Toward the Evolution of a More Civil World

Melvin Ember and Carol R. Ember
Human Relations Area Files at Yale University, New Haven

ABSTRACT

This paper reviews cross-cultural evidence on the conditions favoring less homicide and war, two components of a more civil world. Although violence and war are very common in the ethnographic record, we can examine why their frequencies vary from society to society, which may tell us why violence and war occur in the first place. Warfare in the ethnographic record is linked to homicide and assault, as well as to other forms of violence such as warlike sports, malevolent magic, and severe punishment for crime. Various statistical results are consistent with the theory that homicide and assault are inadvertent consequences of war. Parents train their sons to be aggressive so that they may be courageous and successful warriors, but this training generalizes to other areas of life, resulting in higher rates of homicide and assault. Warfare, in turn, is strongly predicted by unpredictable but expected resource scarcity, and secondarily by socialization for mistrust. Less internal war (within a society or language group) is predicted by more participatory (more 'democratic') political systems. These results suggest foreign and domestic policies that could reduce or eliminate the causes of incivility and war, and so hasten the cultural evolution of a more civil world.

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INTRODUCTION

The term 'civil society' has many connotations. For the purposes of this paper, a more civil society is a society with less homicide and war. All societies known to anthropology, even the simplest, have some peaceful ways of trying to suppress violence and resolve conflicts within and between political units. (In 50 percent of the cases, when first described, the largest political unit was the local group – the band or village.) Peaceful ways of conflict resolution can range from public opinion to gossip to negotiation to adjudication. They may not always be successful. The question we address here is: How could human societies become more civil and peaceful? This question has long been a focus of speculation and research by philosophers and social scientists. Here we look at some anthropological (cross-cultural) evidence on the question, as we know it mainly from our own studies of war, peace, and interpersonal violence[1, 2].

To understand what produces civility and peace, we have to understand what produces their opposites, violence and war. Despite our wish that it be otherwise, the ethnographic record shows that incivility (homicide and assault) is not uncommon at the local level, and there is frequent war between local or larger territorial groups. In most societies, when they were first described by anthropologists and others, the frequency of homicide and assault was not low, and the vast majority of societies had frequent wars, unless the society had been pacified, usually by a Western colonial power. Indeed, if we look only at societies not pacified, war is almost ubiquitous in the ethnographic record. Less than 10 percent of the unpacified cases had no war or rare warfare, and the distribution of war frequency is strongly skewed toward the high end. About 9 percent had warfare once every 3–10 years, another 9 percent had warfare every two years or so, and more than 70 percent had warfare every year, seasonally or constantly (C. R. Ember and M. Ember 1997, 1992a).

With all this incivility and war, how (you might ask) could the ethnographic record tell us anything useful about how to achieve a more civil and peaceful world? How could we discover predictors of conditions that are rare? For example, we cannot compare societies with and without war to see how else they might differ. Cases without

war are too infrequent. But there is a way out of this dilemma: We can ask why the frequency of war (or of homicide) varies from one society to another. Answers to the frequency question might suggest why people go to war or commit murder in the first place. So our strategy was to look for predictors of variation in the frequency of civility (incivility) and peace (war). And we have found some, which we describe here.

Before we turn to why cross-cultural research is a good thing to do, and what it appears to tell us about the causes of civility and peace, we admit that the idea of a completely civil and peaceful world is probably utopian. It is hard to imagine how the world, and all the people in it, could ever be completely civil and at peace. We should also acknowledge that a society without any internal and external violence at all would probably not be very nice. It would likely be a very coercive one. How could there be no internal violence without a high degree of intervention and repression by the state, and without a high degree of public opinion pressure that would intrude on privacy and civil rights? So we are not referring here to civility and peace in the absolute sense of no violence internally and externally. Rather we are asking: What predicts a low rate of internal violence (assault/homicide)? And what predicts a low frequency of war (combat between territorial groups)? Answers to these questions point us to the conditions that could make the world more civil and peaceful.

CROSS-CULTURAL RESEARCH: WHY DO IT?

When we refer to 'cross-cultural' studies here, we mean studies that test hypotheses on data from worldwide samples of societies. Anthropologists and other social scientists started doing such studies to avoid biased or culture-bound explanations, i.e., explanations that fit only some places or types of culture. In other words, cross-cultural tests seek universal or near-universal explanations, i.e., explanations that fit all or nearly all societies. But they are not very popular, yet. Why is a good question, given their advantages and the fact that they are not that hard to do (C. R. Ember and M. Ember 2001).

In the anthropological sense, a society is conventionally defined as a more or less continuously distributed population that speaks a

common language not usually understood by its neighbors (C. R. Ember and M. Ember 2004, pp. 16–17). To anthropologists, states or countries in the modern world often contain many societies (language groups) and therefore many cultures. For example, China includes more than 50 officially recognized cultures; anthropologists recognize even more. Sampling by society, as in a cross-cultural study, thus allows for a wider generalizability than sampling by state or country, as in a cross-national study. The people in a state may mostly have one culture in the anthropological (language group) sense, as in the case of Japan, but many if not most states (as of now) are multicultural in the sense of containing more than one society and culture. Moreover, societies vary considerably in level of political integration. In many societies, as we already noted, the largest autonomous political unit is the band or village; in other societies there may be chiefdoms or larger units up to a centralized state that unifies the whole language group. And, of course, many political units include more than one society in the anthropological sense (these units, when they are large, are called 'empires'). Thus, the results of a cross-cultural study are generalizable to a wider political and cultural universe than a cross-national study's results (M. Ember 1991; M. Ember and Otterbein 1991; C. R. Ember and M. Ember 2001).

This indeed is the major rationale for worldwide cross-cultural research, and why it was invented. For example, as compared with cross-national research, worldwide cross-cultural research has a better chance of generating conclusions that have more or less universal validity. A cross-national investigation is generalizable only to a limited range of cross-cultural variation, namely, that which is exhibited in the complex societies (usually multicultural nation-states) of recent times. In contrast, the results of a worldwide cross-cultural study are generalizable to all types of society – from hunter-gatherer-fishers with populations in the hundreds or a few thousand, to shifting village cultivators and pastoralists with larger populations, to agrarian state societies with populations in the millions, to modern nation-states with populations in the many millions. Until recently, to be sure, the ethnographic record under-represented the complex end of cross-cultural variation. But this situation is changing as anthropologists

and other social scientists increasingly do ethnographic fieldwork in the world's complex societies.

Worldwide cross-cultural research has other advantages compared with cross-national research. In addition to its restricted generalizability, cross-national research is more limited in the kinds of data that can be used, which generally come from censuses and other nationally collected statistics. The data used by cross-cultural studies are broader in scope because they are ethnographic, collected by observation and interviewing in the field. There is almost no bound to what ethnographers may describe about the societies they study. Therefore, measures based on ethnographic reports can pertain to many more domains of life than the measures in cross-national studies. In our experience, just about any variable that is described in ethnographic reports can be measured at least ordinally; that is, societies can be ranked in terms of degree on just about any variable. Because the ethnographic record is much broader in its scope (more domains of life can be measured), cross-cultural research can test more kinds of hypotheses than cross-national research. And because ordinal measures are usually possible, investigators can use advanced statistical methods such as multiple regression to discover the relative influence of different possible causes.

There is a third advantage of worldwide cross-cultural research compared with cross-national research. Using the ethnographic record extends the range of cultural variation and complexity that can be investigated, beyond what we can see in recent nation-states. For example, recent nation-states are all commercial, and usually industrial. That is, all have had a money economy. But many societies in the ethnographic record did not. If we want to generalize to the economics of human experience in all of its variety, we should look at all kinds of human society. For example, if we want to discover how humans might be able to live without money or inequality, we should look at the entire range of human culture, not just commercial societies or societies with classes. (Commerce is probably less than 10,000 years old in the world, about as old as social stratification.) Similarly, if we are interested in achieving a more civil and more peaceful world, we may have to free ourselves from restraining myths that de-

rive from less than worldwide cross-cultural research (M. Ember and C. R. Ember 2001).

In short, if we want to maximize our chances of coming up with explanations that have universal validity, we must look at the entire range of human cultural variation. And if we want to maximize the possibility of useful explanations, particularly for reducing human problems such as violence and war, our investigations should include cross-cultural investigations. An explanation that is culture-bound, or applicable only to a particular nation or region or type of society, is not likely to suggest a policy that is likely to work *whatever the time and place*.

CROSS-CULTURAL PREDICTORS OF LOW HOMICIDE/ASSAULT RATES

Let us turn now to what our own and other comparative (cross-cultural and cross-national) studies suggest about how to achieve a more civil society, assuming that what predicts more civility should suggest policies that would make it so. Recall that, for us, a more 'civil' society is in part a society with a low level of interpersonal violence, as reflected in a low homicide/assault rate. Using ethnographic qualitative descriptions on an initial sample of 186 largely pre-industrial societies, two independent coders rated frequency of homicide and assault, each measured separately on a 3-point ordinal scale (1 = low, 2 = moderate, 3 = high). The two independent coders did not know the hypotheses to be tested to minimize confounding between this and other measures. The independent coders resolved their disagreements, if any, and only the more reliable codings were used in the statistical analyses (that is, we used the resolved ratings only if the two originally separate ratings were the same or close – see C. R. Ember and M. Ember 1994; for the complete set of codings, and why we chose to use only the most reliable ratings in the statistical analyses, see C. R. Ember and M. Ember 1992a). For the multiple regression analyses, the homicide and assault measures were summed.

In the kinds of societies that anthropologists typically study, homicide and assault statistics are not usually available. Many of the societies described in the ethnographic record did not write, and

therefore lacked written records. And even if writing was present, records of homicide and assault were often not kept (or reported in the ethnographies). So, we measured rates of violence by rank-ordering the sample societies according to what the ethnographers say about the frequency of homicide and assault. In other words, the ethnographers' qualitative descriptions are transformed into quantitative comparative judgements. (Measuring variables on the basis of ethnographic information is just another form of content analysis.) For example, the statement that murder is 'practically unheard of' is taken to mean that the murder rate is lower than where it is reported that 'homicide is not uncommon'.

One of the clearest findings emerging from the cross-national research literature is that higher frequencies of war are associated with higher rates of homicide. For example, Archer and Gartner (1984: 63–97) compared changes in homicide rates of nations before and after major wars. Whether a nation is defeated or victorious, homicide rates tend to increase after a war. This result is consistent with the idea that a society or nation legitimizes violence during wartime; killing the enemy is approved and encouraged, in military training and in the media. After a war, homicide rates may go up because inhibitions against killing have been relaxed. In the United States, for example, surges in violent crime rates occurred during the 1860s and 1870s (during and after the Civil War), after World War I, after World War II, and during the Vietnam War (Gurr 1989: 47–48).

Using the ordinal measure of homicide/assault rates described above, the cross-cultural results are consistent with the results of the cross-national research summarized above. In the ethnographic record as well as in the recent historical (cross-national) record, more war is associated with more homicide and assault (C. R. Ember and M. Ember 1994; compare with Archer and Gartner 1984). Cross-culturally, more war is also associated with warlike sports (Sipes 1973; Chick *et al*. 1997), beliefs in malevolent magic (Palmer 1970; Sipes and Robertson 1975), wife-beating (Erchak and Rosenfeld 1994; Erchak 1997), and severe physical punishment for crimes (Russell 1972; Eckhardt 1975; Sipes 1973; Sipes and Robertson 1975). And more feuding or internal war generally predicts more external war (Otterbein and Otterbein 1965; Ross 1985; Ross 1993, p. 118). In short, as

many have noted, different kinds of violence go together. There often is a 'culture of violence'.

The critical question for us is what promotes a 'culture of violence'. A number of lines of analysis suggest that a high frequency of warfare is central. Warfare seems to be the most important ultimate cause – and socializing boys for aggression (in preparation for warrior roles) seems to be the most important proximate cause – of high frequencies of homicide/assault (C. R. Ember and M. Ember 1994). The relevant results are as follows. First, more warfare is a significant bivariate predictor of more homicide/assault, but it largely drops out as an independent predictor in the multiple regression analysis (see Table 1). This result is consistent with the idea that warfare is not a proximate cause of homicide/assault. The second relevant result is that the more war a society has (counting all kinds – local group against local group, between larger territorial units in the society, between units of different societies or language groups), the more it will socialize for aggression in boys. We tested many possible explanations of homicide/assault rates, but, except for socialization for aggression in boys in late childhood, hardly any of them were supported, and none was anywhere near as strong as socialization for aggression (see Table 1). The other factors considered included the best bivariate predictors of 'low warmth and affection in childhood', 'harsh socialization', and 'low father-salience', along with the presence of warfare itself, which may legitimize violence. Analyses presented in C. R. Ember and M. Ember (2002) suggest that a more direct measure of father absence also predicts high homicide/assault rates; cf. B. B. Whiting (1965) and Ross (1993: 118).

Another set of results illuminates the relationships between warfare, socialization, and homicide/assault. These results indicate that more war is more likely a cause of more homicide/assault than vice versa (C. R. Ember and M. Ember 1994: 633–637). For example, if socialization for aggression is truly a consequence rather than a cause of war, people would encourage their boys to be aggressive *because* they have a lot of warfare and need to produce effective warriors. If, however, a society is pacified or forced to stop fighting, warriors are no longer needed, so pacified cases should show reduced socialization for aggression. And this is what we find. Pacified societies are sig-

nificantly lower than nonpacified societies on socialization for aggression in boys in late childhood (Mann-Whitney U = 1,332, Ns = 23, 94; p = .04, one-tailed). This result is consistent with the idea that parents will generally stop needing to produce aggressive and tough warriors after war has been abolished.

Another set of evidence is also consistent with our interpretation that socialization for aggression is a consequence rather than a cause of war. This set of evidence allows us to reject the possibility that the causality is reversed. The lower scores on socialization for aggression in pacified societies could conceivably be explained in the opposite way. Pacification might be more likely because the society was previously low on socialization for aggression. (Societies not prepared psychologically to fight might be pacified more readily.) But the evidence we are referring to here unequivocally indicates that war is antecedent to socialization for aggression. We had some societies in our sample that were pacified more than 10 years before the time of first description. We can compare such societies (the 'early pacified') with others that we know were pacified sometime later. If we are correct that socialization for aggression is a consequence of war, and that socialization for aggression drops *after* warfare ceases, the early pacified societies should show significantly lower socialization for aggression than the societies pacified later. And this is what we find (Mann-Whitney U = 437, Ns = 30, 22, p = .041, one-tailed – C. R. Ember and M. Ember 1994: 636–637). Finally, a number of path analyses (C. R. Ember and M. Ember 1994: 636–639; data not shown here) are consistent with the causal model that war largely impacts on homicide/assault via socialization for aggression The model that is most consistent with our data also points to a slight direct effect of war frequency on homicide/assault, consistent with the theory that war may directly legitimize violence.

In sum, the cross-cultural evidence we have published is consistent with the theory that socialization for aggression is likely to be a consequence (not a cause) of war, that people will want their sons to be aggressive when they have a lot of war and need to produce courageous warriors. This is not to say we think that parents *want* to produce murderers when they socialize for aggression. Rather we think that high rates of homicide and assault are inadvertent (unintended)

consequences of more war: Once you learn to kill an enemy, you may be more likely to hurt or kill anyone. If socialization for aggression is the main proximate cause of interpersonal violence (the opposite of civility), the underlying or ultimate cause (what natural selection may operate on) would be the need for committed or unambivalent warriors. If this theory is correct, we would have to say that the U.S. history of high war-involvement may be an important indirect cause of incivility within our society. (Why is there so much punching and shooting on television, in the movies, and in computer games?). Our results imply then that if we want to reduce the likelihood of incivility, we may mostly need to reduce the likelihood of war, which would minimize the need to socialize for aggression and therefore reduce the likelihood of interpersonal violence. If we want to rid the world of incivility, we may first have to rid the world of war. That goal may take a while to achieve.

How could researchers test our theory further? One way would be to examine recent and contemporary cases in which warfare ceased abruptly as a result of defeat and unconditional surrender. Did people in these situations significantly reduce their socialization for aggression, as compared with earlier? Were young boys in Japan taught less about samurai traditions and heroes after World War II? Did Germans reduce their socialization for aggression in the post-war years? Our cross-cultural research suggests that socialization for aggression is the major mechanism accounting for incivility. We need more research of all kinds (including experimental and cross-historical studies) to see if this is generally true.

CROSS-CULTURAL PREDICTORS OF HIGH WAR FREQUENCIES

We presume that if we can predict variation in war frequency, i.e., if we can predict relative peace or low frequencies of war, the predictions will tell us why people go to war in the first place. (The higher the score on a predictor for a particular society, the more frequent their warfare should be.) In testing for possible predictors of more versus less war, we generally ignored the pacified cases because they are *falsely* low on the frequency of war. That is, partly or completely pacified societies might still have conditions that would otherwise

predispose people to go to war. And to minimize the possibility of error in our data, we used only the most reliable codings, i.e., only those codings by two independent coders that were initially close. The ordinal scale for overall war frequency (internal, external, or both) had 5 points but the coders were allowed to choose a rating between scale scores (for the coded data, see C. R. Ember and M. Ember 1992a; for the results of the hypothesis tests, see C. R. Ember and M. Ember 1992b).

We looked at many possible causes of war – social, psychological, ecological. There were two stages in our analyses, as in our study of interpersonal violence (first bivariate, then multivariate tests). We first computed the bivariate relationships; we looked to see if a hypothesized cause was moderately and significantly associated with overall war frequency. (By 'moderately' we mean that the Spearman's rho was at least .30.) Only a few of the possible predictors we looked at predicted war frequency. Most did not. For example, there was little or no support for two commonly entertained psychological theories of war – the 'frustration-aggression' hypothesis, i.e., that frustrating socialization makes for more war, and the 'machismo' hypothesis, i.e., that the conditions encouraging 'protest masculinity' make for more war. As noted above, we did find that socialization for aggression in boys is associated with more war. However, as discussed above, there was strong evidence that such socialization is more likely a consequence than a cause of war. Measures of social complexity weakly predict overall war frequency in the bivariate tests, but those measures are not significant in multiple regression analyses (data not shown). For example, foragers (hunter-gatherer-fishers) on average do fight a little less often than food producers (agriculturalists, pastoralists), but that seems to be because foragers score lower on the two variables (discussed below) that strongly predict higher overall war frequencies in the multiple regression analyses (C. R. Ember and M. Ember 1997). Only those two variables emerged as strong predictors from the multiple regression analyses. The two together predicted 50 percent of the variance (in overall war frequency) in the entire sample, and 67 percent of the variance in non-state societies.

When we started the research, we knew that we wanted to test the notion, often entertained, that people go to war over resources. We measured resource scarcity in three ways. The first two tap unpredictable fluctuations over a 25-year period: threat of famine and threat of unpredictable natural (weather or pest) disasters that destroy food supplies. By 'threat of unpredictable natural disasters', we mean a history of serious, unpredictable fluctuations in the supply of food, due to aperiodic floods, droughts, or pest infestations. Our third measure of resource scarcity is the degree of chronic or regularly recurring (*e.g.*, annual) scarcity. The measures of unpredictable resource problems were not linearly related to war frequency. Rather, there appeared to be a threshold effect: any degree of threat of famine or unpredictable disasters appears to predict a high frequency of warfare. Accordingly, these two variables were dichotomized at no threat versus some threat. The bivariate relationship between warfare and the dichotomized measure of threat of weather or pest disasters is particularly high in nonstate societies (rho = .71).

Our plan was to test theories about resource problems predicting war against other theories, particularly psychological theories suggesting that frustrating socialization (harsh socialization, sexual restrictiveness, low need satisfaction) may increase the likelihood of war. Because few societies could be rated on all variables, we pursued a two-pronged approach in the statistical analysis. We chose the strongest significant bivariate predictor in each set of related variables (*e.g.*, pertaining to harsh socialization) to include in the multiple regression analysis. We found no significant bivariate relationships between war and 21 measures of harsh socialization (see footnote 2 in C. R. Ember and M. Ember 1994) or between war and 2 measures of sexual restrictiveness in boys (see footnote 10 in C. R. Ember and M. Ember 1992). So we did not include harsh socialization or sexual restrictiveness in the multiple regression model. Threat of unpredictable natural disasters was the strongest of the indicators of resource predictors and socialization for mistrust, *e.g.*, telling children not to visit neighbors, warning them about witches (the codings on this variable came from Barry *et al.* 1976) was the strongest bivariate predictor in the set of variables pertaining to low need satisfaction. Column 1 of Table 2 displays the multiple regression analysis using the dichoto-

mized measure of threat of disasters and socialization for mistrust. The socialization for mistrust predictor is not nearly as strong a predictor (the standardized coefficient is .296, $p < .025$, one tail) as the threat of disasters predictor (the standardized coefficient is .591, $p < .001$, one tail).

In contrast to the threat of disasters predictor, we found in a previous analysis (not shown) that chronic scarcity is not a significant predictor of war frequency in a multiple regression analysis (C. R. Ember and M. Ember 1992b). This fact suggests to us that it is the fear of unpredictable scarcity, rather than the experience of shortages, that mainly motivates people to go to war. As we mentioned earlier, the bivariate relationship between threat of disasters and warfare is not linear. Societies with only the threat of scarcity, with a memory of unpredictable shortages but no actual shortages during the measured 25-year period, fought very frequently, just like societies that had actually had one or more scarcity-producing disasters in the previous 25 years. So we think that people may decide to go to war because they want to cushion the impact of expected but unpredictable disasters, scarcity-producing events they expect to occur in the future but cannot predict or control or prevent. The idea that war is an attempt ahead of time to mitigate the effects of unpredictable disasters is supported by the results pertaining to the outcomes of war. Almost always in our sample cases, the victors in war take land or other resources from the defeated, *even if the victors do not have resource problems at the time*. If you don't need resources at the time, why take resources from the enemy, if not to protect against anticipated but unpredictable scarcity? And not just agriculturalists take resources if they win. Even foragers do. For example, they take hunting territory. It appears then that people even in pre-capitalist societies may have been mainly motivated to go to war for economic reasons, particularly to cushion themselves against expected but unpredictable scarcity.

If fear of future, unpredictable loss is the main motive for going to war, it makes sense that chronic scarcity does not predict war. There may be two reasons. First, chronic scarcity (*e.g.*, seasonal shortages) may not be as lethal as natural disasters that destroy food supplies. Second, chronic scarcity may be psychologically easier to deal with

than threat of natural disasters just because chronic problems are predictable. If you know there will be some 'hungry' months (and this is a common kind of statement in ethnographies), you can prepare yourself emotionally. But the threat of natural disasters, which occur rarely and unpredictably, may be so frightening that people would be willing to go to war to protect themselves ahead of time, even though they or loves ones could die. A cross-cultural study (Cohen 1990) suggests that fear of natural disasters may be exhibited, albeit in disguised form, in folktales. Cohen found that unprovoked or what he calls 'capricious' aggression is likely to appear in the folktales of societies that are subject to unpredictable food shortages (he used our 'threat of disasters' measure). Why? One possibility is that folktales really reflect experience. Unpredictable disasters *are* capricious, not provoked by any human activity, brought on by the gods or nature 'out of the blue'. Curiously, societies with a history of unpredictable food shortages hardly mention natural disasters in their folktales. Perhaps this is because the threat of them is too frightening, and therefore people cannot deal with it consciously. Isn't this the kind of situation that might select for the psychological defense mechanism of denial? Because they are so frightening, unpredictable disasters and their capriciousness are transformed into the capriciousness of characters in folktales.

It appears that our theory of war applies particularly strongly to nonstate societies; the multiple Rs (with and without outliers) are higher when we exclude state societies from the analysis (see columns 2 and 3 of Table 2). But why should this be? There may be two reasons. First, in addition to disasters that destroy food supplies, state societies may face threats to other necessary resources. If these additional threats also motivate people to go to war, the natural disasters predictor should work less well by itself in state societies. Second, state societies, which are larger societies with formal government, are more likely to have redistributional mechanisms that could mitigate the effects of disasters; surpluses could be moved from disaster-free areas to the affected areas, and therefore the natural disasters predictor should not predict warfare so strongly in state societies.

What about the complex societies of the modern world? In particular, what about industrialized societies, which are hardly repre-

sented in our sample of ethnographically described societies? Is warfare in and between them explainable in much the same way that preindustrial warfare may be explainable? If the answer provided by future research is yes, it will certainly be a modified yes, because our conception of the threat of disasters must be expanded to fit the realities of industrialized societies. In the modern world, with its complex economic and political connections and dependencies, we may not be worried only about weather or pest disasters that would curtail food supplies. Possible curtailments of other necessary resources (*e.g.*, oil) may also scare us into going to war.

We did another study, with the political scientist Bruce Russett, that suggests another reason people may go to war (C. R. Ember, M. Ember, and B. Russett 1992; C. R. Ember, B. Russett, and M. Ember 1993; B. Russett 1993). The hypothesis we tested, which comes out of cross-national studies, is that democracies rarely if ever go to war with each other. To test the empirical limits of this hypothesis, we decided to see if it applies also to the ethnographic record, which is very different in scale from the record for complex nation-states. Remember that, in the ethnographic record, warfare is usually internal to the society or language group, and the local group (band, village) is often the largest autonomous political unit. Democracy as we know it is hard to see in that record. Hardly ever are there contested elections and other features of democracy as defined by political scientists. So we reformulated our test hypothesis in terms of variables of political life that can be observed and measured universally.

Do such variables predict less internal war in the ethnographic record? The answer is yes, and strongly so. In multiple regression analyses, three political variables at the local level (the only universal level of political life) explain most of the variance in the frequency of internal (within the society) warfare. The original codes on these variables were developed and rated by the political scientist Marc Ross [1983] for approximately 90 societies; we enlarged the sample for our own work. One of the significant local political variables (see Table 3) is the degree to which adults participate in community decisions (Extent of Participation), which is analogous to a wide voting franchise in modern democracies. The second is peaceful political succession or nonviolent ways to remove a leader (Removal of Lead-

ers), which is analogous to contested elections. The third is the absence of fission; nobody leaves the community after a political dispute (Absence of Fission), which approximates a respect for civil rights. This last variable, which we interpret as agreeing to disagree, is the most important of the three political predictors of less internal war. Two control factors also predict more internal war: Larger societies are likely to have more internal war (Population), as do societies located on an isolated island or group of islands (Isolated Island); but these two variables account for less variance than the three political variables. There is only one political variable that appears to contradict the hypothesis, namely, Consultation in Table 3. Bivariately, the correlation is in the predicted direction, but not significantly, with more consultation by a leader going with less internal warfare. Yet the standardized coefficient in the multiple regression analysis is significant in the *opposite* direction, with higher scores on consultation by a leader predicting more internal war. After eliminating the possibility that multicollinearity accounts for the reversed sign, we suggest that what is left for this variable after other effects are taken out is how much authority the leader has, which is not necessarily undemocratic authority. The highest score on this variable is how much persuasion the leader has to employ, which may suggest a lack of stable authority.

In column 3 of Table 3 we look only at societies that have political organization at the local level. We want to make sure that the presence of multilocal authority is not intruding upon the result by creating more internal peacefulness. Although the sample size is smaller in column 3, the results suggest the same kind of pattern found in societies without multilocal political integration, namely, more democracy predicts less internal war.

Finally, another multiple regression analysis (not shown here) contradicts the idea that fraternal interest groups make for more internal war. When there are localized groups of related men because of patrilocal residence (couples live with or next door to the husband's relatives), that does *not* predict more internal war (C. R. Ember, M. Ember, and B. Russett 1992), contrary to what Otterbein and Otterbein (1965) and others have assumed.

CONCLUSION

The peaceful effect of democracy, the ability of more participatory polities to agree to disagree and settle disputes peacefully (internally and externally), suggests a way to reduce the risk of war in the world. If authoritarian governments were to disappear from the world, because the powerful nations stopped supporting them militarily and otherwise, the world could be more peaceful for this reason alone. The theory suggested by the cross-national and cross-cultural results is that democratic conflict-resolution within a political system generalizes to democratic conflict-resolution between political systems, if the systems on both sides are relatively democratic. If participatory systems are not likely to go to war with each other, that suggests the wisdom of a foreign policy to encourage the emergence and consolidation of participatory systems of government all over the world, not just where the U.S. and other powerful countries currently have alliances and strategic interests. The robust relationship between democracy and peace strongly suggests that it is counterproductive to support undemocratic regimes, even if they happen to be enemies of our enemies, if we want to minimize the risk of war or terrorism in the future.

Another one of our results (not published) gives us additional reason to think that the future may be more peaceful. It seems that war has become less frequent over the last 200 years, judging by the ethnographic record. The more recent the time of description in our sample cases, the lower the overall frequency of war. This relationship may reflect the decline in the number of independent political units in the world over the last 200 years. What might this mean for the future? One possibility is that as the world becomes more integrated politically, we can expect less war. If war is most likely when people fear unpredictable disasters of any significant kind, the risk of war in the world could be reduced if people came to understand that the harmful effects of disasters could be mitigated or prevented by international cooperation. Just as we have the assurance of disaster relief within a country, we could have the assurance of disaster relief worldwide. The fear of unpredictable disasters and the fear of others, and the consequent risk of war, could be reduced by the assurance ahead of time that the world would help those in need in case of dis-

aster. Instead of going to war out of fear, we could go to peace by agreeing ahead of time to share more. The certainty of international cooperation could compensate for the uncertainty of resources.

So, in addition to creating a program for worldwide disaster relief, and in addition to encouraging the growth and spread of democratic institutions, we should also support international efforts to integrate the world politically. Globalization usually refers to economic matters. With a little will, it could also be political. To be sure, civil wars and terrorism are ever-present risks around the world, and so we may continue to need a military for peace-making and to deter attacks. But the results described here suggest that the sooner we create international and national institutions to reduce the fear of disasters, to reduce the fear of others, to increase political participation, and to persuade people to agree to disagree, the sooner we will achieve a more peaceful world. And a more peaceful world should reduce our need to produce warriors and the unintended consequence of more homicide/assault. If so, the more we can go to peace, the sooner we could achieve a world of more civil societies.

Explaining Frequency of Homicide/Assault[a] Table 1.

	1	2	3	4	5	6	7
	Overal	Omitting Parental Warmth	Omitting Parental Hostility	Omitting Parental Warmth and Hostility	Column 4, omitting outliers	Nonstate societies only	Column 6, omitting outliers
Soc. for agg. late-boys	.739**	.663**	.736**	.592***	.601***	.593***	.592***
Overall parental warmth	.257		.076				
Overall parental hostility	.095	.005					
Mother sleeps closer to baby than to father	.112	.190	-.022	.088	.127	.133	.175*
Warfare frequency	.135	.040	-.017	.075	.121	.150	.362**
N	18	24	20	35	34	27	24
R^2	.560	.489	.491	.420	.483	.522	.809
P value	.053	.010	.030	.001	.001	.001	.000

[a]The Ns in this analysis represent all the societies from an initial set of 186 largely preindustrial societies known as the Standard Cross-Cultural Sample (Murdock and White 1969) that could be rated reliably by our coders on homicide, assault, and warfare frequency. Data on socialization for aggression came from Barry *et al.* 1980, p. 215; data on overall parental warmth and overall parental hostility came from Rohner and Rohner 1981: 251–7 and data on sleeping arrangements were recoded by us from data from Barry and Paxson 1980, column 1.

Table 2.

Predictors of Warfare Frequency (standardized coefficients)[a]

	1	2	3
	Overall	In Non-state Societies	Column 2, Omitting Outlier
Natural Disasters	.591***	.631***	.778***
Socialization For Mistrust	.296**	.352**	.216*
N	30	20	19
R	.71	.82	.88
R^2	.50	.67	.78

*p <.05, one tail; **p <.025, one tail, ***p <.001, one tail

[a] The Ns in this analysis represent all the unpacified societies from an initial set of 186 largely preindustrial societies known as the Standard Cross-Cultural Sample (Murdock and White 1969) that could be rated reliably by our coders on overall warfare frequency and threat of natural disasters (see the data in C. R. Ember and M. Ember 1992a). Data on socialization for mistrust came from Barry *et al*. 1980, p. 217. Nonstate societies are defined as those rated by Murdock and Provost 1980, p. 150 as 0, 1, or 2 on Scale 9, Level of Political Integration (one or no levels of administrative hierarchy above the community).

Table 3.

Predictors of Internal Warfare (standardized coefficients)[a]

	1 Overall	2 Column 1, omitting outlier	3 Local-level polities only
Population Size (log)	.522***	.634***	.656***
Isolated Island	.492***	.513***	.396**
Checks on Power	.023	-.018	-.310
Removal of Leaders	-.482**	-.470***	-.367*
Consultation[b]	.533** (two tails)	.552** (two tails)	.664
Extent of Participation	-.476**	-.366**	-.184
Absence of Fission Following a Dispute	-.619***	-.643***	-.590**
R^2	.60	.68	.74
N	37	36	20
p	.000	.000	.009

*p <.05, one tail; **p <.025, one tail, ***p <.001, one tail

[a] The Ns in this analysis represent all the societies that could be coded from 186 largely preindustrial societies in the Standard Cross-Cultural Sample (Murdock and White 1969) plus 51 randomly selected cases from the Ethnographic Atlas: A Summary (Murdock 1967). We excluded cases that could not be reliably rated on the dependent variable, internal warfare frequency (C. R. Ember and M. Ember 1992a).

[b] The p-values for consultation are two-tailed because the direction was not as originally predicted.

NOTES

[1] The term 'civil society' also brings voluntary associations to mind. These organizations and interest groups between the state and the family range from bowling groups to neighborhood associations, from local and national charitable groups to multinational NGOs. 'Civil' in this sense means not involving the state or coercive authority; to be 'civil' in this sense is to be helpful, cooperative, considerate, polite, and courteous. The authors of this article are cross-cultural anthropologists; we test explanations on data for worldwide samples of societies. If we were asked what anthropology tells us about the origins of 'civil society' in the sense of voluntary associations, the first thing we would have to say is that such associations are generally absent in the ethnographic record. The only groups that are universally present are kinds of kin groups (families, lineages, clans) and local groups (bands, villages, towns, cities). These are not voluntary associations; everyone of the appropriate age and gender has to belong. But if voluntary associations are not found in most societies known to anthropology, all have political life, activities organized in behalf of territorial groups to maintain social order and minimize, or deal with, social disorder. Hence all societies have ways that at least sometimes reduce conflicts, even though there may be no full-time political officials, legislatures, courts, or armies. And so all societies can be located, at any given moment, on the dimensions of more or less civil or more or less peaceful. This is our focus here. It should be noted that about 50 percent of the societies known to anthropology, as of the times they were first described, did not have political integration beyond the local group, the band or village. In those societies, for us, violence within the local group was homicide or assault; violence between local groups was war.

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