflicts other than the
unstable ties of reciprocal exchange….Second, political autonomy explains only
the potential for war, not its actual occurrence. Even if we accept the highly
dubious proposition that war, like an economy or religion, is normal for all
societies, variations in war patterns require explanation just as much as variations
in economic or religious systems.132

War, like other aspects of culture and indeed like traits of any biological species,
can be studied via its variations and the correlations between those variations and the
variations in other characteristics, encompassing social, political, economic,
demographic, ecological, technological, and other factors.133 This comparative strategy
seems more likely to make progress than an a priori insistence that human beings are
either inherently violent or inherently peaceful. As anthropologist Keith F. Otterbein
expresses this research program,

For both case and comparative studies a paradigm that examines causes (material
and efficient) and consequences has come to be employed. This paradigm has
shown itself to be useful in studying the conditions under which war and other
forms of violence occur. Some conditions lead to war, some do not. I see great
variation in the nature and frequency of war. It is this variation and the reasons
for it that researchers should be investigating.134

133 Biologist Edward O. Wilson explicitly endorses such “multifactorial” models in the study of human
Conclusion

Both war and peace have occurred among prehistoric societies, as they have among literate societies. Neither factor directly causes the other; both correlate with wider social and physical contexts.

From a biological point of view, the variety of social behaviors that we rank on a scale from “peace” to “war” is part of the human species’ reaction norm. What may be considered “innate” is the range of behaviors, in the same sense that ability to learn a range of grammars and languages is part of human nature. No single behavior pattern is innate any more than knowing the English language is. Any particular behavior pattern can be elicited in various circumstances where it may be more or less adaptive.

This viewpoint is supported by the cases reviewed in this paper. Not only war and peace but a range of related activities have occurred among societies both with and without writing.

Hobbes and Rousseau were both wrong. Not only were they wrong because human beings are neither always warlike nor always peaceful, even more fundamentally they were wrong in that each assumed that the human race consists entirely of isolated, atomized individuals. Since long before the emergence of *Homo sapiens*, human beings and their ancestors have lived and interacted in social groups, and it is groups that live in peace or wage war.

The two images of “primitive” man that have been traditional in Western culture—the “noble savage” and the brutish “war of all against all”—are myths. The actual responses of societies to conditions both physical and cultural span the gamut from docility to conquest. This variation holds true among societies that lack writing as well as societies that lack or share any other cultural component. In particular, it is as true of societies that lack writing as it is of societies with a literary tradition.

Literacy can be considered a technology with multiple effects. One effect is that it increases the complexity of collective actions that a society can undertake. Although writing can have this “raise the ceiling” effect, lack of writing does not prevent responses that fall under the category “war.” Illiteracy did not prevent the rise of relatively sophisticated civilizations in South America which, not incidentally, expanded their power by what were unequivocally wars of conquest. Even chimpanzees, which lack not
only writing but language and weapons, engage in a form of wars of conquest against adjacent chimpanzee groups.

Neither does illiteracy impel a society to war. Cases reviewed above reveal a number of societies without writing for whom war is nonexistent or so rare as to be a major departure from the society’s normal patterns of behavior.

War, like all aspects of human behavior and society, is embedded in wider contexts. So is literacy. Neither appears to be either a necessary or a sufficient condition for the other. The picture that emerges is a mosaic of multiple strands of explanation, and accounts and theories of war both before and within history can benefit from integrating the categories of motive, function, and origin into larger explanatory frameworks.

**Future Directions**

This paper envisions a strategy for further research into prehistoric war that falls under the rubric “the comparative method.” Biologists once searched for the “essence” of life or of each species; linguists once viewed historical change and regional variation in language as “decay” from proper speech. They began making progress in unraveling heredity and evolutionary history, syntax and linguistic history, and many other aspects of organisms and languages, when they discarded this essentialist view and began investigating variation as their primary object of study rather than viewing it as obscuring deviation from an underlying ideal.

The topic of prehistoric war has rich connections with many topics in many fields of study. Future research can explore connections and correlations between writing as a technology and war and peace as social behavior patterns and such things as

- Behavior of other species
- Local ecology
- Economic and political organization
- Personal and social psychology
- Other aspects of technology
• Gender studies (For example, how has participation in war by females varied from one society to another?)
• Other aspects of culture such as religious beliefs and kinship systems
• Chronological development

For example, warfare has changed and developed over time. The warfare of the Roman Empire differed greatly from the warfare of Neolithic tribes, and the warfare of modern states differs just as greatly from Roman warfare. What are these differences, and how have they developed over time?

I generally accept the division of theoretical approaches to war into studies of motive, function, and origin, and contrasts and correlations between these aspects are another object of further study. For example, modern nation-states are usually quite explicit about what material or political ends they intend to accomplish by fighting a war. Tribal members observed and interviewed by ethnographers, by contrast, typically give magical reasons for fighting (to appease evil spirits or remove a curse) and show little or no awareness of the material effects of their combat that the same ethnographers document. Could the correspondence or divergence between motives and concrete effects help explain the prevalence and outcomes of wars?

In particular, studying the functions and origins of war seems to promise rich rewards in uncovering connections between the two. Some theorists have concentrated on timeless functions without considering how transitions actually develop. One needs both legs to walk down the path toward more comprehensive understanding. How do the dynamics of social evolution explain and affect the functions of war? How do those functions in turn affect social evolution?

One obvious area for further research is to do more detailed studies of particular cultures, periods, and geographical areas. Indeed, the topic of prehistoric war really deserves a more comprehensive database than could be included in this paper. Such a database would not only detail more facets of individual cases but allow more comprehensive comparisons.
Another aspect that can be further explored is philosophical and methodological questions about the nature of evidence of warfare and its interpretation, as well as technical issues involved in data collection and theory construction.

Examples of prehistoric war can add to the classification of modes or styles of warfare. Such a scheme in turn could further comparative studies of the similarities and differences between, for example, prehistoric and classical and modern war.

Study of war can contribute to examining the assumption in the social sciences of a common developmental scale of human societies (such as band-tribe-chiefdom-state). I question the universal applicability of such scales, largely because the characteristics of human cultures, including whether and how they fight wars, appear to present too variegated an assemblage to reduce to a single dimension.

There are more detailed technical issues within the study of war that this paper has not touched on, such as the distinction between internal and external war. Internal war is when neighboring groups within a common cultural area fight each other, as distinct from external war in which distinctly different cultures clash. Internal war is more likely to be ritualized, since maintaining war as a ritual depends on agreement by both sides, while external war is more likely to result in displacement or conquest. This and other issues deserve further elucidation.

Ultimately the study of prehistoric war can contribute to attempts to define war and peace. Such efforts can attempt to develop a list of necessary and sufficient conditions for war or peace and a list of characteristics of both war and peace. The range of variation in the practice of war available for study is expanded by adding prehistoric war, allowing definitions and distinctions to become more comprehensive and refined. Prehistoric war can acquire its proper place within the larger study of war and peace and human culture in general.
Table 1: Comparison of Selected Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Agent</th>
<th>Target</th>
<th>Sanctioned?</th>
<th>Violent?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawsuit</td>
<td>Individual or faction</td>
<td>Individual or faction</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Arrest</td>
<td>Collective</td>
<td>Individual or faction</td>
<td>Yes</td>
<td>In some cases</td>
</tr>
<tr>
<td>Prosecution</td>
<td>Collective</td>
<td>Individual or faction</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Assault or homicide</td>
<td>Individual</td>
<td>Individual</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Economic competition</td>
<td>Individual or faction</td>
<td>Individual or faction</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Assassination</td>
<td>Individual or faction</td>
<td>Individual</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Feud</td>
<td>Individual or faction</td>
<td>Individual or faction</td>
<td>No</td>
<td>In some cases</td>
</tr>
<tr>
<td>Capital punishment</td>
<td>Collective</td>
<td>Individual</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Sacrifice</td>
<td>Collective</td>
<td>Individual</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Duel</td>
<td>Individual</td>
<td>Individual</td>
<td>In some cases</td>
<td>Yes</td>
</tr>
<tr>
<td>Hunting</td>
<td>Individual or faction</td>
<td>Nonhuman animals</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Individual argument</td>
<td>Individual</td>
<td>Individual</td>
<td>In some cases</td>
<td>No</td>
</tr>
<tr>
<td>Boycott or blockade</td>
<td>Faction or collective</td>
<td>Faction or collective</td>
<td>Yes</td>
<td>In some cases</td>
</tr>
<tr>
<td>Factional exchange of insults</td>
<td>Faction</td>
<td>Faction</td>
<td>In some cases</td>
<td>No</td>
</tr>
<tr>
<td>Collective exchange of insults</td>
<td>Collective</td>
<td>Collective</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>War</td>
<td>Collective</td>
<td>Collective</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Table 1 Notes

Agent  Who carries out the activity
Target Who the agent directs the activity at
Sanctioned? Is the activity sanctioned by the society?
Violent? Does the activity involve violence?
Individual Single member of the society
Faction Interest group within the society (a family, criminal gang, political bloc, trade guild, religious or ethnic group, etc.)
Collective Society as a whole

Activities listed as being carried out by the collective are not literally performed by the entire membership of the society, but police, executioners, and armies act as representatives of the society and on behalf of the society, thus the actions are in effect carried out by the society.
<table>
<thead>
<tr>
<th>Perspective</th>
<th>Theory</th>
<th>Representatives</th>
<th>Premise</th>
<th>Application to War</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological</td>
<td>“Killer ape”</td>
<td>Raymond Dart, Robert Ardrey, Sigmund</td>
<td>Human beings have an innate biological drive to aggression and violence.</td>
<td>War is inevitable; people engage in aggressive violence automatically.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freud?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biological</td>
<td>Selfish gene</td>
<td>Richard Dawkins, George C. Williams</td>
<td>Genes promote copies of themselves through individual and collective behavior.</td>
<td>Under certain circumstances, war enhances genetic fitness of individuals and groups.</td>
</tr>
<tr>
<td>Cognitive</td>
<td>Memetics</td>
<td>Richard Dawkins, Susan Blackmore</td>
<td>Memes promote their spread in human minds.</td>
<td>The war meme spreads itself in competition with other memes.</td>
</tr>
<tr>
<td>Biological</td>
<td>Sociobiology</td>
<td>Edward O. Wilson</td>
<td>Genes, environment, and culture interact to produce behavior.</td>
<td>War is a behavior pattern that is elicited when it is adaptive.</td>
</tr>
<tr>
<td>Biological</td>
<td>Ecological</td>
<td>Jared Diamond</td>
<td>Behaviors are adaptations to local conditions.</td>
<td>War is an adaptive response to ecological pressures.</td>
</tr>
<tr>
<td></td>
<td>adaptation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theological</td>
<td>Innate evil</td>
<td>Reinhold Niebuhr</td>
<td>Human beings are evil.</td>
<td>Human evil manifests itself in war.</td>
</tr>
<tr>
<td>Perspective</td>
<td>Theory</td>
<td>Representatives</td>
<td>Premise</td>
<td>Application to War</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------------------------</td>
<td>----------------------------------------</td>
<td>----------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Philosophical</td>
<td>Drive to dominate</td>
<td>Hans Morgenthau</td>
<td>Human beings have a drive to dominate others.</td>
<td>The drive to dominate leads to war.</td>
</tr>
<tr>
<td>Political</td>
<td>Fraternal interest group</td>
<td>Keith F. Otterbein</td>
<td>Group behavior results from political dynamics.</td>
<td>War results from power plays by fraternal interest groups.</td>
</tr>
<tr>
<td>Ecological, demographic</td>
<td>Resource scarcity</td>
<td>R. Brian Ferguson, Steven A. LeBlanc</td>
<td>Groups require material resources.</td>
<td>Groups fight for access to scarce resources.</td>
</tr>
<tr>
<td>Philosophical, political</td>
<td>“Realism”</td>
<td>Thomas Hobbes, modern neorealist theorists</td>
<td>The drive for security threatens others’ security.</td>
<td>War results from clashes in security requirements.</td>
</tr>
<tr>
<td>Philosophical</td>
<td>Corrupting civilization</td>
<td>Jean-Jacques Rousseau</td>
<td>Civilization has corrupted man’s original peaceful and cooperative nature.</td>
<td>War results from the inequalities fostered by civilization.</td>
</tr>
<tr>
<td>Biological, political</td>
<td>Biologically grounded realism</td>
<td>Bradley A. Thayer</td>
<td>Biological evolution grounds egoism and selfishness.</td>
<td>Egoism and selfishness lead to clashes in interests.</td>
</tr>
<tr>
<td>Perspective</td>
<td>Theory</td>
<td>Representatives</td>
<td>Premise</td>
<td>Application to War</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------------</td>
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<td>----------------------------------------------</td>
<td>---------------------------------------------------------</td>
</tr>
<tr>
<td>Sociological, cognitive</td>
<td>Mental constructs</td>
<td>Peter Meyer</td>
<td>Mental constructs motivate social behavior.</td>
<td>Groups fight for ideas of resources.</td>
</tr>
<tr>
<td>Anthropological</td>
<td>“Peaceful savage”</td>
<td>Many anthropologists</td>
<td>Primitive peoples lived in peace and ecological balance.</td>
<td>War results from the increased pressures of civilization.</td>
</tr>
<tr>
<td>Anthropological</td>
<td>“Hunting hypothesis”</td>
<td>Sherwood Washburn, Umberto Melotti</td>
<td>Humans have long hunted large animals.</td>
<td>War is hunting displaced onto human beings.</td>
</tr>
<tr>
<td>Economic</td>
<td>Rational choice theory</td>
<td>Classical and neoclassical economists</td>
<td>People act according to a rational calculus of personal advantage.</td>
<td>When it is in enough members’ interests (likely benefits minus potential losses), a group goes to war.</td>
</tr>
<tr>
<td>Behavioral</td>
<td>Game theory</td>
<td>John Maynard Smith, other game theorists</td>
<td>Interactions can be modeled as games with varying rules, payoffs, and strategies.</td>
<td>War results from certain game outcomes and is itself a game.</td>
</tr>
</tbody>
</table>
Table 2 Notes

This list is not exhaustive or in any particular order. I apologize for the inevitable misrepresentations entailed by shoehorning elaborate theories into a diagrammatic schema.

Many theories overlap, while others are incompatible.

Not every theory or theorist in this list is discussed in the body of the paper.
BIBLIOGRAPHY


BIOGRAPHICAL SKETCH

After graduating from New College in Sarasota in the 1970s and working a series of jobs in the business world for two and a half decades, mostly around Chicago, Darryl Myers returned to school in the History Department at Florida State in order to switch careers in mid-life. “Hey, look, they’re making an academic out of me!”