Trends in Conflict: What Do We Know and What Can We Know?

Aaron Clauset and Kristian Skrede Gleditsch

The Oxford Handbook of International Security
Edited by Alexandra Gheciu and William C. Wohlforth

Print Publication Date: Mar 2018 Subject: Political Science, International Relations
Online Publication Date: Apr 2018 DOI: 10.1093/oxfordhb/9780198777854.013.16

Abstract and Keywords

Contending arguments on the causes of war often have divergent implications for trends and the possibility for change. Many argue that we observe a decline in conflict and violence, contrary to traditional conceptions of warfare as a fundamentally inescapable problem. Critics challenge whether conflict is in decline, our ability to make inferences about trends from existing data, and to what extent we can learn from the past about the present and the future. We provide a non-technical overview of the contending positions and the concepts necessary to understand the current debate. We review trends in common measures such as the number of conflicts and severity of wars, plausible models for distributions and the timing of conflicts, as well as the role of theory and assessing uncertainty. We conclude with some thoughts on how to advance research on trends in conflict and how to assess change at particular points in history.

Keywords: conflict trends, conflict data, measuring conflict, conflict severity, conflict distributions, power laws, decline of conflict debate

16.1 Introduction

TRENDS has been a central topic since the inception of research on conflict and violence. Many early debates revolved around contending claims about the causes of war, with different implications for the frequency of war and the possibility for change. While some insist that the risk of war is essentially constant and inescapable, others see warfare as a more dynamic phenomenon that can increase or decrease in frequency and severity with other features such as social organization and development (see, e.g., Gat 2005; Fry 2006; Pinker 2015). Recent debates over whether war is in decline have reignited interest in trends in conflict. Some argue that we see clear evidence of a decline in conflict, especially after the Cold War, following a broader decline in many types of violence with deeper historical roots (see, e.g., Gurr 2000; Payne 2004; Goldstein 2011; Pinker 2011). This is a remarkable contrast to the extreme pessimism that prevailed at the end of the Cold War, where many argued that conflict was becoming more common and predicted an in-

creasingly violent world (Mearsheimer 1990; Kaplan 1994). The decline of war thesis is not without its critics, who express a host of reservations ranging from challenges to the underlying data, claims that certain types of conflict do not decline, as well as more fundamental concerns over limits to our ability to make inferences about trends from existing data.

Much of the debate on trends in conflict involves technical issues about data and modeling, but at the core of the debate lie fundamental questions about what we can learn from the past about the present and the future. Is the long peace between the major powers since 1945 a remarkable fact, indicating a decline in war, or fully compatible with random fluctuation? If war has declined, can we say something about the possible role of (p. 228) specific factors such as democratic institutions, economic interdependence, and nuclear weapons, or the implications for future conflict (e.g. Mearsheimer 1990; Russett 1990; Gaddis 1992/93; Schelling 2005)? Does the decline of conventional conflict mask an increase in unconventional violence (see, e.g., Kaldor 2013; Gray 2015)? What can we say about the future and what constitutes informative evidence?

In this chapter we provide a non-technical overview of the contending positions and the concepts necessary to understand the current debate on the decline of conflict. We first consider trends in the raw number of armed conflicts or states involved in conflicts, followed by trends in the severity of interstate and civil wars, and trends in alternative measures of conflict. We then consider the role of distributions, and the timing of conflicts. Throughout, we consider whether trends may have emerged or changed at particular points in history, such as the end of the Second World War or the end of the Cold War. We conclude with some thoughts on how to advance research on trends in conflict.

16.2 Measures of Conflict Trends

Many questions about trends in conflict are inherently descriptive. The many contemporary data sources on conflict following pioneering efforts of scholars such as Richardson (1960) should in principle allow for assessing such questions, but the availability of data alone has not led to a consensus. Indeed, data rarely speak directly for themselves, and conclusions can often depend on the specific measures used.

16.2.1 Number of Armed Conflicts

Discussions of trends in conflict often count absolute incidence or events. Although theoretical definitions of conflict tend to stress incompatibilities rather than specific means (Most and Starr 1989), most data tend to focus on violent events. One common data source is the Uppsala Armed Conflict Data (ACD, see Gleditsch et al. 2002), which focus on episodes of armed interactions, with at least one state actor, over a governmental or a territorial incompatibility, causing at least 25+ deaths in a calendar year. Based on the identity of the actors, the ACD distinguish among (i) *interstate conflicts*, (ii) *intrastate* or *civil conflicts* between a state and a non-state actor, (iii) *internationalized civil conflicts*

where other states participate on the side of the government, and (iv) *extrasystemic conflicts* where states fight non-state actors in overseas colonies.

Panel (a) in Figure 16.1 plots the number of ongoing armed conflicts from 1945 through 2015. Interstate conflicts have been relatively rare since 1945, and extrasystemic conflicts disappeared after the independence of the last major overseas colonies (p. 229) controlled by Portugal in the early 1970s. At the same time, civil wars appear to have become more common as decolonialization accelerated in the 1960s. The number of civil wars peaked shortly after the end of the Cold War, but subsequently declined. This is the best known and least controversial claim of a decline of war. Although the number of ongoing civil conflicts has gone up in the most recent years, the number that reaches the more severe threshold of 1000+ deaths remains below the post-Cold War peak.

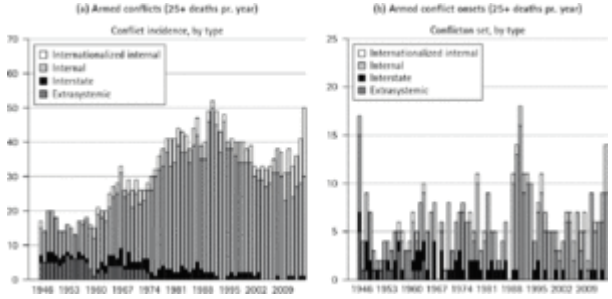

Figure 16.1 Uppsala armed conflict data

Overall incidence does not distinguish between new and ongoing conflicts. Moreover, duration or the length of conflict episodes tends to differ by conflict type, as civil wars on average last much longer than interstate conflicts. Panel (b) in Figure 16.1 indicates new conflict outbreaks, counting only the first year in a new conflict. Save for the artificial spike in 1946 (where all ongoing conflicts "start" at the beginning of the dataset), the early 1990s sees the largest spike in new conflicts, reflecting the dissolution of Yugoslavia and the USSR.

16.2.2 States in Conflict

Many other factors that could affect the absolute number of conflicts also change over time. In particular, since definitions tend to stress state involvement, the number of conflicts identified may depend on the number of states. If there is a fixed probability of conflict between a pair of states, for example, the total expected number of conflicts must increase as the number of states N grows.[1] The idea of a fixed probability of war may be unrealistic, but many suggest that the risk of interstate conflict increases with the number of states (e.g. Harrison and Wolf 2012). Moreover, decolonialization introduced weak states plausibly at higher risk of challenges from non-state actors (e.g. Fearon and Laitin 2003). (p. 230) Finally, one weak state can have multiple civil wars that cannot be considered independent.

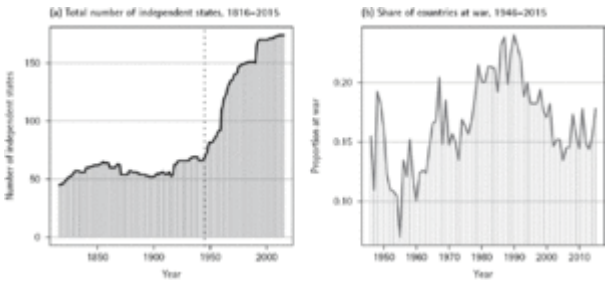

Figure 16.2 Number of states and states at war

In light of this it may be useful to normalize measures of conflict by the number of states. Panel (a) in Figure 16.2 shows the growth in the number of independent states, based on the Gleditsch and Ward (1999) list. The number of independent states increased rapidly after 1945, and more than doubled by 2015. In Panel (b) in Figure 16.2 we plot the share of states involved in armed conflict (irrespective of type) since 1945. We see an increasing share of countries with conflict following decolonialization, and an even more notable downward trend after the Cold War.

16.2.3 Conflict Severity

The measures used in Figures 16.1 and 16.2 count armed conflicts equally, but they differ dramatically in severity or the number killed. Some such as the Iran–Iraq war in the 1980s generate millions of battle deaths, while others such as the 1998 Omagh bombing in Northern Ireland (29 fatalities) just exceed the annual threshold. This speaks in favor of scaled measures of the extent of war or weighting by the severity of wars.

One simple measure of conflict severity is the number of battle deaths. Panel (a) in Figure 16.3 displays the summed battle deaths in armed conflitcs, drawing on Lacina and Gleditsch (2005) as well as more recent updates by the Uppsala Conflict Data Program. Although interstate wars are relatively rare compared to civil wars, the former tend to kill more than the latter. We also see a clear decline in total battle deaths over the period, starting before the end of the Cold War, and particularly notable after the end of the very severe Iran–Iraq conflict in the late 1980s.

Absolute deaths may be a problematic severity measure since population increases over time. If the risk of war is proportional to the number of people of fighting age, for example, we should expect more wars and deaths with a larger population. To use an (p. 231) analogy, the total incidence of cancer may increase with a growing population, even if the relative or per capita rate of cancer declines. As such, it may be appropriate to standardize conflict deaths by world population. Panel (b) in Figure 16.3 displays global battle deaths as a rate over global population in 100,000s, using data from the United Nation’s population division. This indicates a strong decline in the battle death per capita rate over time.

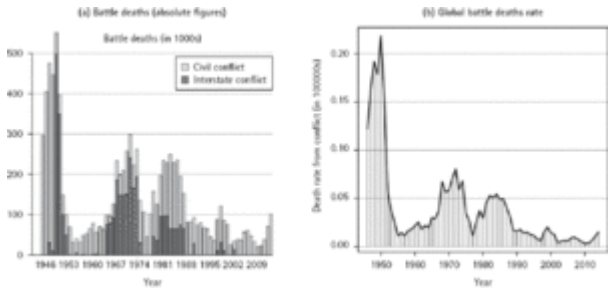

Figure 16.3 Battle deaths from conflict

16.3 Longer Time Series

Limiting analyses of trends in conflict to the post-Second World War period leaves a relatively short series, without the preceding major wars. Panel (a) in Figure 16.4 plots the absolute incidence of wars—defined as armed conflicts claiming at least 1000+ casualties over a conflict—going back to 1816, based on the most recent Expanded War (EW) data (Gleditsch 2004).[2] In Panel (b) we scale wars by the number of participating states, since some wars counted as a single event—such as the First and Second World Wars—have many participants. These figures indicate an even more dramatic decline in recorded wars after the end of the Cold War. This reflects how many ongoing armed conflicts with 25+ deaths per year after the post-Cold War conflict peak do not reach the cumulative 1000+ war threshold.

Figure 16.5 displays battle deaths for the longer time series on wars. Panel (a) shows absolute deaths while panel (b) shows deaths as a rate compared to global population. The picture is consistent with many points made already for the shorter time series, including less severe conflict. Interstate conflicts tend to be more severe but less frequent, and the decline in conflict after the end of the Cold War is still prominent. Although the World Wars stand out as extremely severe events, the average death rates for the nineteenth-century seem similar to the post-1945 period. **(p. 232)**

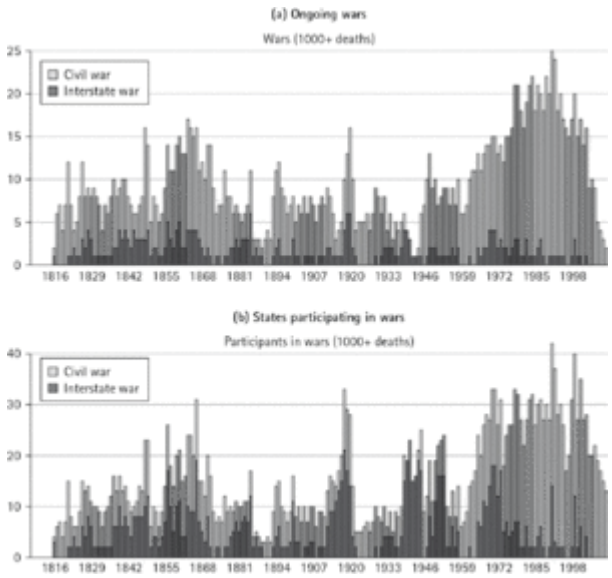

Figure 16.4 Expanded conflict data, frequency

16.4 Alternative Conflict Measures

The measures considered so far require organized violence, specific incompatibilities, and some minimum casualties. Alternative conflict measures generally dispense with one or more of these criteria, and some researchers have claimed to find divergent patterns contradicting the decline in violence using these. We focus on two important alternative measures, namely interstate crises and terrorism.

Measures of interstate crises dispense with the casualties requirement. Many key events during the Cold War such as the Cuban Missile Crisis did not involve direct casualties, but could be seen as periods of tension where war potentially could have broken out. The Military Interstate Dispute (MID) data focus on "the threat, display or use of military force short of war by one member state … explicitly directed toward the (p. 233) government, official representatives, official forces, property, or territory of another state" (Jones et al. 1996: 163). Panel (a) in Figure 16.6 shows how the number of ongoing MIDs increases steadily with time, unlike the number of wars. Based on an analysis of these data, Harrison and Wolf (2012: 1055), claim that "[w]ars are increasingly frequent, and the trend has been steadily upward since 1870."

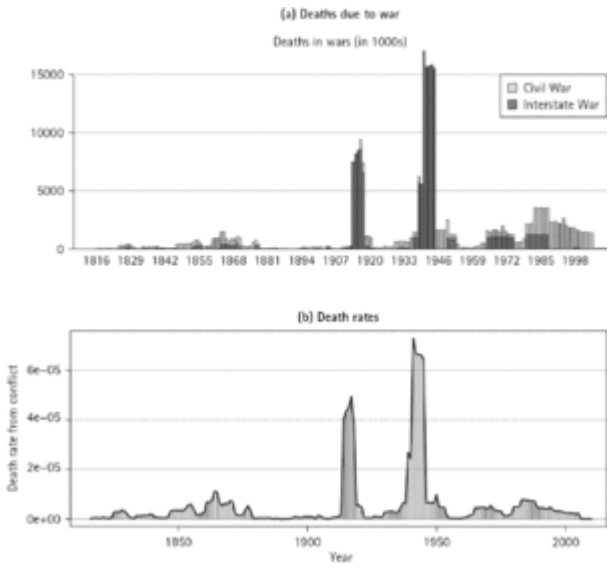

Figure 16.5 Expanded conflict data, severity

Although MIDs do not decline to the same extent as armed conflicts after the Cold War, extending the concept of war to events without casualties is controversial. Figure 16.6 shows that most MIDs are non-lethal and do not involve any casualties. As such, perhaps the most remarkable trend in these data is that interstate disputes seem to escalate to violence at a lower rate over time (Gleditsch and Pickering 2014). Our ability to identify disputes and lower intensity conflicts may decline the further we go back in time, especially outside the developed world. Non-fatal events are likely to be recorded at a much higher rate in more recent years with increasing media coverage, and this may explain the apparent growth in non-fatal MIDs over the period. (p. 234)

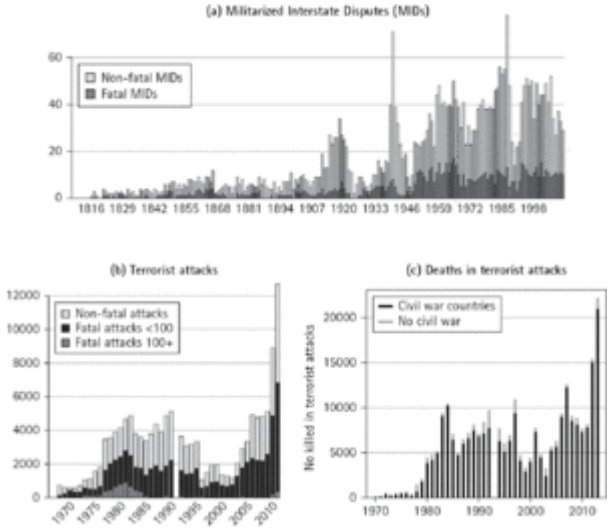

Figure 16.6 Alternative conflict data

Many argue that there has been a dramatic increase in the number of terrorist attacks after 9/11 (see, e.g., http://bit.ly/28MRq5k), and that we are witnessing a transformation of political violence, where any apparent decrease in conventional violence simply masks an increase in irregular violence (see, e.g., Kaldor 2013; Gray 2015). Terrorism is a contested concept, but can plausibly be distinguished from conventional armed conflicts by the emphasis on indirect attacks, intended to coerce or send a message to a different audience, rather than direct attacks between the antagonists. Thus, terrorist attacks need not entail organized violence (i.e. attacks may be carried out by lone wolves), the incompatibility or perpetrator can be unclear, the specific victims may be irrelevant, and events are identified based on intent to harm rather than casualties.

The Global Terrorism Data documents individual attacks since 1970 (see LaFree and Dugan 2007). The count of terrorist attacks in panel (b) in Figure 16.6 suggests a different pattern than civil wars, with a similar decrease in the immediate aftermath of the Cold War, but then followed by an increase after the mid-2000s, and especially after 2010.

(p. 235) However, a number of issues call for caution in interpreting this as support for increasing terrorist violence replacing conventional civil war. Binning by lethality reveals that most attacks are not lethal. The number of severe lethal events remains low and was higher during the 1980s, partly due to plane bombings. We are likely to have better reporting of less severe events over time, and some argue that changing data collection practices undermine comparisons (Pape et al. 2014). Finally, others argue that the concept of terrorism has become extended to all attacks against civilians, especially in Afghanistan and Iraq (Human Security Report 2007).[3]

Panel (c) shows that most deaths due to terrorism take place in countries already at civil war. This is not consistent with strong claims of a transformation of violence, where terrorism is said to occur instead of conventional violence, but rather suggests that terrorism is increasingly used in ongoing civil wars (Polo and Gleditsch 2016).

16.5 Conflict Distributions and Comparisons

Looking at conflict trends in the observed data can be criticized for not comparing against a null model, or interrogating the likely amount of variation that one should expect given a plausible underlying distribution. For example, our confidence in a sample estimate, such as a poll estimate of the share intending to vote for a candidate in an election, should be considered proportional to the likely variability. In a poll, the margin of error depends on the variation among the respondents and sample size. All else being equal, an estimate from a small poll has more uncertainty than an estimate from a larger poll, and averaging the results from many polls entails less uncertainty than the estimate of a single poll.

The sample analogy here may strike some readers as odd, since the historical record or the observed data are normally thought of as the population. However, comparisons to a null model or distributional comparisons may be useful or quantify uncertainty through

measures of expected variation (see Berk et al. 1995). If we think of the observed data on conflict as one iteration of history, we may ask how much variation we could expect to see from one iteration to another, given the observed data and specific assumptions. Beyond the idea of alternative or counterfactual histories, we may also be interested in uncertainty over predictions about future events, based on what we know from the observed data.

16.5.1 The Timing of Wars

Richardson (1944) developed an influential model of the timing of wars in terms of the number of outbreaks by year. His analysis suggested that the distribution of annual war (p. 236) outbreaks over the period 1820–1929 was consistent with a Poisson process, a common distribution for the number of independent random events over a time interval, where there is a constant "very small probability of an outbreak of war somewhere on the globe on every day" (Richardson 1944: 243) and "an absence of any drift toward more or fewer wars" (1944: 246). We can think of this random distribution as a null model for assessing claims about trends in observed conflict data. Many studies find that a Poisson distribution provides a plausible fit to other conflict datasets (see, e.g., Houweling and Kuné 1984; Mansfield 1988).

The idea that the distribution of conflict is random does not sit easily with much research on the causes of war.[4] Failing to reject a Poisson distribution for the overall timing of wars does not mean that individual outbreaks must be entirely random. Richardson himself found some evidence that wars were contagious, in the sense that an ongoing war increased the likelihood of outbreaks among neighbors and that countries with more borders were more likely to see wars. Research has uncovered many state/relational characteristics associated with differences in the risk of interstate conflict, including power-preponderance, geographic distance, and a tendency for conflict to recur (see Bremer 1992; Goertz and Diehl 1993), or country profiles at greater risk of civil war (see Sambanis 2002).

At the same time, dyadic or monadic research rarely considers implications for global conflict distributions. If specific features believed to be relevant to conflict change over time, then we should see shifts in either the probability or timing of conflict. We return to this point later.

16.5.2 The Frequency–Severity Distribution of Conflict and Power Laws

Another important conflict distribution model considers the frequency of wars of a particular magnitude or severity. Richardson (1948) found that the frequency and severity of conflicts appeared to follow a so-called power law, where the frequency of an event is an inverse power of severity, or the number of casualties. More formally, the frequency of wars of a given severity x scale as $P(x)) \propto x^{-\alpha}$, where $\alpha \approx 2$ is the scaling exponent. In a power law, multiplying the severity level by a given factor yields a proportional division of the frequency. The ratio of these values is given by the "scaling parameter" α, and distrib-

ution is said to be “scale free”, since this relationship holds for all values of the power law.

Plotting the complementary cumulative distribution function $P(X \geq x)$ of a power law on doubly-logarithmic axes will appear as a straight line with a slope $\alpha - 1$, at least in the tail of the distribution above some minimum value x_{min}. Panel (a) in Figure 16.7 displays Richardson’s original plot of the frequency and severity of deadly quarrels. Due to binning, the individual data points show up as horizontal lines. Panel (b) provides a more recent example from Cederman (2003), using the Correlates of War interstate war data (Small and Singer 1982), suggesting an approximately linear relationship between log cumulative frequency and severity. (p. 237)

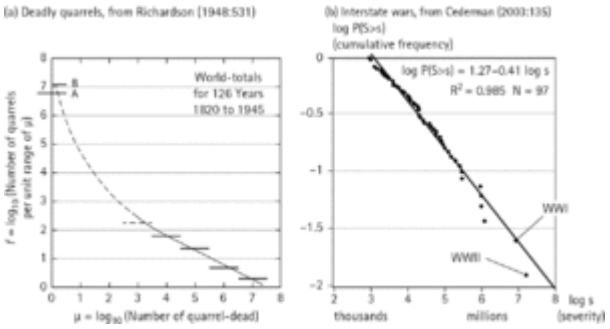

Figure 16.7 Power laws in conflict frequency and severity data

Power laws differ from normal distributions as their heavy tail implies a substantial fraction of observations far away from the center. For a phenomenon that plausibly follows a normal distribution, such as height of individuals (upper panel in Figure 16.8), the mean (168cm) has a clear interpretation as a “typical” value. Values around the mean are common; one would expect about 95 percent of all observations to fall within two standard deviations (*ca* 20cm) of the mean, and values of multiple standard deviations above the mean are essentially impossible. However, in a power law distribution, large events substantially above the mean are relatively common.

Many phenomena display a power law distribution, at least in the upper tail (Clauset et al. 2009). The distribution of cities with more than 50,000 inhabitants in the United States in the lower panel in Figure 16.8 does not resemble a normal distribution. The average is 155,400, while the standard deviation is 379,499. Large cities the size of New York City—population over 8 million, more than 20 standard deviations above the average—would be extremely unlikely under a normal distribution.

By contrast, if individual heights in the US population followed a power law, then we should expect many individuals to be multiple standard deviations above average height. More precisely, we would expect nearly 60,000 individuals to be as tall as the tallest adult male on record (2.72m), 10,000 as tall as an adult male giraffe, and 180 million individuals no more than 17cm tall.

If war severity and frequency follows a power law, then we should expect most wars to have limited severity, but the risk of severe wars can be high, even if such events have not been observed over a long period. The severity distribution of terrorist events also appears to follow a power law distribution, and Clauset and Woodard (2013) use this fact to estimate the likelihood of a terrorist event with the same or larger magnitude as the 9/11 attacks over the decade 2012–21. The precise estimate depends on the specific assumptions used, but their forecasts indicate a likelihood ranging from 19 percent (p. 238) to 46 percent. Thus, although the 9/11 attacks were more severe than previous terrorist attacks, it is not an "outlier" based on a plausible distributional model. More generally, the large variability in heavy-tailed distributions makes it difficult to tell whether a trend exists in observed data, since even draws from an unchanged distribution with no trend can exhibit periods of peace and more conflict just by chance.

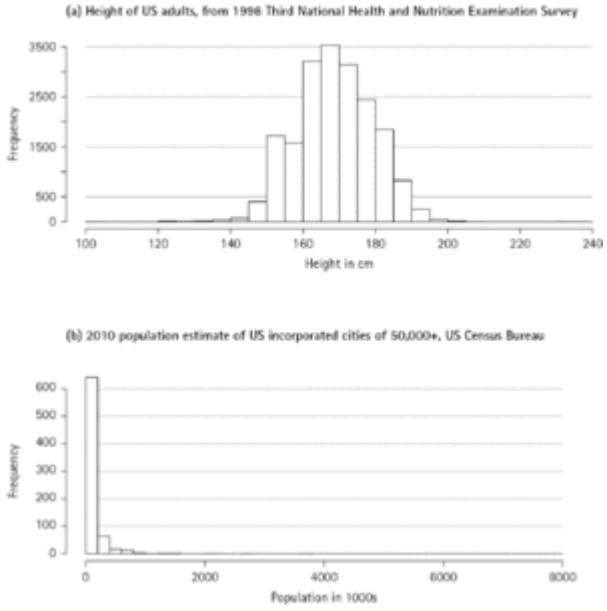

Figure 16.8 Real-world distributions

16.6 The Decline of War and the New Conflict Trends Debate

The relative lack of severe interstate conflict in the post-Second World War era—which Gaddis (1986) has called "the long peace"—inspired speculation on whether there has (p. 239) been some structural shift in the risk of conflict. Some attribute international stability to the stabilizing effects of bipolarity or deterrence through nuclear weapons (Waltz 1979; Schelling 2005), while others have argued that changes in norms and values have prevented major interstate wars, or highlight changes in characteristics believed to influence interstate conflict such as democracy or economic interdependence (see, e.g., Mueller 1989; Russett 1990).

However, others have worried that wars are becoming more common. Many argued that the Cold War rivalry between the superpowers exerted a stabilizing influence, and that its end would usher in renewed interstate conflict (Mearsheimer 1990; Huntington 1993). The increase in civil wars following the breakup of the former Yugoslavia and the perceived instability in the former Soviet Union fueled perceptions of an explosion of ethnic civil war and a "coming anarchy" (Kaplan 1994). These claims were widely shared among scholars and policy-makers of all kinds of backgrounds and persuasions (for an interesting review of pessimism after the end of the Cold War, see Mueller 1994).

This received wisdom that war was becoming more common was regarded as so self-evident, few bothered to consult the data. One of the first empirical studies, Wallensteen and Sollenberg (1995), however, actually found a declining number of conflicts over the period 1989–94 but received only limited attention. An op-ed piece in the *Los Angeles Times* on the decline in warfare by Wilson and Gurr (1999) generated more attention, and discussed possible explanations based on greater ethnic accommodation and conflict management efforts Goldstein (2011).

The current decline of war thesis is to a large extent associated with Pinker's (2011) *The Better Angels of Our Nature: Why Warfare has Declined*. Pinker notes the post-Cold War decline in civil wars and the decline of interstate conflict after 1945 discussed in this chapter, and makes a more ambitious claim about a long-term decline in violence, noting extreme levels of deaths due to violence in pre-historic states, and a remarkable decline in homicide.

Although some have disputed the data themselves (Harrison and Wolf 2012; Gray 2015), few see this as a fundamental challenge to evidence for the decline of war, and there is in our view at best modest evidence for a transformation to unconventional conflict.

A more challenging criticism questions the relative lack of emphasis on mechanisms and the broad nature of the decline of war thesis. Some of the proposed explanations are rather nebulous, especially the notion of a civilizing process (see Elias 2000/1939), where it is unclear if the decline of violence is a clearly separate outcome, caused by the former. It is also not obvious whether any single mechanism can be expected to account for such a diverse range of violence, and some argue that looking at specific types of conflict and scope conditions can allow us to learn more about the relevant mechanisms (Cederman et al. 2017). However, this is primarily a call for theoretical elaboration and differentiation between conflict types rather than a challenge to the decline of war thesis per se.

Cirillo and Taleb (2016) present a more fundamental challenge, emphasizing the problems in drawing conclusions about trends and the likelihood of future severe wars, **(p. 240)** given the statistical properties of conflict data noted by Richardson. They stress that measures of central tendency such as the mean from the observed data are not informative. Rather than the small wars and events emphasized by those who see a decline of violence, we should focus on what statistics allow us to say about the expected likelihood of the very big wars.

The absence of severe wars over a long period alone does not constitute evidence about fundamental changes in the pattern of war.

Using a new dataset on deaths in wars with at least 3000 casualties over the two most recent millennia (1–2015), normalized by global population, Cirillo and Taleb (2016) argue that their analysis provides no basis for rejecting the null hypothesis that wars follow an independent Poisson process, without any change in the frequency and severity of conflict. To reject this null we would need much more data, i.e., “the absence of a conflict generating more than, say, 5 million casualties in the last sixty years [is] highly insufficient to state that their probability has decreased over time, given that the average inter-arrival time is 93.03 years, with a mean absolute deviation of 113.57 years!” (Cirillo and Taleb 2016: 7).

Some see this critique as a devastating blow to the decline of war thesis, but Pinker and many others dispute this. The emerging debate has generated some light on important issues, but also a great deal of heat and inflammatory language, and has so far primarily taken place in comments and blogposts rather than journal articles (see Beauchamp 2015; Roodman 2015; Spagat 2015; Pinker n.d.; Taleb n.d.; Ulfelder n.d.). We try to outline here what we see as the main issues.

16.6.1 What Can We Know About Conflict Trends?

At one level, one may question what there is to debate, as there is, in principle, no inconsistency between claiming that the world currently sees less violence than prior periods and simultaneously acknowledging that history involves elements of chance, where some events could have played out differently, and that it is difficult to make predictions about the future (see, e.g., Clauset 2017; Tetlock and Belkin 1996; Tetlock and Gardner 2015). Pinker and others argue that Cirillo and Taleb attack a straw man, and a position on trends and prediction that they do not take.

Looking beyond the surface, however, there are some clearer disagreements and divergent views on what constitutes evidence. Pinker and others see the decline of many forms of violence outside large-scale warfare such as homicide and interpersonal violence as relevant information that strengthens our confidence in a decline of warfare. Cirillo and Taleb dismiss anything beyond their preferred null of no change in the frequency of major warfare, making it harder to shift prior beliefs.

There is also an underlying disagreement on what we can learn from history and the nature of prediction. Pinker and others would argue that changes in prevalent views on war and the use of violence have important real-world implications. War was once considered heroic and glorious, and conquest for long a conventional motive, while the use of force is now normally only justified on defensive grounds. Some see this as indicative of a shift to politics by agreements and stronger governing institutions, beyond (p. 241) simply an accidental avoidance of conflict (see also Mueller 1989; Goertz et al. 2016). Delineating alter-

native testable propositions is a common method to try to “maximize leverage” when dealing with limited data (King et al. 1994).

Detailing mechanisms can also help provide more specific tests of implications for conflict trends. Cederman et al. (2017), for example, examine if a decline in ethnic civil conflict after the end of the Cold War could plausibly be attributed to changes in ethnic accommodation, democratization, and peacekeeping. Their results suggest a clear structural break, and some evidence that the risk of conflict decreases and prospects for conflict termination increase after following changes in individual countries.

There has also been renewed interest in out-of-sample prediction of conflict and instability and some evidence of progress in predictive ability (see, e.g., Ward et al. 2013; Tetlock and Gardner 2015). In general, claims about the future can and should be evaluated based on our understanding of the mechanisms believed to have produced changes and our confidence that these will endure (see, e.g., Hughes et al. 2014; Spagat n.d.; Ulfelder n.d.).

Re-examining the debate in this way helps suggests possible ways to advance research on conflict trends. Instead of limiting ourselves to a single null hypothesis of unchanging warfare that can only be rejected after very long periods with the absence of extreme events, can we come up with more informative alternative tests? For example, if there has been a shift in the underlying distribution of war, what would be the plausible changes to the distribution, and would we be able to detect it? Can we gain more information by examining distributions of different types of warfare? Roodman (2015) notes that Cirillo and Taleb’s analysis suggest that wars of at least 1 million should happen every 26.71 years, yet we have seen no such conflicts between the major powers since 1945. How unlikely is such an outcome, based on models of past conflict between major powers? Is the relative absence of severe interstate conflicts consistent with specific limiting factors? Do existing studies on territorial conflict management offer hope that disputes in East Asia will not escalate to severe wars (Goertz et al. 2016)? Should we use different models of expected war frequencies and duration for the civil wars that are most prominent in current global warfare? How can we rigorously integrate data on the frequency and severity of different types of conflicts? How fragile are the mechanisms believed to have reduced the risk of war since the Second World War?

These are complex questions that are far from trivial to answer, and raise important theoretical and methodological issues. However, they are in our view answerable and worthy of attention. Conflict trends and modeling distributions deserve a prominent place in conflict research.[5]

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Notes:

(1.) More formally, the number of possible pairwise interactions between states increases by$[N \times (N-1)]/2$.

(2.) Unlike the Correlates of War data (Small and Singer 1982), the EW data do not impose a European-centric definition of states, which can undercount global warfare.

(3.) By contrast, previous violence against civilians such as the Rwandan genocide was not generally considered terrorism at the time.

(4.) Some have suggested that war outbreaks should be random in a bargaining framework, as any observable factors that influence the outcome of armed contests should be factored into demands and concessions (Gartzke 1999). However, this presumes prior incompatibilities, and the empirical research can be seen as identifying dyads that are more or less likely to have incompatibilities rather than the use of force.

(5.) We are grateful for helpful discussions and comments from the volume editors, Baris Ari, Rebecca Cordell, Nils Petter Gleditsch, Philip Nelson, Steve Pickering, and Steven Pinker.

Aaron Clauset

Aaron Clauset is Assistant Professor in the Department of Computer Science and the BioFrontiers Institute at the University of Colorado, Boulder.

Kristian Skrede Gleditsch

Kristian Skrede Gleditsch is Professor in the Department of Government at the University of Essex, director of the Michael Nicholson Centre for Conflict and Cooperation, and a research associate at the International Peace Research Institute, Oslo.