

War and Human Nature

What We Know, and What It Means

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At a recent “Back to School” night for one of my children at a local Bedford, Massachusetts public high school, the history teacher explained the syllabus to us parents. He had divided it into periods such as the Napoleonic wars, the First World War, the Interwar era, the Second World War and so on. A somewhat agitated parent put the teacher on the defensive by accusing him of having a worldview way too focused on war. This seemed the sort of parent who might, in some other less antiseptic social context, assert that if we simply refused to think about war it just might go away—as in, “Don’t give little boys toy guns and there will be no more violence.” The teacher countered that these wars were indeed important turning points in modern history, but added that his course did not actually focus on the wars themselves.

On reflection, I found it a bit odd that anyone, even in Bedford, Massachusetts, could complain about a history curriculum that would focus on events that killed millions, traumatized whole civilizations and transformed the global social order. It was perhaps a bit much for General George S. Patton, Jr. to say that, “Compared to war all other forms of human endeavor shrink to insignificance.” But a more scholarly appraisal from Christian Mesquida and Neil Wiener from York University makes the same essential point in a manner that even

a devoutly liberal anthropologist could appreciate: “The most highly organized and largest scale human collective or social action is coalitional aggression, or war.”¹

That there is an underlying and uncomfortable truth to these assessments, no sentient adult can deny. Wars are important, and we should not apologize for wanting to study them. After all, when we want to cure cancer—interestingly, we declared *war* on cancer, as we have on poverty, drugs and more besides—we don’t just study healthy people; we study people with cancer.

Of course, we have been studying war for a long time, much longer than peace studies programs and peace institutes have been in existence. But one can question how well our studies have progressed, having only recently moved from an emphasis on how to fight more effectively to an emphasis on how to avoid fighting altogether. Alas, too, most of our ideas about the origins and nature of war come from contemplation of the European wars of the past two centuries, the same ones limned in my son’s high school history course. This is in some ways natural, for it was in the West that the ideal of scientific rationality, and its concomitant commitment to objectivity, migrated (probably) first from “mechanics” to the study of society. If Giambattista Vico had not insisted on it, someone else would have, for it was in the nature of the late 17th-century

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¹Mesquida and Wiener, “Human collective aggression: A behavioural ecology perspective”, *Ethology and Sociobiology*, vol. 17 (1996).

European zeitgeist. And so the study of societies, relations among societies and, within the latter, war was separated from the constraints imposed by the godhead—and in time even from those of patria, royal pride and commercial interest.

This separation has yet to occur in some parts of the world, so the achievement is nothing to sneeze at, but, unfortunately, the European interest in things European has resulted in a blinkered view of war as a human phenomenon. Obviously, humanity has been on the planet for much longer than two or three centuries. Warfare spans thousands (actually, hundreds of thousands) of years on every continent and it has been fought by hundreds of different cultures. Even a candid look at our chimpanzee relatives tells us that warlike behavior is not a human monopoly. Only by examining all we know about warfare can we decipher its underlying causes and, just maybe, do a better job of limiting its frequency and destructiveness.

That means, among other things, coming to terms with the deep divisions that characterize the study of war. There are three dominant theories of the causes of war: that war is rational under many if not most circumstances, that war is hardwired into us genetically, and that war is just collective human stupidity run amok. These are not mutually exclusive explanations. War could be rational and genetically inherent at the same time, explaining perhaps why we have not gone extinct. Or it could be first rational and then very stupid at different times, explaining, perhaps, why we have not gone extinct yet. But most observers tend to put heavy weight on one of the three explanations to the exclusion of the other two.

In the present case, if not also in others, this tendency is probably unfortunate. As we will see, it makes more sense to see war as having some genetic basis, but as a collective phenomenon as opposed to an individual one, one in which social context makes all the difference between what is potential and what is extant. This means that all war has some universal characteristics, but any particular war represents a variation on a theme in which adjectives like “rational” or “stupid” may make any sense. That, anyway, is what my own research as an anthropologist-archaeologist, looking at the

long sweep of history and societies at all levels of social complexity, tells me.

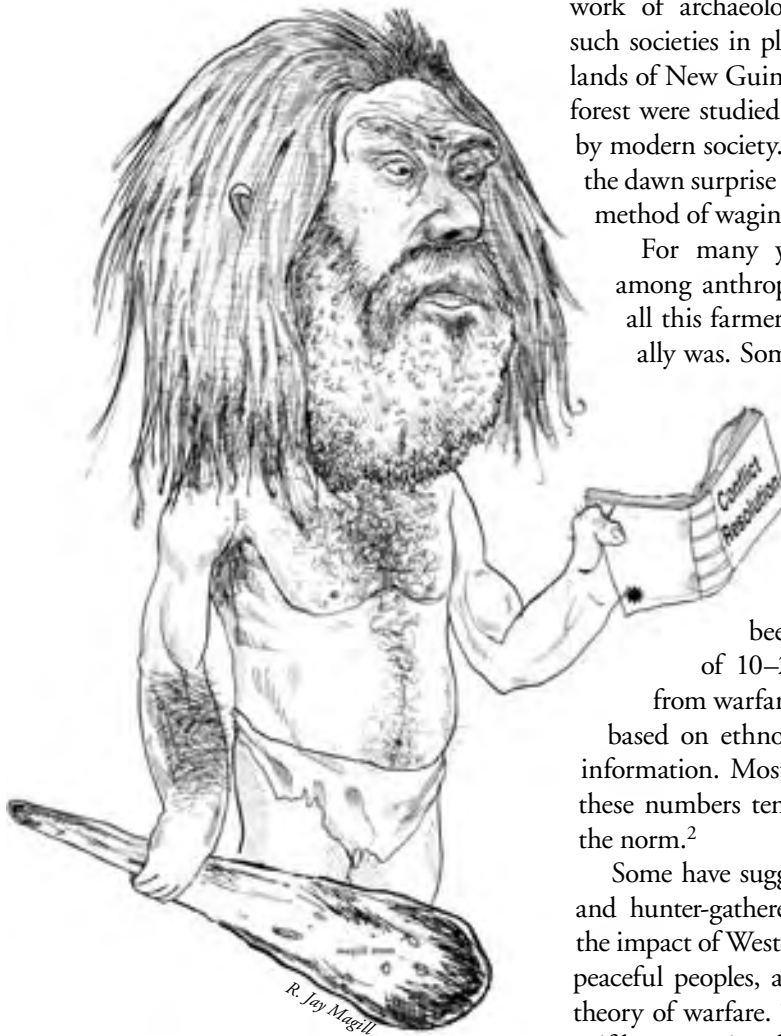
Warfare in the Deep Past

Even before the age of genomics arrived to shed light on the second of these three theories, there was plenty of empirical evidence about war. Some of that evidence, because of the context in which it was collected, enabled us to see farther back into history by way of inference than one might at first appreciate. Describing the South Australia Aborigines in 1852, William Buckley wrote:

On approaching the enemy's quarters, they laid themselves down in ambush until all was quiet, and finding most of them asleep, laying about in groups, our party rushed upon them, killing three on the spot and wounding several others. The enemy fled precipitately, leaving their war implements in the hands of their assailants and their wounded to be beaten to death by boomerangs, three loud shouts closing the victors triumph. . . .

The bodies of the dead they mutilated in a shocking manner, cutting the arms and legs off, with flints, and shells, and tomahawks. . . . When the women saw them returning, they also raised great shouts, dancing about in savage ecstasy. The bodies were thrown upon the ground, and beaten about with sticks—in fact, they all seemed to be perfectly mad with excitement.

Buckley was a British convict who escaped the penal colony in 1803 and was taken in by an Aboriginal band near present-day Melbourne. His account of his thirty years with the tribe is perhaps the earliest description of Aboriginal life. Because that life had not yet been much affected by the colonists, it is reasonable to infer that Buckley was seeing things that had not changed much, if at all, in millennia. These practices may well have been characteristic of other societies in other places as well. And since 1852 we have indeed been able to confirm from a good deal of other evidence the inference that war in the deep past was pervasive and deadly. Low-density foragers such as Australian



Aborigines, Andaman Islanders, the peoples of Tierra del Fuego and Eskimos—all people with few possessions and whose subsistence strategies required frequent moves—had specialized weapons used only for warfare. They formed alliances, conducted surprise dawn attacks, and not infrequently slaughtered all the members of other groups. They killed strangers on sight if there was little risk in so doing. They located their camps or villages in such a way as to protect against surprise attacks. Their daily lives were filled with concerns about being attacked and the need for allies. Theirs was a world of constant vigilance against sudden organized violence.

With the advent of farming about 10,000 years ago, group sizes increased—and warfare remained every bit as significant. We know much more about farmer warfare because their larger and more permanent settlements aid the

work of archaeologists, and because several such societies in places as diverse as the highlands of New Guinea and the Amazonian rain forest were studied before they were impacted by modern society. Villages were fortified, but the dawn surprise attack was still the preferred method of waging war.

For many years there was confusion among anthropologists about how deadly all this farmer and pre-farmer warfare really was. Some believed that, typically, a single person or perhaps two might be killed in a dawn attack, that this era of warfare was almost game-like, filled with more bluster than actual slaughter. This view has been proven false. Estimates of 10–25 percent of males dying from warfare seem to be in the ballpark based on ethnographic and archaeological information. Most of us who have evaluated these numbers tend to see the higher end as the norm.²

Some have suggested, too, that most tribal and hunter-gatherer warfare was induced by the impact of Western civilization on otherwise peaceful peoples, a theory I call the “disease” theory of warfare. The idea is that war spread as if by contagion, having been invented by the complex societies of Eurasia and then passed by bloody example to less advanced peoples. There is overwhelming evidence that this idea is really nothing more than political correctness gone completely wild. Those sweet, peaceful people you see on television or an eco-tour in the rainforest, desert or any other exotic place were not

²These numbers and this interpretation were first clearly formulated by Lawrence Keeley of the University of Illinois in the mid 1990s. Clearly, despite more than a hundred years of archaeology and serious ethnology, it took a long time to come to grips with this high death rate and its implications. The reason seems to be that we emotionally resisted coming to such conclusions. We still do, managing to put aside knowledge of the undeniable fact that in recent decades internal conflicts have killed more than a million people a year.

peaceful in the past any more than the ancestors of modern Europeans or Asians were. And, by the by, they were fighting each other long before anything remotely resembling Western civilization even existed.

Which raises another candidate theory, that warfare is a fairly recent development in human history, maybe only a few thousand years old—and so not necessarily part of our evolutionary past. It is difficult to assess the degree of conflict in the deep past, beyond 10,000–20,000 years ago. When we find evidence of a single violent death, we don't necessarily know if it was the result of an accident, a murder or organized conflict among groups. But that is not all we have found. We have found piles of skulls, most likely from the taking of trophy heads. We've found spear points and bashed-in skulls so uniform that it is exceedingly unlikely to have resulted from accidents. There are a surprising number of examples of human remains that appear to have been prepared and cooked. This could be the ritual eating of one's deceased relatives, but it is more likely evidence of the eating of one's defeated enemies. Conservatively, then, the archaeological evidence from the deep past is fully compatible with warfare being as common and deadly then as it has been more recently. There is no evidence for a "Garden of Eden" past anywhere on the planet.

Perhaps even more surprising to many is the fairly recent revelation that our closest relatives, the chimpanzees, wage the functional equivalent of war. Groups of males band together, seek out isolated males (and occasional females) of other bands, and deliberately and viciously kill them. Don't be fooled by the playful, telegenic chimps in the zoo. A group of males moving in the wild to the attack is frightening. And while we cannot read their minds, we think the chimps enjoy these attacks.

Of considerable interest, too, is the care chimps take not to get killed themselves. In a wonderfully clever experiment, Richard Wrangham and his students from Harvard recorded the calls of some chimps. They then played these calls near groups of males from other troops, making them think foreign chimps were nearby. When the chimps heard only the call of a single foreign chimp they surged forward, presumably ready to attack. When they simultaneously heard the

calls of a number of chimps, making clear that they would not have overwhelming superiority of numbers, they retreated. The chimps calculated the odds of killing without being killed, and they were prepared to attack only when the odds were overwhelmingly in their favor.³ Whether this calculation is instinctive, learned or reasoned we do not know, but it is shockingly similar to what we know about when and how small-group humans fight.

Scarce Resources and Peace

Having established the deep historical ubiquity of war, we come to the main question: What does the evidence tell us about the motives for such organized violence?

Much of human warfare (and maybe chimp violence, too) can be explained, it seems, by population growth. It has only been in the past century that human populations have not grown whenever and wherever it was possible. Absent a technological way out of the dilemma, population growth would have resulted, just as Thomas Malthus understood, in resource stress. This does not mean that there were not times of peace among foragers or tribal farmers; resources were not always scarce, even in times of demographic expansion. Indeed, it is the evidence for times of peace that provides important insights into why we have wars.

Not only were there times of peace, but even times of war were not uniform. We have some examples of times when warfare intensified, times when it ebbed but did not end, and times when it stopped abruptly. Most of these changes correlate with changes in resource abundance, and the most dramatic of these relate to climate change. What is termed the Little Ice Age of the Middle Ages in Europe also seems to have affected North America. During this time, resources were reduced and warfare intensified almost everywhere. The combination of fewer resources, resulting from colder and drier conditions, combined with intensified warfare,

³M.L. Wilson, M.D. Hauser and R.W. Wrangham, "Testing costs and benefits of cooperative defense in wild chimpanzees", *Animal Behaviour*, vol. 61 (2001).

reduced the population, in some places dramatically. People responded quickly and violently to the changed climate.

The reverse also happened. When resources became more abundant on a per capita basis, people often fought but fought less. Sometimes, however, they stopped fighting and began to trade and interact positively with erstwhile enemies. Sometimes the resource base expanded through trade when groups obtained new plants and animals from others. Sometimes, too, resources were more easily obtained when people got iron tools such as knives or axes, whether through trade or by their own ingenuity. And sometimes per capita resources increased when diseases rapidly reduced population numbers. We have examples of all these phenomena from Africa, South and North America, and Australia. Such events most likely took place in Eurasia as well, but they are so far distant in the past that we do not have records of them.

What this means, among other things, is that peoples some would consider “warlike” according to their behaviors could within a generation or two become peaceful and friendly. Nothing changed in their genes. Their children did not stop playing with makeshift “war toys.” They didn’t convert to some new pacific religion. They appear instead to have concluded, rather rationally, that warfare was not in their best interest. This observation provides hope for the future in a way that myths about peaceful people hidden away in the jungle living in harmony with nature do not. That some people who experienced regular and deadly warfare stopped fighting so completely and so quickly that some of these people lack any knowledge of the deadly wars in their history argues that warfare is not fixed in our genes. This does not mean, however, that genes are in no way involved in warfare.

A Genetic Component to Warfare

Perhaps the thing that scares us the most about warfare is that it might be hardwired into us. Well, it is, and it isn’t, which is to say that the matter is not at all simple. We are not dealing here with a nature *or* nurture situation,

but rather with a nature *and* nurture one. Gene-based tendencies over which individuals have no knowledge or control interact with other tendencies—call them cultural factors—that are, in fact, quite plastic. Cultural factors can affect selection and procreation, too, so that the whole is not a matter of easily calculable percentages, as in half learned, half genetic or a 60–40 split. Cultural conditioning can mitigate behavioral tendencies that evolved in a group of coalitional aggressive males. We are not hardwired for war, therefore, in any simple or deterministic way. That could only be true if we could not think, decide and act freely as individuals and groups. Without that freedom, cultural variation to the extent that we see it could never have come about.

We know from archaeology that there has been ample time for cultural selection for warfare-derived behaviors, the potential for which resides in the gene pool. We know from ethnography that one scarce resource men have fought over is women. We also know that revenge was often given as a reason for war. In fact, even when it was obvious that warfare involved competition for scarce resources, the reasons given for it were invariably women and revenge. Fighting over women dominates the explanation for conflict among Australian Aborigines, while revenge seems to be the recurrent theme among Eskimo explanations. The Yanomamo of South America regularly invoke both reasons for conflict. It is not hard to see the nature *and* nurture dynamic at work. In many traditional societies, polygamy was practiced to some degree, reducing the chances for many young men to find a mate. Selection would favor those who could father more children. This was accentuated in societies where female infanticide occurred—that is, where women were more or less made into a “scarce resource” and competition for them intensified.

The desire for revenge is more subtle. The ability and willingness to exact revenge is part of one’s reputation, either as an individual or as a member of a group. You are much safer if you have a reputation for being dangerous and aggressive, and more vulnerable if you gain a reputation for passivity. One can easily see how male aggressiveness would have become more prominent in populations over time, not

least because women may have sought out men whom they thought more capable of protecting them and their children.

Within this complex evolutionary selection process there is an important but unanswered question: How much did people realize they were really fighting for resources, or did they see warfare as being mostly about revenge and other, culture-defined motives? I believe they perceived both motivations. Culture layers over motives but does not always completely obscure them. People with tendencies for aggressive behavior that focused on revenge and capturing women were able to take resources from others when they calculated they could succeed. The two are linked and unfolded in concert. They believed war made sense, and they enjoyed it.

A genetic component for warfare certainly seems clear in differences between the sexes. Studies show that males are much more likely to form coalitions for aggression, are much more violent, and are more intent on revenge than women. These are traits we associate with warlike behavior. In sum, there is enormous evidence that warfare is a “male thing”, not just a learned or recent behavior. By contrast, women in the past often left their own band to marry into another. They were sometimes captured against their will. (Among the Yanomamo, who still live in the Amazon today, more than 15 percent of all women have been captured at some point in their lives). Women thus lived in a world where it was important for survival to be able to function in a new group. Evolution over millennia have made women better at assessing others’ motives, better at negotiating solutions to disagreements, and better at several other social skills.

Of course, evolution has selected for many other behaviors as well. Even an aggressive male’s testosterone levels begin to drop when he sees a smiling helpless infant. To produce surviving offspring, men have had to cooperate, support their children and otherwise get along. The aggressive male is the same male who flings himself on a grenade to save his squad, or jumps into an icy river to rescue complete strangers. The aggressive male is also altruistic. Thus better questions are: How much do instinctive male tendencies to fight affect the decisions of groups to start wars? Are such decisions necessarily irrational for both

individuals and the group, or could there be some separation between the two?

War as Irrational

Some people find solace in believing that warfare is irrational, and that neither competition for scarce resources nor innate tendencies have anything to do with it. Instead, they argue that people just make mistakes by thinking they can gain from warfare. Again, we can turn to anthropology and archaeology for a broader perspective on this type of explanation.

Small societies minimize risk in warfare by using ambush and treachery. You sneak up on an enemy camp or village, wait till dawn, and then attack. Better yet, kill one or two people leaving camp and then run for it. Or invite another group to your village for a feast, lull them into a sense of security, then pull out your hidden weapons and kill as many as possible.

Of course, all such tactics are risky. The attacking party might be spotted en route and be preemptively ambushed. The scene in *Dances with Wolves*, where the Pawnee think they have surprised the Sioux and are themselves surprised and slaughtered, is a fanciful example, but verisimilitudinous. Even defensive strategies can fail. We think of the Maginot Line as the classic case of a failed defense, but archaeologists have found the remains of hundreds of bodies piled in defensive ditches outside the palisades of destroyed villages. Such communities were overconfident about their ability to repel attack.

This does not mean, however, that taking either offensive or defensive risks is never worth it—that it is always irrational or stupid. Spending too many scarce resources on defense can be counterproductive. Wiping out an enemy can double your land and your wives—well worth a moderate risk. Success or failure in warfare was one of the prime factors determining whether many males received a mate (or multiple mates). If winning a conflict can substantially raise your chances of marrying and having children, men will take considerable risks. This tradeoff may still be with us. Mesquida and Wiener have shown that societies with a relatively large portion of young

unmarried males are much more likely to start wars or experience internal strife.⁴ Risky behavior, however, is not the same as irrational behavior. We should also note that the parts of the male brain that affect the propensity for risk-taking do not fully mature until well past puberty. It doesn't seem quite fair, or scientifically sensible, to label a behavior irrational when the brain lacks a capacity for qualitatively different behaviors.

It is also hard to explain the pervasive existence of alliances in a framework of irrationality. The maintenance of alliances was a key to survival in the past. If all your potential competitors could gang up on you, you were probably doomed. One big difference between humans and chimps is that chimp males can form coalitions of a handful of males, but they cannot form alliances between groups. This is a uniquely human trait. In the past alliances were formed at some cost. One had to ally with previous enemies, which likely meant having to get along with people that had probably killed your relatives. You exchanged wives to help cement relationships; you feasted and traded to encourage the alliance. As a result of all this, humans have developed great skills at recognizing dishonesty and are highly sensitive to potential treachery. In general, many of our mechanisms for dealing with other people evolved in a world

where allies were also potential threats. Genuinely irrational people cannot plan well enough to form alliances, let alone hold them together.

Another remnant of our evolutionary past is that humans are rather poor at assessing risk. We are consistently optimistic, which may itself have an evolutionary basis. In the long run, it pays to be an optimist because it is motivating. But optimism can motivate individuals and groups into disaster. So can misconstruing a changing environment. Many have argued that many of the wars of the 20th century were fought over resources, especially land, that were not as important as they had been in the pre-Industrial Revolution era. Is this irrationality or stupidity or merely error? Or is something else altogether going on?

As suggested above, it could be that those who think war irrational or stupid fail to distinguish adequately between the macro-consequences of war for society as a whole and the micro-consequences for the leadership elite who wield decision-making authority. War can be bad for the group but good for its leaders. When leaders lose touch with reality, however, everyone is liable to suffer. Did Saddam Hussein invade Kuwait because he thought he

⁴Mesquida and Weiner, "Human collective aggression: A behavioural ecology perspective."



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needed more oil, or to give expression to his sociopathic narcissism? He and his family already had all the wealth they could possibly use. The same could be said for many dictators. Why do they risk their and their family's survival when they already have all they need and far more? This happens so often that there must be something else going on besides mere miscalculation.

It seems that wanting to win, wanting to dominate, and simply wanting more are human instincts. Many leaders in the past had hundreds of wives. Did they really need them, or could they simply not help themselves when the opportunities arose to acquire them? Seeing war as irrational misses the point. Wars don't behave; people do. And people *qua* leaders are sometimes irrational. The human proclivity for status competition envelops nearly everything; whether those drawn to politics are more prone to irrational exuberance of the martial kind is, of course, an old, still unanswered and still relevant question.

Bad News, Good News

What, in sum, does the evidence seem to be telling us about war? It tells us, above all, that humans organize themselves to fight over scarce and valuable resources, or what they believe to be scarce and valuable resources. In the past that was primarily land and women (or the resources necessary to obtain women). Today it could be energy or water. Some energy sources and most water sources are local. Only neighbors can or would fight over them. While this is something to worry about, as the conflict in Darfur seems to suggest, the really big issues concern food and energy.

As to the latter, oil is highly portable, so it constitutes a resource that can be fought over globally. Is not having oil today roughly analogous to not having enough land to hunt or farm in the past? Getting enough then meant the difference between life and death. The archaeological record shows that many societies failed to perpetuate themselves. Do people today confront similar problems? And if they do, or think they do, will they not seek similar solutions?

Not having enough oil to run an industrial society like ours may not be literally the same as not having enough land to feed a population. We could survive as a less capital-intensive society. But for practical purposes, life "as we know it" would not be sustainable without oil or some substitute. Moreover, as I have mentioned, humans often exaggerate the likelihood of success at risky, violent behavior. When we do, our aggressive genes often kick in. Many people think that peacefully transitioning the world to non-oil-based energy sources will dramatically reduce war, but the anthropological and archeological record does not support such a prediction.

If technologically advanced societies were to find viable alternatives to oil, it would surely help, but it would be no panacea. What if allies or adversaries achieve an energy breakthrough first? Allies would no longer need your friendship, and adversaries might gain decisive advantages over you. New technologies can also elevate the demand for new scarce resources (lithium, perhaps), creating a potential for new conflicts. The combination of a new kind of scarce resource, new competitors (China, anyone?) and the possibility of abandonment by traditional allies makes a potentially toxic brew.

The food question is inextricably linked with climate change. A hundred years ago, we thought climates changed very slowly. Fifty years ago we began to realize that they might change more quickly, but we assumed that such changes were just small wiggles that would flatten out into some sort of stable norm. (The water laws of the western United States are based on this premise.) More recently, thanks in part to the study of the archeological record, we have begun to realize that climate can change more quickly and that the change can last for a long time (quite apart, by the way, from any anthropogenic causes). New information from studying ice cores has been surprising in this regard and fits nicely both with what the archeological record shows and what genomics research suggests.

What the evidence shows is that climate change has not been orderly. Climate shifts have jumped around to new and unpredictable states and will likely do so again. Scientists talk about tipping points, non-linear responses, irreversible positive feedback cycles, cascading responses and

discontinuities. A big non-linear change in our future might be the breakdown of the Gulf Stream, which could plunge us back into an ice age in just a couple of decades. Scientists think such events happened in our past. Many climatologists think the Gulf Stream did break down 12,000 or so years ago, with just such a consequence.

Certainly, anthropogenic global warming has the potential to cause plenty of problems, but so does global cooling. For all we know, the latter may follow the former (it wouldn't be the first time). The fact is that, in the past, it did not take much change in either direction to have a big impact on resources, and hence on the human propensity for warfare. There has not been that much climate change since the Industrial Revolution began, but with its resultant population growth, we are probably more susceptible to minor changes in climate than we have ever been. Arctic ice melting, which would also result in permafrost melting and other effects, will surely affect the climate of the rest of the world in such a way that food supplies would be affected. At the very least the locus of high and low productivity areas could change fairly quickly even if the net change were small.

What are the consequences of all these possibilities for the prospects of war? If people will fight for anything, it is food. But that is not all people fight about. Transportation patterns will shift, too. Contemplate for a moment a completely ice-free Arctic, with access to new energy resources of uncertain or disputed ownership. The ability to travel the fabled Northwest Passage would shift naval balances and affect North American security writ large. Non-linear climate change can catch us by surprise in more ways than one.

The good news is that we have a tremendous advantage today over most humans in the past. We have developed a scientific-industrial infrastructure that is potentially capable of two key things. First, we have the ability to actually understand ourselves. We can figure out how our minds work. We can understand our history and learn from it, something that was unthinkable just a few centuries ago. Second, we have the technical ability to solve problems. We can eliminate the need to compete over oil. We can mitigate and plan for the effects of

global warming (or cooling). We can thereby affect the definition of scarce resources. To the extent that wars tend to be fought over scarce resources, and to the extent our instincts are involved, we can understand them, get ahead of them, and change outcomes.

We also have history on our side. There are many fewer inter-state wars than there have ever been, and even including the numerous civil wars still going on the world is far more peaceful than it was for our ancestors. Another thing going for us is the fact that we and many of our potential competitors, such as China, have relatively low numbers of young men. Such societies are less likely to start wars. A more pressing problem is the very high ratio of young (often unmarried) men in many societies in Africa and the Middle East, including Iran. This is a problem for which we do have some understanding, but for which solutions are harder to come by.

Above all, perhaps, the normative environment has changed. In the transition from a world of fate to a world of choice, we have gained confidence that humans can accomplish great things besides wars. Medicine is probably the most hopeful example. A hundred years ago in the United States, about one kid in your class of thirty or so would die from disease every year. Vaccinations ended those terrible ratios in a single century, a mere blink of historical time. For the first time in human history we really have the ability to combat disease on a massive, global scale. If we want, too, we can grow all the food we need and with a little cooperation, get it distributed to where it needs to be.

Dealing with war is admittedly a tougher problem. There is no technical fix for it like there is for curing smallpox or growing more rice. But it is not entirely beyond us, either, not least because we have the idea—from as long ago as the time of Isaiah and the time of Buddha—that we will ultimately conquer it. We can understand war, and we can control it, if not stop it altogether. One day, as Isaiah prophesied, we “will study war no more.” But war in all its contexts is precisely what we need to study now if that day is ever to arrive. 🌍