

**Where Have All the Victories Gone?
War Outcomes in Historical Perspective**

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ABSTRACT

This paper is part of a project, still in its infancy, on historical changes in war termination. Here, I document an empirical trend: a marked increase over time in the number of wars ending in a draw, occurring for interstate wars after WWII, and for civil wars after the end of the Cold War. For war to end in a draw, two conditions must hold: neither side is able to defeat the other outright, and the belligerents can reach a compromise settlement, allowing them to stop fighting rather than continuing the war in the hope of eventual victory. Using this framework, I outline and test a number of hypotheses derived from existing literature on war outcomes and duration. I also explore the possibility that the increase in the number of draws is an artifact of the coding. However, at least two possible explanations for such an artifact point to fundamental changes in the nature of war, suggesting interesting avenues for further research.

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The last decade has seen a burst of scholarship on war termination. While studies of how wars end are still vastly outnumbered by studies of the onset or causes of war, considerable analytic and empirical rigor has been applied to studying the processes by which fighting stops and the politics of the aftermath of war. Some of this scholarship has focused on interstate wars (e.g., Fortna 2004b; Goemans 2000; Wittman 1979), some on civil wars (Mason and Fett 1996; King 1997; Walter 2001), some has limited its empirical domain to the post-WWII era, some has examined a longer historical sweep. But most of this work takes the problem of war termination as something that has not changed much over time.¹ Yet the ways in which wars end have evolved.

This paper is part of a larger project (in its very early stages) exploring war termination in historical perspective. The project is motivated by several observations about change over time. Territorial exchange between sovereign states, once extremely common at the end of war, is now rare (Zacher 2001). Civil wars, which once only very rarely ended in a negotiated settlement, now much more frequently do so (Howard 2003). Meanwhile it has become surprisingly rare for interstate wars to end with explicit political settlement of the issues over which they were fought (Fortna 2004b). Practices used to cement the peace have also changed over time. Marriage between ruling families of former belligerents has long since fallen out of fashion as a way to end hostilities, while practices such as international peacekeeping were “invented” only in the second half of the 20th Century. It has also become much more likely than it was in the past for wars to end in a draw rather than a clear victory for one side and a loss for the other. As a first step in addressing the causes and consequences of these changes, this paper focuses on the last of these observations. Why have draws become more common over time?

THE RISING TIE: THE EMPIRICAL TREND

Both interstate and civil wars are much less likely to end with a decisive victor than they once were. For interstate wars the change takes place after World War II (see figure 1). In a data set of dyads in interstate wars from 1816 to 1999, using Stam’s (1996) coding of war outcomes, fewer than 8% end in a draw before 1946, compared to 35% of the dyads since World War II (see

¹ One exception is Holsti (1991).

Table 1).² Using the Correlates of War (COW) measure, the difference is even more dramatic (Table 2). Only one war (France and Turkey in 1919-1921) before 1946, representing half a percent of the dyads, is coded by COW as a having no clear winner, while over 44% of the dyads after World War II end in a tie.³ The Militarized Interstate Dispute (MID) project codes war outcomes somewhat differently, but again the same change over time is apparent (see Table 3).⁴ In all three comparisons, the difference between time periods is extremely unlikely to be the artifact of chance.⁵ Existing data on the military outcome of wars is remarkably inconsistent, but this dramatic increase in the number of draws is apparent regardless of the coding one uses.⁶

² This data is described further below, as are coding criteria for draws. For the purposes of this paper, I use the terms *tie*, *draw*, *stalemate*, *compromise outcome*, and *indecisive outcome* interchangeably.

³ COW seems to have attempted to minimize the number of wars coded as a tie. “While we had some difficulties in discerning a true victor in several of the interstate wars, only two were judged to be a draw: the Korean War of 1950-1953 and the Israeli-Egyptian War of Attrition in 1969-1970” (Small and Singer 1982, p.182). The other cases eventually coded by COW as draws were added in later versions of the data set.

⁴ If one considers the MID category of wars that end with one side “yielding” to the other as stalemates rather than as victories, the figures are 6.4% with no victor before 1946, and 50% after. COW and MID figures are affected by counting even minor participants in each war, including, for example, all 16 belligerents in the Korean war. But the same trend is apparent in Stam’s data which counts only major participants in each war.

⁵ Pearson’s χ^2 tests the null hypothesis that the rows and columns in the table are independent. Mann-Whitney tests the null hypothesis that two samples (in this case pre-1945 wars and post-1945 wars) are from populations with the same distribution. In all three tables, we can reject both null hypotheses with great confidence ($P < 0.000$).

⁶ Of the wars both Stam and COW code as draws, they agree on only four: the First Kashmir war, Korea, Iran-Iraq, and the Second Sino-Vietnamese war. COW codes the Israeli-Egyptian War of Attrition and the Israel-Syria war in Lebanon as ties, but Stam lists them as victories for Israel. COW also codes the Franco-Turkish war of 1919-1921 as a tie, but Stam does not include this war in his dataset. All of the other wars coded by Stam as draws are listed by COW as victories for one side. These include the First Schleswig-Holstein war in 1848-49, the Spanish-Chilean war of 1865 (two dyads), the Sino-French war of 1884-85, the Central American war of 1906 (two dyads), the Sino-Japanese war of 1937-41 and the Changkufeng war between Russia and Japan in 1938. The correlation between these two different codings of war outcomes is only 0.45. The correlation between COW ties and MID stalemates is 0.72, between Stam and MID,

Decisive military outcomes have clearly become much less common in interstate wars since World War II.

[Figure 1 and Tables 1-3 about here]

It is possible that interstate wars were much more likely to end in draws during the Cold War, but that the pattern will now return to its earlier norm. There are not yet enough data points to be certain, but this does not seem to be the case. The First Gulf War was a rout, as was the period of “major combat operations” in the Second Gulf War, but with US and allied forces now bogged down in Iraq, a clear victory seems less and less likely. The first round of fighting in the Armenia-Azerbaijan war (up to the cease-fire in 1992) was a tie, but the fighting from 1992 to 1994 ended with Armenia occupying the disputed territory of Nagorno-Karabakh.⁷ The 1999 Kargil war between India and Pakistan is coded as a stalemate by MID,⁸ and the Ethiopia-Eritrean war is coded as a compromise.⁹ The early indications suggest that the increase in ties has outlived the Cold War. In short, something has changed, making interstate war less decisive than it used to be.

A similar trend is apparent in civil wars, except that the change occurs half a century later, after the end of the Cold War.¹⁰ Of the 110 intrastate wars ending before 1946, COW lists only one, the Mexico-Yucatan Maya war of 1847-1855 that ends in a tie. Seven of 95 after 1946

0.55.

⁷ Fortna 2004b. In the analyses below, data is missing for this case as it is listed as “ongoing” in COW and “unclear” in MID.

⁸ However, Stam might be more likely to code this case as a victory for India, as it successfully fended off Pakistan’s challenge to the territorial status quo. The MID dispute is listed as running from 1993-1999 so appears to encompass not just the fighting in Kargil, but the larger ongoing conflict in Kashmir in which Pakistan fights by proxy.

⁹ This case might also be coded as a victory (for Ethiopia) following Stam’s coding criteria. See Seybolt (2001, p.28).

¹⁰ If there is a temporal trend to war outcomes in extrasystemic wars, it is in the opposite direction. COW codes only four ending in stalemate: the Turco-Persian War of 1821-23, the Italo-Ethiopian war of 1887, the Sino-Tibetan war of 1918, and the British Afghan war of 1919. No extrasystemic wars have ended in a tie since 1920.

end in a tie. But these seven all end in or after 1989. None of the civil wars during the Cold War are coded by COW as ending in a tie. Fewer than 1% of civil wars before 1989 ended in a draw, while 19% after the end of the Cold War have ended with no clear winner (see Table 4).¹¹ The COW civil war data set has often been criticized, but it is the only I know of that extends back before World War II, covering the period from 1816-1997. A data set adapted from Doyle and Sambanis' (2000) data on civil wars from 1944 to 1997 codes more cases as ending with no clear victor, but the change at the end of the Cold War remains apparent (see figure 2). Of 61 cases during the Cold War, 13 (20%) end in a tie (defined as a truce or settlement, as opposed to victory by either the government or the rebels). After the Cold War, 38 of 54 (70%) end in a tie (see Table 5).¹² This last figure is particularly striking. The conventional wisdom is that civil wars are usually fought to the finish, to the complete defeat of one side. This is the premise underlying Walter's (1997; 2001) work explaining why negotiated settlements are so difficult to reach in internal wars. This premise held for most of the period she examined, but it is no longer true.¹³

[Figure 2 and Tables 4-5 about here]

Historically, the shape of the international system has been determined in large part by the outcome of wars. If the way wars end is changing, that will have important consequences for international relations.¹⁴ The general conception of war as a decision mechanism is one in which

¹¹ Again, both the Pearson's χ^2 and Mann-Whitney tests indicate that this difference is extremely unlikely to be the artifact of chance.

¹² Notably, both truces and formal treaties become more common, about equally so. Of the civil wars ending in a tie, about three-quarters end with treaties, one-quarter in a truce, in both the Cold War and the post-Cold War periods. In other words, it is not just an increase in formal negotiated settlements that is occurring, but an increase in all indecisive outcomes.

¹³ Howard (2003) has hypothesized that the new emphasis on fighting terror after September 11, 2001 may undercut the trend toward negotiated settlements rather than decisive victories in civil wars. Recent settlements in Liberia and Sudan suggest this may not be the case, however.

¹⁴ On the other hand, if the trend described above turns out to be simply a blip caused by the Cold War and its end, then studies of war termination based on the last half century are likely to yield

the war will end with a winner and a loser.¹⁵ While this conception does not rule out the possibility of a tie, draws are generally thought of as a default, and relatively rare category.¹⁶ If draws have become more prevalent, perhaps war is becoming less effective as a decision mechanism, a possibility I address further below.

Among other things, the outcome of war affects the duration of the peace that follows. If, as most studies indicate, decisive military outcomes yield more stable peace than do draws, then the empirical trend documented above is potentially quite worrisome.¹⁷ It means that the job of maintaining peace has gotten harder. The fact that wars have become less likely to end in a decisive outcome rather than a draw is thus of profound significance for stability and the international system.

The implications of the trend for human welfare may thus be somewhat mixed: if war is declining in its usefulness as a decision mechanism, this may contribute to war's obsolescence as

misleading conclusions.

¹⁵ As Holsti (1991, p.xvi) puts it, "Men do not go to war for the sake of battle, but to resolve issues that cannot be reconciled by other means."

¹⁶ Some studies, for example Bueno de Mesquita (1981), simply treat ambiguous outcomes such as draws as missing data. Stam (1996, esp. Chapter 2) argues for the importance of thinking about war outcomes as falling into three categories, win, lose, or draw, as opposed to just victory and loss. As he points out, the possibility of a draw means that it is not true that anything that makes one side more likely to win makes the other less likely to prevail. Maoz (1983) codes all three categories in interstate disputes but treats draws simply as an intermediate outcome between victory and loss rather than an outcome requiring its own explanation. Diehl and Goertz (2002) is one of the only studies to treat stalemate as a category worth exploring in its own right.

¹⁷ The relationship between decisive victory and stability has been explored in interstate conflicts by Fortna (2004b); Kegley (1999); Kozhemiakin (1994); Maoz (1984); and Werner (1999); and in civil conflicts by Dubey (2002); King (1997); Licklider (1995); and Walter (1997), and probed most explicitly by Toft (2003b). In the empirical work especially on civil war, this relationship is sometimes clouded by a conflation of the military outcome (victory/defeat vs. draw) and whether the war ended with an explicitly negotiated settlement. For example Licklider's (1995) coding of "negotiated settlement" is that neither side has been completely defeated militarily. While these variables may be correlated they are at least analytically separate. Because both decisive victory and a formal peace treaty may make peace more stable relative to an informal truce, failure to consider these separately may obscure the effects of either one.

a means of settling disputes (Mueller 1989). On the other hand, if indecisive wars leave issues to fester, erupting in repeated fighting, the change in war outcomes may lead to more rather than less violence.

POSSIBLE EXPLANATIONS

How might we explain the change in decisiveness in both interstate and civil wars? Despite the importance of war outcomes for international relations, there has been surprisingly little empirical work on the topic from which to extract an explanation of the historical pattern. No existing studies have noticed, let alone explained the temporal shift in war outcomes. The most thorough recent study of the subject is Stam's *Win, Lose, or Draw* (1996). While he does not address change over time, some of his hypotheses and findings about when we are most likely to observe each of these three outcomes might explain the decline in wins and losses and the rise of draws. Diehl and Goertz (2002) explore the possibility of change over the course of an enduring rivalry, but not the change over historical periods. Work by Maoz (1983) on the outcomes of interstate disputes, and by Mason, Weingarten & Fett (1999), Enterline & Balch-Lindsay (2002), and DeRouen & Sobek (2004) on outcomes in civil wars might also shed light on our question.

Studies of the duration of war, both civil (e.g. Fearon 2002; Fearon 2004; Regan 2002; Soderbom, Collier, and Hoeffler 2002) and interstate (Bennett and Stam 1996), may also be a propos.¹⁸ The concepts of war's outcome and the speed with which it is reached are often closely linked, if not conflated – decisive wars are quick, while long, drawn out conflicts are indecisive. As Fearon (2002, p.2) puts it “Civil wars tend to last a long time when neither side can disarm the other, causing a military stalemate. They are relatively quick when conditions favor a decisive victory.” Stam puts the causal arrows the other way, arguing that longer wars are more likely to end in a draw (p.108).¹⁹ The relationship between duration and indecisiveness may be

¹⁸ Enterline and Balch-Lindsay (2002) and DeRouen and Sobek (2004) study outcomes and duration together.

¹⁹ Stam acknowledges that duration may be endogenous to draws. His coding (see below) seems in some cases to depend on duration, so that the finding that long wars lead to draws borders on

reciprocal. But however the causal arrows run, findings about the duration of war might give us some leverage in explaining the trend toward more draws. If wars have gotten longer over time, this might explain the increase in draws. Fearon (2002) shows that civil wars have steadily increased in duration since World War II.²⁰ This begs the question, however; why have wars gotten longer?

In the most common conception, stalemates or ties occur if neither side can win the fighting outright. Note, however, that Walter's (1997; 2001) argument about civil war outcomes suggests almost the opposite. In her conception, parties to a civil war attempt to find a settlement, but are often unable credibly to commit to it, so fighting continues to a decisive outcome – the parties fight to the finish if they are unable to reach a compromise outcome.²¹

These two conceptions of war outcomes suggest two necessary conditions for war to end in a tie. On the one hand, draws occur when neither side can win decisively. On the other hand, draws only occur when the parties can credibly commit to a settlement; otherwise, they continue fighting. For a war to end in a draw, therefore, **both** conditions must hold: that is, draws are the result of the inability of either side to win outright, combined with their ability to reach a compromise outcome of some sort. The existing literature focuses more on the former condition

tautology. Nonetheless, it does seem plausible that early in a war neither side will be likely to settle for a tie and both will choose to continue to fight to a decisive outcome. As the war drags on, however, compromise settlements that give neither side a clear victory become possible. Mason, Weingarten and Fett (1999, p.247) argue that as the war drags on each side increases its estimate of the time (and therefore the cost) necessary to achieve victory, making settlement relatively more palatable. Interestingly, Enterline and Balch-Lindsay (2002, p.24) find that while the hazard of either government or rebel victory drops quickly as a war endures, the hazard of settlement is relatively constant over time. In other words, if neither side can prevail quickly, the chances of victory drop significantly, but the chance of settlement does not rise, rather wars that are not won quickly become entrenched and last a very long time.

²⁰ Casual inspection of interstate war duration indicates that wars were, on average, longer in the 20th Century than the 19th, but difference of means and Mann-Whitney tests reveal that the difference before and after 1945 is not statistically significant.

²¹ In the first conception, since it often takes a long time to determine whether either side can win, draws tend to occur in long wars. The second conception, however, suggests that indecisive outcomes (truces and negotiated settlements) are reached earlier than decisive ones.

than the latter, but together they form a framework for analysis of war outcomes.

The following sections explore, first, variables that affect the ability of either side to win decisively, second, variables that affect the parties' ability to settle rather than continue to fight. I then turn to testing these hypotheses. At the end of the paper, I explore a third set of possibilities: that the temporal change we observe in war outcomes is a coding artifact, but one that may in fact reflect a fundamental shift over time in the meaning of war.

Inability to Win Decisively

If draws occur when neither side can win decisively, then factors such as relative power, strategy, intelligence, technology, whether other states intervene, and terrain should explain outcomes. For some of these variables, such as strategy, there is no particular reason that we would expect a large change over time, making them unlikely explanations of the temporal trends in interstate and civil war outcomes. Nonetheless, it is possible that through random chance, or because of some overlooked causal process, such variables may have changed in a way that is driving the decline in decisive victories. Others (such as technology, and intelligence) have likely changed over time, so are on the face of it, more plausible candidates to explain historic change.

Relative Capabilities

In thinking about the ability to prevail in war, the most obvious place to start is relative capabilities. Intuitively, we might expect a relatively even balance of military capabilities to make draws more likely.²² Existing studies are somewhat contradictory on this point. While Stam (1996) finds that the balance of capabilities clearly affects who wins or loses, surprisingly he neither hypothesizes nor finds a relationship between capabilities and the probability of a draw. However, while Diehl and Goertz (2002) find that capabilities do not explain the occurrence of stalemate well in disputes in general, they find capabilities to be more important as

²² There is considerable debate about whether a balance or a preponderance of power makes war more likely in the first place (e.g. Bremer 1992; Claude 1962; Organski 1968). If relative capabilities affect war initiation, its effects on outcome may be muted by a selection effect.

a determinant of stalemate in full-scale wars. And from Maoz's (1983, p.206) bivariate distributions of dispute outcomes, it appears that ties are somewhat more frequent between two major or two minor powers than between a major and a minor power.²³ One striking characteristic of the post-World War II interstate system is the virtual absence of wars among major powers.²⁴ Meanwhile, wars between minor powers have become more common. If this shift in who is fighting whom has systematically changed the relative power of warring states, this might help explain the rise in draws in interstate wars.²⁵

It is notoriously difficult to measure relative military capabilities in internal wars. Civil wars are almost by definition asymmetric conflicts, with governments and rebels bringing very different resources to bear. But if civil wars have, for some reason, gotten more evenly matched after the end of the Cold War, this might explain the trends in intrastate wars as well.

Michael Doyle has suggested two reasons to think that the relative balance of power between governments and rebels might have shifted with the end of the Cold War.²⁶ The first is that many states had a superpower patron willing to prop them up against internal threats, but this support fell away with the end of the Cold War, leaving governments more vulnerable to rebels.

²³ This difference is only marginally significant ($P(\chi^2)=0.093$). Bennett and Stam (1996) find that relative capabilities affect the duration of war – lopsided contests are much shorter. Fearon (2002, p.21) argues that lopsided contests should lead to decisive outcomes and more equal fights to deals, but that relative capabilities should have no clear effect on duration – that either way the outcome should be reached quickly. He does not test these propositions, however.

²⁴ Thanks to Erik Gartzke for pointing this out. The one exception is the Korean War.

²⁵ The relative number and quality of troops mobilized for war might also affect the likelihood of a tie. Stam's (1996, pp. 154,158) findings on these points are unclear, however, in bivariate analyses of dispute outcomes, Maoz (1983, p.213) finds equal mobilization ratios and balanced military expenditures to be, if anything, less likely to lead to draws. Stam also finds that the absolute number of troops on a given side decreases the probability of a draw (p.156). Bennett and Stam (1996, p.253) find that the total number of troops is positively associated with war duration. It is not clear why relative mobilization or expenditure rates might have changed over time, but if they have, they might explain the temporal change in war outcomes. To my knowledge, no one has studied questions of relative mobilization and troop quality in the context of civil wars, but a similar logic presumably applies.

²⁶ Discussion at ISA, Montreal, March 20, 2004.

Of course, many rebel groups also enjoyed superpower patronage, so the net effect of the end of the US-Soviet conflict on relative capabilities is not entirely clear, but it is possible that the Cold War helped governments more than rebels, on average.

The second reason Doyle proposes for a shift in favor of opposition groups is the proliferation of small arms that occurred with the collapse of the Soviet Union and its client states. The widespread availability of AK-47s and other light weapons has made it easier for rebel groups to arm themselves cheaply. For one or both of these reasons we might expect a general tilt in favor of rebel groups after the Cold War. Given the lopsided nature of power in civil wars, a decrease in the government's military advantage may increase draws.²⁷

War Fighting Strategy

Stam focuses particular attention on war-fighting strategies, distinguishing between maneuver, attrition, and punishment strategies for both the offense and the defense. He hypothesizes that the use of punishment strategies (which inflict high costs on the adversary without necessarily defeating the opponent's forces in battle) by one or both sides is most likely to lead to a draw (p.55). His discussion implies that draws are most likely to occur when the offense and the defense employ the same strategy, whichever one that may be (table 2, p.88). Stam's empirical findings appear to be somewhat at odds with both of these hypotheses, however. In his statistical model, none of the strategy combination variables has a significant effect on the likelihood of observing a draw (though several are significant predictors of victory). But Stam's graphs suggest that the use of attrition strategies which "seek to destroy or capture opposing forces, making them incapable of continuing to fight," by both sides make draws more likely (p.138).²⁸

²⁷ For many guerilla groups, not to lose is to win; some groups may be fighting to force a settlement with no real prospect of outright victory. So some outcomes coded as draws might better be thought of as rebel victories.

²⁸ Stam's predicted probability numbers (used to generate the graph on p.138) indicate that the probability of a draw is about 20% when both states employ attrition strategies, is somewhat lower when one side uses attrition and the other punishment, but is zero when one side uses an attrition strategy and the other a maneuver strategy. Note that the graph of relative marginal

Fearon (2002) makes a related argument about civil wars, distinguishing between rebels who attempt to take power in a coup or revolution and insurgencies that aim to impose costs and undermine the government's ability to fight. Coups and revolutions work via a tipping mechanism, so they either succeed or fail very quickly (pp.3-4, 20). They are thus much like Stam's maneuver strategies, while insurgencies rely on punishment and attrition.

It is not clear why war fighting strategies might change over time, but if, for some reason, attrition strategies have become more common in interstate wars since World War II, and if insurgent civil wars have outpaced coup and revolution attempts since 1989, this might explain the decrease in decisive outcomes.

Intelligence: Surprise and Self-selection

Another variable explored by Stam suggests a potential explanation. He codes whether either side managed to achieve strategic surprise at any time during the war. Surprise is rather rare in the data, and when it occurs it has no significant effect on the chance of victory, but it does significantly reduce the chance of a draw. All else equal, he finds that the probability of a draw is about 20% if neither side achieves surprise, but drops to only 7% if one side manages to surprise the other (p.153). It is possible that intelligence has gotten better over time, making strategic surprise harder. If so, this might help explain the increase in draws.

A related hypothesis is raised by Stam's discussion of the process by which states select themselves into war. He argues that to the extent states self-select into wars, picking those they think they can win, we should see more decisive outcomes. The more accurately states can anticipate their chances, the fewer the draws. If wars were just a random throwing together of any two states in the interstate system into battle, Stam argues, we would observe more draws (p.78). I would argue exactly the opposite, however. A random selection of states into war would yield many more wars among extremely mismatched states. We generally only see war when **both** sides have reason to believe they can win (Fearon 1995). The better states can assess their chances as they choose whether to fight, the more closely matched they must be in terms of

effects on p.136 shows the size but not the direction of effects.

capability and resolve to actually fight, otherwise the anticipated loser would choose to settle. We should thus observe more draws rather than fewer. The better the intelligence states have about their chances, the more indecisive outcomes should be, and the same should be true for parties to civil wars. As with strategic surprise, improving intelligence over time might explain the rise of ties. The logic of these arguments should apply equally to civil wars, though why the ability to achieve surprise or the quality of intelligence might shift at different times (in 1945 for interstate wars, and in 1989 for civil wars) is unclear.

Military Technology: Offense-Defense Balance

Large systemic changes in war and its consequences are often explained by changes in military technology. Bean (1973), for example, uses military technology, specifically the offense-defense balance, economies of scale in the defense of territory, and the specialization of military forces to explain the birth of the nation state. The literature on the offense-defense balance has mostly focused on its effects on the likelihood of war (Jervis 1978; Van Evera 1998, 1999). However, one link in the causal chain between this balance and the probability of war is the effect of military technology on the decisiveness of victory. As Lieber (2000) states the theory in his empirical critique:

When technological change shifts the balance toward offense, attackers are more likely to win quick and decisive victories. This prospect of quick and decisive warfare exacerbates the security dilemma among states, intensifies arms races, and makes wars of expansion, prevention, and preemption more likely (p.71).

That is, when military technology favors the offense, we should expect wars to end in decisive outcomes, when it favors the defense we should expect more wars to end in stalemate or draws.

The development of nuclear weapons, which in the counterintuitive logic of mutually assured destruction favor the defense, might therefore explain the increase in draws in interstate wars (though not in civil wars).²⁹ On the other hand, there is reason to doubt a direct link between nuclear weapons and the observed trend in military outcomes because, with the

²⁹ One could argue that the proliferation of cheap small arms discussed above represents a technological shift in civil wars, but it is one that favors the offense, or at least the revisionist side.

exception of the Kargil war in 1999 between India and Pakistan, the wars of the nuclear age have thankfully involved non-nuclear dyads. Nuclear weapons on the part of one side presumably make a decisive loss by that side less likely, but the taboo against their use mutes any effect on military outcomes between a nuclear and a non-nuclear power (Paul 1995; Price and Tannenwald 1996). If, however, the superpowers' fear of nuclear escalation led them to prevent decisive outcomes in wars among or even within other states, then nuclear weapons might indirectly explain the increase in military stalemates.³⁰ This suggests yet another possible explanation. . . .

Joiners and Intervention

Steve Van Evera has suggested that draws are the result of “joiners,” of states that join an ongoing war not necessarily to win outright but to prevent the defeat of an ally.³¹ If the phenomenon of joining, especially by great powers, was more likely in the bipolar system of the Cold War, then this might explain the trend in interstate wars.

The logic of these arguments about joining ought to apply equally to civil wars.³² Regan (2002) finds that outside intervention during the fighting increases the duration of civil wars

³⁰ In the Six Day war, the threat of Soviet intervention led the US to pressure Israel to cease fire. However, while this may have prevented an even more catastrophic loss for the Arab states, it did not prevent one of the most decisive outcomes in the post-WWII period. Avner Cohen argues that Israel considered using nuclear weapons to prevent defeat in the Yom Kippur War, and convinced the US to help out with a “tremendous” airlift to prevent nuclear use. (Op-Ed, *New York Times* October 6, 2003). Again, this war ended in a decisive outcome, but a victory for Israel rather than the Arab states.

³¹ Conversation with the author, APSA, Philadelphia, August 30, 2003. Stam's theory suggests that alliances should affect who wins and who loses in war, but should be orthogonal to the probability of a tie. He nonetheless reports a statistically significant positive correlation between alliance contributions to the war and the likelihood of a draw (pp.114, 148). Interestingly he finds that increases in allies' troop quality decrease the chance of a draw (p.151). Stam does not explain or further explore these findings, nor does he examine relative alliance contributions, he looks only at contributions to one side.

³² Mason, Weingarten, and Fett (1999, p.264) argue that intervention (both biased intervention to aid one side, and neutral intervention to end the conflict) make settlement less likely, but that this effect is attenuated over time. However, their statistical results suggest exactly the opposite.

substantially.³³ Superpower intervention to prevent the demise of one or the other's proxy forces might arguably lead to fewer decisive civil wars.³⁴ This does not seem a likely explanation for the empirical pattern in civil wars, however, as the decline of decisive outcomes takes place after the end of the Cold War rather than during it. Competing interventions, in which aid for one side promotes aid from someone else for the other, have been found to decrease the likelihood of civil war ending in a compromise (Enterline and Balch-Lindsay 2002). So the end of the superpower rivalry that likely fueled such competitive interventions might explain the shift in civil war outcomes. But, again, the same logic should apply to interstate wars, so the fact that draws became more likely in interstate conflict during the Cold War and in civil wars after the Cold War is puzzling. (See below for a separate hypothesis about third party intervention to keep peace after, rather than during, the fighting).

Terrain

Several recent studies have noted the effect of terrain on war outcomes and duration.³⁵ Rough terrain makes it harder for either side decisively to defeat its opponent. As Stam hypothesizes:

Wars fought on flat, open terrain will be decisive. Wars fought on inhospitable terrain will be associated with a higher probability of draws (p.64).

And this is borne out in his data (pp.114-5, 174-5).³⁶ Bennett and Stam (1996) also find that

³³ See also Elbadawi and Sambanis 2000.

³⁴ As noted above, Doyle argues that intervention during the Cold War favored the government. Enterline and Balch-Lindsay (2002) find that pro-government interventions have no effect on the probability of a draw (and surprisingly actually make government victory less likely), but that interventions on the rebel side increase the likelihood of a compromise outcome. They also find that the overt use of force by another state against the government in a civil war makes ties much less likely.

³⁵ For a theoretical discussion of the effects of rough terrain on ethnic conflict, see Fearon and Laitin (1999).

³⁶ While Stam theorizes that states located far from the battlefield will be more likely to tie (pp.100-1), he finds no support for this in the data. Distance affects the probability of victory and loss, but not of a draw (p.171).

rough terrain increases the duration of interstate wars, and Soderbom et al. (2002) find that war lasts longer in heavily forested countries (but not in mountainous countries). DeRouen and Sobek (2004) confirm the link between forests and duration, and find that both rebel victories and truces, but not treaties, are more likely in mountainous countries.

If interstate wars are more likely to be fought on rough terrain after World War II than before, this would help explain the decrease in decisive outcomes. The geographic shift in war from the plains of Europe to other continents may thus help provide an answer to our puzzle.³⁷ If a similar but later shift in the location of civil wars occurred at the end of the Cold War, this might also explain the pattern of internal wars.

Settling for a Draw

All of the foregoing explanations focus on the first condition for wars ending in a draw, that is, they all relate to factors that affect one side's ability to defeat the other outright. But for a draw both sides also have to decide to stop fighting. Otherwise, while neither side would win, the war would simply continue. There are several possible explanations for changes in the prevalence of ties that are best thought of as affecting this second condition.

Population

Stam finds draws more likely in more populous states, arguing that this is because as population increases, "the expected benefits that any individual in the population can expect to receive from victory" are diluted, undermining willingness to press on with the fight rather than settle for a draw (pp.98-100). DeRouen and Sobek (2004) find that population increases the likelihood of a truce in civil wars.³⁸ Population growth over time might thus explain the increase

³⁷ Over half of the participants in COW interstate wars ending before 1946 fought in Europe, compared to only 4% after World War II.

³⁸ Studies of war duration find no strong or robust effect of population (Bennett and Stam 1996; Fearon 2002; Soderbom, Collier, and Hoeffler 2002).

in draws over time.³⁹

Issue Salience

Wars fought over low salience issues may be more likely to end in a draw. Stam finds that wars over low salience issues such as policy or empire building are more likely to end in draws than wars over other issues such as territory. He hypothesizes that this is because neither side is willing to commit enough resources to win outright (pp.106-8). However, issues that are highly salient for one side are also likely to be highly salient for the other, and the same is true with low salience issues.⁴⁰ Salience should not necessarily affect the relative resources committed. Only if an issue is much more important for one side than the other should this affect whether or not the war ends with a decisive outcome.⁴¹ In this case, the effect of salience is indirect, reverting back to the one explored above about relative military resources.

If salience has a direct effect on the likelihood of a tie, I would contend this has more to do with the ability of warring parties to settle than on the resources they commit to the fight. It should be easier to call a militarily stalemated fight off and find a compromise outcome when the contest is over lower salience issues than when the stakes are higher.⁴²

If states after World War II, or parties to civil wars after 1989, are now fighting over lower stakes issues than before, this might explain the increase in ties that we observe. Fazal (2001) has documented the decline of “state death,” that is, conquest and the loss of formal

³⁹ Not only has global population grown, the average population of states in the interstate system has risen from under 10,000 in 1816, to almost 26,000 in 1900, to over 30,000 in 1991.

⁴⁰ This helps to explain Stam’s findings that high salience issues are more likely to end in victory **and** in defeat. Stam uses Holsti’s issue codings which are monadic, but are often the same for both sides.

⁴¹ Maoz argues that dispute outcomes are the result of resolve. Greater resolve (which he measures as willingness to escalate to a higher level of hostility and initiative-taking in terms of committing more militarized incidents) leads to victory, but when “the target is able to match the initiator’s resolve, the dispute is likely to end up in a tie” (p.223).

⁴² Similarly, Diehl and Goertz (2002) find that less severe disputes are more likely to stalemate than are more severe ones.

sovereignty in interstate war, after World War II. If states know that they are unlikely to be “killed off” in war, salience is arguably now lower. But while the number of states that actually die in war has declined markedly, the number of wars in which one side sought the elimination of another state or regime has not declined (Holsti 1991, pp. 319-20)⁴³. How much confidence do states have in their relative immunity from state death after World War II?

Observing salience in civil wars is similarly tricky. The hypothesis that civil wars over ethnicity or identity are more salient and therefore less tractable than others receives only mixed empirical support (Doyle and Sambanis 2000; Dubey 2002; Hartzell, Hoddie, and Rothchild 2001; Licklider 1995; Fortna 2002; Elbadawi and Sambanis 2000; Fearon 2002; Soderbom, Collier, and Hoeffler 2002; Walter 2001). Ideology is arguably of lower salience than other issues over which civil wars are fought. But this would lead us to expect exactly the opposite pattern over time than the one we observe, as wars over ideology were presumably more frequent during the Cold War than after. Walter (2003) argues that governments with many potential break-away regions fight hardest over secessionist wars to avoid setting a precedent that might lead to the state’s disintegration. Similarly, Toft (2003a) argues that in conflicts in which ethnic groups demand sovereignty and states worry about the precedent of granting it, the territory over which they are fighting becomes an indivisible issue. If the number of secessionist conflicts has fallen since the end of the Cold War, this might explain the trend in civil conflicts.⁴⁴ It is therefore possible that secular trends in salience explain the observed pattern in war outcomes.

Regime Type

Stam finds that highly repressive governments are more likely to win their wars, but they are also more likely to tie (p.162), and the same is true of democracies (p.177).⁴⁵ Both findings

⁴³ Fazal (2004) argues that the goal of eliminating regimes has increased, while the goal of eliminating states has decreased.

⁴⁴ Enterline and Balch-Lindsay (2002) make a similar argument about government reputation, but find that separatist wars are no less likely to end in a compromise outcome.

⁴⁵ Reiter and Stam (2002, chap. 7) argue that because democracies are more sensitive to the costs of war, if war drags on they will be more willing to settle for a draw, while autocracies will

might be explained by Goemans' (2000) argument about regime type and war termination. Leaders of democracies, while they may lose office if they fail to succeed at war, are unlikely to be harshly punished. Highly repressive governments can suppress, and therefore survive, discontent with war outcomes that are less than ideal. Intermediate regimes or "anocracies" are most vulnerable, facing punishment for a draw that may be little better than for complete defeat. Leaders of democracies and highly repressive states should thus be more willing to compromise and settle a stalemated war, rather than "gamble for resurrection," holding out for the possibility of a clear victory.⁴⁶

The increase in the number of democracies could thus explain the rise in the number of draws over time. If levels of repression have also increased (in other words, if regime types have become more extreme over time), this would help answer our question about historical change.

The "Technology" of Maintaining Peace

Belligerents may be reluctant to cease fire if they worry that the war will soon resume, possibly leaving them worse off than if they never stopped fighting in the first place. Demobilizing forces can leave belligerents vulnerable if the other side reneges on a cease-fire and attacks once again (Walter 2001). Fearon (2002) develops a model showing "how a commitment problem could prevent an insurgency from being ended in any way except by a military defeat" (p.23). Walter argues that this concern is particularly acute for combatants in civil wars, but maintaining peace can also be problematic for states (Fortna 2004b).

This suggests that mechanisms that allow parties credibly to commit to maintaining peace will make it easier for them to stop the war at a draw, rather than fight on to the finish.⁴⁷ Walter argues that civil war combatants require credible intervention by third parties to reach a settlement. And several studies have shown that international peacekeeping helps maintain peace

continue to fight, holding out for the possibility of victory.

⁴⁶ DeRouen and Sobek (2004) find no effect of regime type on civil war outcomes, but they do not consider the possibility of non-linear effects.

⁴⁷ Thanks to Alan Kuperman for suggesting this hypothesis.

in both civil and interstate wars (Doyle and Sambanis 2000; Fortna 2003). The availability of peacekeepers may make draws more likely by allowing belligerents to reach agreements they would otherwise reject as untenable.⁴⁸ This possible explanation fits nicely with the timing of the increase in ties in interstate and civil wars, as peacekeeping was developed as a practice for interstate conflicts largely after World War II and was then extended to civil wars after the Cold War.

The latter phenomenon reflects an important shift in the norm of sovereignty, as the taboo against interference in the internal affairs of states has been largely overridden by humanitarian norms. While intervention on one side or the other in civil war is hardly new, intervention with the primary purpose of ending the fighting and maintaining peace has become much more frequent (more on this point below). The deployment of peacekeepers to civil conflicts, quite rare during the Cold War, has now become commonplace.

In sum, existing findings on war outcomes, the duration of peace, and the ability of parties to maintain peace suggest a number of possible explanations for when wars will end in a draw. These can be thought of as falling into two categories: those that affect the ability of one side to win outright, and those that affect belligerents' ability to reach a compromise outcome rather than continue fighting in the hopes of eventual victory. Some of the variables suggested by these arguments are known to have changed over time, making them *prima facie* the most likely candidates for explaining the temporal increase in draws, but the others are worth investigating as well to ensure that the change we observe is not spurious.

FINDINGS

Existing data do not allow tests of all of these hypotheses. To my knowledge, quantitative data on the state of intelligence does not exist, for example; and for others, data for interstate wars and civil wars is uneven, particularly since most civil war data goes back only to

⁴⁸ Studies of peacekeeping usually put the causal arrow the other way – with peacekeepers more likely deployed when a war has ended without a clear victor (Fortna 2004a). But anticipation of peacekeeping might make it easier for parties to reach such a compromise outcome.

1945, making it impossible to test arguments about change over a longer period of time. Nonetheless, it is possible to test, at least in a preliminary way, the plausibility of most of the hypotheses outlined above.

I examine, first, whether there has in fact been a significant shift in relevant variables over time, specifically whether the factors outlined as possible explanations above are significantly different for interstate wars that ended after 1945 than for the 1816-1945 period, and for civil wars that ended after 1988 than for those during the Cold War. I then explore whether these variables are significant predictors of draws. For the civil war tests, I use a data set adapted from Doyle and Sambanis (2000), consisting of 115 civil wars ending after 1945.⁴⁹ For the interstate wars, I use a data set consisting of all dyads in COW wars from 1816 to 2000.⁵⁰ This yields 308 dyads in over 80 wars. This includes even relatively minor participants. To ensure that these minor players are not driving findings, I also run tests on a subset of the data restricted to major participants.⁵¹

The first set of preliminary tests consists of difference of means tests for continuous variables and cross tabulations for categorical variables, along with Mann-Whitney tests for both, to compare the two periods (1816-1945 to 1946-2000 for interstate wars; 1944-1988 to 1989-1997 for civil wars). Tables 6 and 7 show these results, indicating the mean or percentage for each variable in the two time periods, and the probability, in a Mann-Whitney test, of the null hypothesis that the distributions in the two time periods are equal. The second set of tests consists of logit analyses to assess variables' effects on the probability of a draw. Results for

⁴⁹ Data and notes on its adaptation available from the author upon request.

⁵⁰ I use Maoz's Dyadic Militarized Interstate Disputes (DYMID1.1) data so as to include, in multilateral wars, only those dyads that actually fought each other. See Maoz (2001) for a description of this data. It is available online at <<http://spirit.tau.ac.il/poli/faculty/maoz/dyadmid.html>>. The data are updated, and many country level variables (capabilities, democracy scores, etc.) generated using EUGene (Bennett and Stam 2003), which is available online at <www.eugenesoftware.org>.

⁵¹ This subset consists of those dyads included in Stam's data set. For example, there are 30 dyads in the Korean war in the larger data set, but only 4 in the restricted data. There are a total of 147 dyads in the data restricted to major participants.

interstate wars are reported in Table 8. Because existing data sets code interstate cases so inconsistently,⁵² I use three different measures of war outcomes: Stam's coding of draws, the COW coding of ties, and the MID coding of stalemates.⁵³ Because there are often many observations from a single war, I calculate robust standard errors, assuming that observations are independent between wars but not necessarily within them. Similarly, for civil wars, I assume independence between countries but not within observations from the same country. Results for civil wars are reported in Table 9.⁵⁴

[Tables 6-9 about here]

Relative Capabilities

On the face of it at least, the argument that changes in the relative capabilities of warring states might account for the rising number of draws in interstate wars seems plausible. A dyadic measure of relative power based on the COW index of national capabilities indicates a fairly large and significant shift. As Table 6 shows, the mean of this measure of preponderance of power (which can, in theory, range from 0.5 for completely balanced capabilities to 1.0) drops from 0.64 to 0.52, a difference that is significant at $P < 0.01$. In other words, warring dyads are more equally balanced after 1946 than before. Note, however, that this difference may be driven by counting even minor participants in each war.⁵⁵

But even if this variable passes the first test, relatively balanced capabilities are not a good predictor of draws. As the positive coefficients in Table 8 show, stalemates are if anything more likely when there is a preponderance of power – exactly the opposite of what we would expect. This coefficient is not statistically significant, so we cannot conclude that there is a

⁵² See note 6, above.

⁵³ Note that because some variables (particularly those coming from Stam 1996) are measured for only some dyads, their inclusion substantially reduces the number of observations.

⁵⁴ Population and army size are highly correlated in the civil war data, so cannot be tested simultaneously

⁵⁵ If only the dyads coded by Stam (that is, only major participants) are examined, the difference is smaller (0.57 to 0.51) and is no longer statistically significant.

strong relationship between preponderance and stalemate, but we can safely reject the hypothesis that more balanced capabilities explain the increase in the number of draws over time.

Another measure of relative power is whether the war pitted a major power against another major power, against a minor power, or consisted of two minor powers. Dyads composed of matched powers (either two major powers or two minor powers) account for only about 45% of wars from 1816-1945, but about 70% of the post-WWII wars, (Table 6). This change is driven entirely by the increase in wars between minor powers, as both major-major power dyads and major-minor power dyads have declined as a percentage of all wars. As we might expect the relatively equal dyads pairing either two major power or two minor powers are most likely to result in a draw,⁵⁶ but this finding is not very robust to different model specifications. It does not hold for Stam's measure of draws, nor when all dyads, rather than just principal belligerents, are included (Table 8).⁵⁷

Relative measures of each side's military personnel and military expenditures indicate more balance in interstate wars after World War II than earlier (though the significance of the latter finding depends on counting even minor dyads). But there has been no significant change in relative troop quality (measured, following Stam, as expenditure per soldier). Neither relative military personnel nor relative military expenditures have a statistically significant effect on the probability of a stalemate (and for the former in fact the sign is the opposite of what we would expect). Relative troop quality is a strong predictor of the MID stalemate coding (but is insignificant for the other two measures) and in the expected direction (results not shown). In short, relative mobilization cannot explain the temporal trend. The measures that change significantly over time are not strong predictors of war outcomes, while the one that predicts ties

⁵⁶ This is true whether one uses a measure of power status taken in the year before the war began, or in the last year of the war – a difference that affects several cases, for example, China in the Korean War.

⁵⁷ A closer look indicates that when a larger set of cases is analyzed (for example, when variables for which many data are missing are omitted), minor-minor dyads are more likely to fight to a draw than are uneven dyads pitting a major power against a minor power. But major-major dyads are often the least likely to tie. In other words, it may not be the balance of power that matters, but rather something about great power status.

does not change over time.⁵⁸

The evidence in support of the relative power hypothesis for interstate wars is thus decidedly mixed. States fighting each other after World War II are more equally balanced than in earlier eras, but there is only weak support for the argument that more equally balanced states are more likely to tie.

We do not have a good measure of relative capabilities in civil wars. While acknowledging its limitations, a number of studies use the size of the government's army as a proxy.⁵⁹ Government army size is lower on average in the post-Cold War era civil wars than in previous years, dropping from about 414 thousand troops to 221 thousand, but this difference is not significant in a Mann-Whitney test (see Table 7). Civil wars against smaller armies may be more likely to end in a tie, but the effect is not significant (see Table 9, column 1). In any case, this measure captures only the strength of one side not the relative asymmetry between rebels and the government.

While I do not yet have the data directly to test Doyle's arguments about declining superpower support for governments against insurgency, or the proliferation of small arms, an implication of these arguments can be tested easily. Both trends suggest a general tilt in capabilities at the end of the Cold War toward rebel groups and away from governments. If these trends are occurring, we should see not only that draws become more likely, but also that rebel victories become more common. Here the evidence is also somewhat mixed. In the Doyle and Sambanis data, as an overall percentage of civil wars, rebel victories become less frequent after 1989, not more. Approximately 30% of all civil wars end in rebel victory before 1989, only 19% after. But the drop for government victories is even steeper (from 49% to 11%). Of the wars ending in a victory for one side, the government wins most during the Cold War, while rebels win most after the Cold War.⁶⁰ If one considers that some rebel groups may be fighting in the

⁵⁸ To my knowledge, no measures of mobilization (other than government army size, as discussed above) or troop quality exist for civil wars.

⁵⁹ For a justification, see Mason, Weingarten, and Fett (1999, pp.244-5).

⁶⁰ The proportions swap evenly – before 1989 the government won 62.5% to rebels' 37.5%, after 1989 the numbers are the reverse. The difference between time periods is marginally significant

hopes of forcing a settlement, rather than to overthrow the government, this hypothesis is more strongly supported. In sum, it is possible that the change in outcomes in civil wars reflects a general shift in relative capabilities toward rebels and away from governments, but the evidence we have suggests otherwise.

Strategy

I use Stam's (1996) coding of the strategies used by the offense and the defense in each dyad in interstate wars to mark whether both sides used attrition strategies, one used attrition while the other used a punishment strategy, or one used attrition while the other employed a maneuver strategy.⁶¹ Changes over time in the war fighting strategies of belligerents do not explain the temporal increase in draws. As Table 6 indicates, cases in which both sides use attrition (found by Stam to be the most likely to lead to a draw) decline as a percentage of all dyads after World War II. Wars in which one side uses a punishment strategy have increased slightly, but are so rare (occurring in only four dyads) that this could easily be a statistical fluke. The use of maneuver strategies, found by Stam to be least likely to result in a draw, have increased over time. In other words, strategies have shifted in exactly the opposite way that we would expect if this variable were to explain the decline of decisive victories. Nor is strategy a strong predictor of ties (Table 8).

As a measure of strategy in civil wars, I use Fearon's (2002) distinction between guerilla insurgencies on the one hand, and coups or revolutions on the other.⁶² Guerilla tactics have

($P = 0.08$ in both Pearson's χ^2 and Mann-Whitney tests). In the COW data, there is little difference between time periods in the percentage of all wars ending in rebel victory, and no significant difference in rebel victories as a proportion of decisive victories. The COW coding of rebel victories is biased by its treatment of cases in which a rebel group takes power but fighting continues. Thanks to Nicholas Sambanis for pointing this out.

⁶¹ In all of Stam's cases, at least one side is coded as employing an attrition strategy, so the other possible combinations (punishment-punishment, punishment-maneuver, and maneuver-maneuver) do not exist in the data.

⁶² Note that not all of the wars in the data used here are in Fearon's data, so there is some missing data for this variable.

indeed become more common after the end of the Cold War. 87% of the wars after 1989 are classified as insurgencies, compared to 71% before, with this difference in distributions just barely missing the $P < 0.05$ threshold for statistical significance (see Table 7). As Table 9 indicates, insurgency wars are also significantly more likely to end in a tie, consistent with this hypothesis. So while changing strategies cannot explain the rise of draws in interstate wars, they may account for the decline in decisive victories in civil wars. This raises the question, however, of why rebel strategies have shifted with the end of the Cold War.

Surprise

As far as I know, data are not available to test the self-selection argument that improved intelligence capabilities lead to wars that neither side will lose decisively, nor is there data on intelligence in civil wars. But we can reject the hypothesis that increased intelligence makes it harder for states to surprise each other and thereby to win decisively. Using Stam's (1996, p.93) coding of whether either side achieves strategic surprise during the war, we can see that surprise has actually become more common over time, occurring in over 40% of dyads after World War II compared to only 26% before 1946 (Table 6). Surprise may help predict stalemates as coded by MID,⁶³ but this is not a robust finding, nor is surprise a significant predictor of other measures of war outcome.

Offense-Defense Balance

To test the hypothesis that changes in the offense-defense balance account for the rise of draws, at least in interstate wars, I use Karen Ruth Adams' (2003/2004) assessment of available technology in various historical periods.⁶⁴ A dummy variable marks wars occurring in periods in

⁶³ The coefficient is close to significant in Table 8, column 6 ($P = 0.16$) and is significant in some other model specifications.

⁶⁴ See Fazal (2004) for a discussion of several ways to code the offense-defense balance, including an alternative that focuses on statesmen's perception at the time (See also Levy 1984). I use Adams' operational measure here, as my interest is not in whether states choose to fight, which is affected more by pre-war perceptions, but the outcome once they do so, which is affected by the actual balance of technology. Many thanks to Nisha Fazal for her thoughts on

which technology favors defense or deterrence, as opposed to offense (that is, 1850-1933 and 1946-present). Obviously, since one of these periods corresponds to the era we are interested in here, this is, on the face of it a plausible explanation. However, defense-dominance is not a good predictor of draws. This variable is not significant, and in most cases the sign is the opposite of what this hypothesis predicts; with draws if anything less likely to occur in defense-dominated eras, all else equal (Table 8).⁶⁵

While data does not exist on the offense-defense balance for civil wars, it is worth noting that the logic of this hypothesis runs counter to the notion that an increase in the availability of small arms has fueled rebel movements since the end of the Cold War. Such a change favors the offense (or at least the side trying to change the status quo), rather than the defense.

Joiners and Intervention

The argument that draws have become more likely because outside states are now more likely to join the fray does not hold up for interstate wars. The percentage of dyads in wars that are joined by other states is actually somewhat lower after 1946 than before. Here I use a measure derived from Zachary Shirkey's (Forthcoming) work on contagion in war.⁶⁶ Moreover, wars in which outsiders joined the fray are no more likely than others to end in a tie, and may even be less likely to do so (for example, when Stam's measure of draws is used).

This measure of intervention used in interstate wars captures only states that actually join

this topic.

⁶⁵ This measure cannot be included for models with the COW measure of outcomes as no wars coded as ties by COW occur in an era of offense-dominance. Bivariate analysis thus suggests that defense dominance is a good predictor of ties as coded by COW, but it is impossible to know whether this relationship holds when other factors are controlled for.

⁶⁶ The decline in joined wars is even clearer when I use a measure derived from MID codings of whether any states in the war were not originators of the fight (that is, they joined in after the beginning). Shirkey's coding is probably a better measure, however, as the MID coding seems to include as joiners states that were not originators of lower-level disputes but that were involved from the beginning of the fight when these disputes escalated to war. The difference between time periods appears whether minor participants are included or not, but fails a test of significance when the Shirkey measure is used and all participants are counted.

the fighting with their own troops, not intervention to support an ally with military or economic aid, or covert assistance. These kinds of help arguably make up much of the intervention by the superpowers during the Cold War.⁶⁷ Better data on intervention in interstate war is thus necessary to test this hypothesis thoroughly.

However, the hypothesis fares no better in civil wars where the measure of intervention does include more of these less direct forms of aid.⁶⁸ Surprisingly, great powers are slightly more likely to intervene in civil wars after the end of the Cold War than before, though the difference is not statistically significant. But wars that see such intervention by outsiders are no more likely, statistically, to end in a draw than are wars that are left alone. The negative coefficients in Table 9 suggest just the opposite, although they are not significant. Patterns of external intervention and joining thus cannot explain the pattern of war outcomes over time.

Terrain

Nor does a shift in the location of wars to rougher terrain explain the puzzle. I use Stam's measure of terrain mobility (derived from Dupuy 1983, 1979) for interstate wars; and for civil wars, I use Fearon and Laitin's (2003) data on the percent of the country that is mountainous.⁶⁹ Note that higher values indicate rougher terrain for civil wars, but less rough (more mobile) terrain for interstate wars. In neither kind of war is the change over time in the right direction. Interstate wars are fought on more open terrain, on average, after World War II than before (Table 6). And countries afflicted by civil wars after the Cold War are, if anything, less mountainous on average than those with civil wars before 1989 (Table 7).⁷⁰ Rougher terrain does

⁶⁷ Thanks to Michael Doyle for pointing this out.

⁶⁸ I use Doyle and Sambanis' measure "major" which codes direct military participation in the war or extensive political support by a major power. It does not include participation by outsiders in a peace operation (see below).

⁶⁹ Note that this measures mountainousness for the whole country, not the specific area where the conflict was fought [try with Buhaug & Lujala's data; get forests data].

⁷⁰ The difference of means is marginally significant ($P=0.09$), but just fails the Mann-Whitney test ($P=0.16$)

tend to yield draws in interstate wars, as coded by MID and Stam, but the opposite is true for ties coded by COW (Table 8). Meanwhile civil wars fought in more mountainous countries are less likely to end in ties, exactly the opposite of the hypothesis above (Table 9).

Population

The average raw population figures for warring states are significantly higher after 1946 than before, but this is driven by the highly skewed nature of population data.⁷¹ A logged measure of population indicates no significant change over time (Table 6).⁷² Dyads composed of more populous states are significantly more likely to end their wars in a tie, as coded by COW but this finding is not significant for the other measures of war outcomes (Table 8).

The population growth hypothesis does even less well for civil wars. The mean population of countries suffering civil war is actually lower after 1988 than during the Cold War, falling from about 56 million to about 28 million,⁷³ and more populous states are less rather than more likely to see indecisive outcomes in their civil wars (Table 9). This variable seems to work differently in the two types of war. A larger population leads, if anything, to indecisive outcomes in interstate conflicts, but to decisive outcomes in civil wars. Why this might be so is unclear, but in any case, the hypothesis that population growth can explain the rise of draws over time does not hold water.

Issue Salience

Territorial conflicts are often said to be highly salient, and are therefore particularly likely to escalate to war and to recur (Hensel 2000; Huth 2000; Vasquez 1995). I therefore use the standard MID coding of whether a war's "revision type" concerns territory (as opposed to policy, regime/government, or other) as a measure of salience. Surprisingly, wars are significantly more

⁷¹ The skewness of dyads' total population is 2.7, with a kurtosis of 10.6. A logged measure is much closer to a normal distribution, with a skewness of -0.2 and a kurtosis of 3.01.

⁷² There is no difference in the relative population of the two sides in interstate wars.

⁷³ The difference in the logged measure of population is marginally significant in both a T-test of means and a Mann-Whitney test of distributions ($p=.010$).

likely to be territorial conflicts after World War II than in earlier periods (Table 6).⁷⁴ Wars over territory are less likely to end in a draw as coded by Stam, but this finding is not terribly robust, and the coefficient is actually positive for the COW coding of war outcomes, so that ties are more, rather than less, likely in these highly salient conflicts (Table 8).

While territory may be more salient than other issues over which states rattle their swords and engage in militarized disputes short of war, it may not be notably more salient than other issues over which states actually fight. However, other measures of this concept fare no better. Stam's coding of whether a war was fought over a highly salient issue changes in the right direction over time, with none of the wars fought after World War II coded as highly salient. But this measure does not predict draws well, and if anything indicates that draws are more likely when issue salience is high (results not shown).⁷⁵

I use several measures of the issue at stake in civil wars: two different data set's (Doyle and Sambanis 2000; and Fearon and Laitin 2003) codings of whether or not the war was based on identity (e.g. ethnicity or religion), and whether or not it involved secessionist or autonomy claims by the rebels. Using Doyle and Sambanis' measure, the civil wars that ended in the post-Cold War era are no more likely to be identity conflicts than those that ended during the Cold War. However, there is an increase in ethnic wars as measured by Fearon and Laitin (Table 7). This is the opposite of what this hypothesis predicts. For neither measure does the predicted relationship between identity conflicts and the likelihood of a draw hold. The coefficients are insignificant and are in the wrong direction, predicting that ethnic conflicts are, if anything, more likely to end in a draw, (Table 9, columns 1-3).

Post-Cold War civil wars are also more rather than less likely to be secessionist conflicts (though this change is only significant, and then only marginally so, for the Doyle and Sambanis measure). There is also a significant relationship between secessionist or autonomy conflicts and the likelihood of a compromise outcome, but again it is in the wrong direction (Table 9, columns

⁷⁴ Holsti's classification of issues suggests that territory has declined as an issue causing war, but that strategic territory has increased as a *casus belli* (pp.309-10).

⁷⁵ [get ICB data on gravity of threat].

4-6). Arguments about the precedent set by compromising with secessionist claims cannot explain the pattern of war outcomes. Rather than being the most intractable conflicts, identity and especially secessionist conflicts are more amenable to compromise. The evidence we have so far indicates that it is not a change in issues that accounts for the rise of draws.

Regime Type

To test the hypothesis that both very democratic and very autocratic states are more likely to draw, I code whether either state in a dyad is a mixed regime, or anocracy, falling in the middle segment of the continuum from total dictatorship to total democracy.⁷⁶ Sixty-four percent of dyads in wars before 1945 included at least one anocracy, versus only 27% after 1945, a statistically significant difference (Table 6).⁷⁷

Anocracy is also a fairly good predictor of war outcomes. Dyads composed of at least one mixed regime are least likely to end their wars in a draw. The coefficient for anocracy is consistently negative, though it sometimes fails tests of statistical significance (for example if Stam's coding of war outcomes is used).⁷⁸ While the evidence for this hypothesis is not overwhelming, changes in regime type remain a plausible explanation for the shift in interstate war outcomes over time.

In civil wars, however, neither overall democracy scores nor the proportion of wars fought in an anocracy show any significant change as the Cold War ends (Table 7). Anocracy is a significant predictor of ties, but the effect is in the wrong direction – more extreme regime

⁷⁶ Following Goemans (2000, p.56), I consider a state an anocracy if its Polity “dem” score is between -4 and +5, inclusive.

⁷⁷ This change can also be seen in measures of the most democratic or least democratic state in the dyad, both of which shift toward the extremes, though the former shift is larger, as we might expect (results not shown). Because democracies rarely if ever fight each other, however (see for example, Russett 1993), measures that add each side's democracy score together show less change and the difference does not quite pass the $P < 0.10$ threshold for significance. The shifts toward democracy on one side tend to be countered to some extent by shifts toward autocracy on the other.

⁷⁸ Measures of the dyad's total, maximum, or minimum democracy scores fare less well.

types are less rather than more likely to draw (Table 9). As column 6 indicates, however, the more democratic the state experiencing a civil war, the more likely a draw.

The effect of regime type is therefore quite different for interstate and civil wars, a finding that requires further investigation.

The Technology of Peace

Peace observation missions were employed in only a few cases before 1945. The League of Nations deployed military observer commissions in the Lithuanian-Polish War, the Manchurian War, the Italo-Ethiopian War, and the Chaco War (Wainhouse 1966). The use of military observers and peacekeepers became much more common after World War II, however. The measure used here marks whether any military commission, observer mission or peacekeeping force was deployed by an international organization (e.g. the UN, or the OAS) or by an ad hoc group of states (for example, the Neutral Nations Supervisory Committee in the Korean War). As Table 6 indicates, peacekeepers were used in less than 2% of all warring dyads before 1946, but over 70% of those after.⁷⁹ Peacekeepers are also closely associated with ties for all three measures of war outcome

For civil wars, this hypothesis also does quite well. As Table 7 indicates, civil wars are much more likely (over 60%) to see a peace operation after 1988 than before (13%) ($p < 0.000$). This is true whether I count consent-based missions only in my measure of peacekeeping, or also include enforcement missions. Wars to which peacekeepers are deployed are also much more likely to end in a draw (see Table 9).⁸⁰ The availability of peacekeepers allows civil war combatants to stop their wars at a draw rather than fight to the finish.

[Table 10 about here]

These findings are summarized in Table 10. We can rule out a number of possible

⁷⁹ There is virtually no chance that the distribution of peacekeeping is the same before and after World War II. The change is only slightly less dramatic if only principal belligerents are included in the data – the percentage of dyads with peacekeepers rises from 3 to 50 ($P < 0.000$).

⁸⁰ This finding is supported by DeRouen and Sobek (2004).

explanations. The increase in wars ending in ties is not well explained by outside parties joining the fray. Nor do shifts in the terrain on which wars are fought explain our puzzle. Population growth fails to explain the pattern in interstate wars, but appears to have opposite effects in interstate and civil wars. Given existing measures of issue salience, this hypothesis, too, can be rejected. While we do not have ideal data on intelligence or the offense-defense balance (especially for civil wars), the evidence we have so far suggests that these variables also fail to explain the decline of decisive victories over time.

For several other variables, the evidence is more mixed. While changes in the index of capabilities cannot explain outcomes, the prevalence of wars among minor powers may help explain the rise of draws. For civil wars, outcomes may be the result of a general tilt in favor of rebels, but we have only weak evidence of this. Changes in war fighting strategy fail to explain interstate wars, but may well explain outcomes in civil wars. The opposite is true for changes in regime type; we have at least mixed evidence that anocracies are both less prevalent now, and less likely to settle for a draw. But this variable does not explain outcomes in civil wars.

The argument that fares best in these tests is that improved methods of maintaining peace, specifically the development of peacekeeping, help combatants bring an end to the war rather than fight to the finish.

Coding and the Nature of Warfare

These findings begin to shed light on the puzzling trend in war outcomes, but they do not fully explain it. A third set of possible explanations, while not yet tested, is worth exploring. It is possible that the change we see in the data is the result of the way outcomes are coded. It may simply be an artifact of historical hindsight. But there are two more interesting explanations that suggest fundamental changes in the meaning of war.

The Effect of Hindsight

One possibility is that the apparent trend in war outcomes is simply an artifact of the way draws are coded. The researchers putting together data sets presumably had more information about the nuances of the military outcomes in more recent wars than in long ago conflicts. The

historical consensus that emerges over time may make military outcomes seem more clear than they were at the time. If ambiguous outcomes are coded as ties, then the state of information about recent wars might result in more of them coded as draws. This effect, in which war outcomes that seem ambiguous now become clearer in hindsight, might have influenced the researchers assembling each of the data sources referred to above: the COW data, the historical research that went into Dupuy and Dupuy (1986) *Encyclopedia of Military History* on which Stam relies for his coding of outcomes, and the various sources that Doyle and Sambanis used for their outcome coding.⁸¹

Because interest in and research on civil wars increased significantly with the end of the Cold War, this effect might explain why we see an increase in ties in civil wars at that point rather than earlier as we do in interstate wars. But the coding hindsight explanation does not account for the marked increase in interstate draws after World War II rather than a steady increase over time. Furthermore, we should expect to see less of an effect of coding hindsight in the COW data relative to other data sets, because it relies in part on relatively contemporary historical records (see Small and Singer 1982, Appendix A).⁸² But as we have seen the effect is most pronounced in the COW data.

There are two more interesting possibilities that could be described as coding artifacts but that are the result of more profound historical changes. The decline of draws may be related to the decline in territorial changes as a result of war, or to the decline of political settlements at the end of war. While Stam's description of the coding of outcomes in his data is a bit vague, it does appear to rely on both territorial changes and codified agreements:

The general coding rule is such that the state that benefits in the new territorial status quo after the war is the winner while states that seek to change the status quo and prove unable to do so are coded as losers. In a draw, both sides formally agree to cease fighting in an internationally recognized and binding treaty. Cases

⁸¹ According to their code book, Doyle and Sambanis' sources include: COW, Licklider (1995); Mason (1996); Walter (1997), "various country-specific sources, State Department and Human Rights Groups Reports." <<http://econ.worldbank.org/programs/conflict/datasets/data?id=13219>>.

⁸² Fewer of Dupuy and Dupuy's bibliographic references are from contemporary sources.

(the Iran-Iraq War during the 1980s, for example) where fighting ends, usually after a long period of time, without an internationally recognized or enforceable agreement to codify the outcome are coded as draws as well Cases where no winner is apparent and the resulting outcome is codified by formal agreement are coded as draws (pp.75-6).

Outcomes are thus judged relative to the status quo, based on the territorial outcome in some sort of codified treaty.⁸³ It is less clear how Stam coded winners and losers in wars that are over issues other than territory. The MID outcome coding defines victory as “the favorable alteration of the status quo.... It denotes the attainment of a tangible piece of territory, the significant change in an adversary’s foreign policy, or the successful downfall of another state’s political regime by force.” Stalemates are “defined by the lack of any decisive changes in the pre-dispute status quo” or when changes occur but the “net balance results in a draw.” Compromise outcomes refer to agreements to divide the spoils or to settle differences.⁸⁴

Territorial Change

As Zacher (2001) has documented, there is a marked decrease after World War II in the redistribution of territory as a result of war. In the MID coding, this change should lead to more stalemates being recorded in the data. On the face of it, it should not affect Stam’s data, as a war over territory that ends at the status quo ante should be coded, according to his rule, as a loss for the initiator and a victory for the defender. This seems to be the case for a number of wars. Iraq is coded as losing the Gulf War after its occupation of Kuwait was repelled, Argentina similarly lost the Falklands/Malvinas war, and Somalia lost the attempt to take the Ogaden from Ethiopia in the late 1970s. But other cases do not seem to follow this rule. The Korean war is coded as a

⁸³ COW gives no specific criteria for its coding. As Small and Singer (1982, p.182) put it “we offer no operational indicators of our own by which the victorious and defeated sides may be differentiated. We merely follow the consensus among the acknowledged specialists in deciding which side ‘won’ each war.” But similar factors are likely to have affected the sources on which COW based its coding.

⁸⁴ Jones, Bremer, and Singer (1996, p.180). MID codes the outcome as a “yield” if there is “coerced submission by one state to the demands made by another but short of any clear alteration of the status quo directly attributable to the threat, display, or use of military force.”

draw despite the fact that North Korea as the initiator failed to change the territorial status quo in a significant way. India and Pakistan are similarly coded as fighting to a tie in 1965 though India successfully fended off Pakistan's challenge to the status quo ante bellum in Kashmir.

When a major territorial change takes place, the war is fairly clearly a victory for the beneficiary of this change. Of Zacher's list of conflicts leading to a significant territorial redistribution⁸⁵ that are also included in Stam's list of wars, all but one are coded as ending with a decisive outcome.⁸⁶ It appears to be more straightforward to code wars that do change the territorial status quo than those that fail to do so. More of the latter seem to be coded as draws rather than victories for the defender. It follows that a decline in territorial redistribution as a result of war might lead to more wars coded by Stam, as well as by MID, as ties.⁸⁷

Political Settlement

The second coding artifact of a more profound change has to do with the political settlement, or lack thereof, that takes place at the end of a war. In the traditional conception, war is a decision mechanism. Two parties who dispute some issue and cannot find a bargain preferable to war fight it out to decide the issue. Wars are therefore thought to end with the issue settled, and this decision is traditionally enshrined in some sort of treaty or agreement.

Most wars end with formal negotiations leading to peace treaties. These treaties perform several functions. They establish, in most cases definitively, the losses and gains suffered or achieved in the contest of arms. They specify the outcome of war, or as Mansbach and Vasquez (1981, ch.8) put it, they represent "decisions" that authoritatively allocate values. . . . The agreements also legitimize

⁸⁵ That is, "interstate territorial aggressions" resulting in a "major change" in Table 2 of Zacher's article.

⁸⁶ The one exception is the First Kashmir war between India and Pakistan which started with a particularly unclear status quo. The war began as the Maharaja of Kashmir dithered over the decision of whether to accede to India or to Pakistan as British colonial rule ended (Lamb 1966). The war ended with the de facto partition of Kashmir. The territorial change noted by Zacher thus reflects the independence of the sub-continent from Britain more than a successful challenge by Pakistan to a well-established status quo ante with India.

⁸⁷ It is difficult to discern how it will affect COW coding, since as noted above, COW gives no coding criteria of its own, but relies on "historical consensus."

war outcomes. (Holsti 1991, p.21)

This seems to be a fairly apt description of most interstate wars from 1820 to World War II. Russia's victory over the Ottomans in 1829 was codified in the Treaty of Adrianople; Mexico's defeat to the US in the Treaty of Guadalupe Hidalgo in 1848; the outcome of the Crimean war was ratified in the Congress of Paris in 1856; a formal protocol enshrining China's concessions ended the Boxer rebellion; Russia conceded its loss to Japan in 1905 in the Treaty of Portsmouth; the Treaty of Versailles codified the outcome of World War I; and several years of negotiations after the Chaco war yielded the 1938 Treaty of Buenos Aires formalizing Paraguay's victory over Bolivia (Kohn 1986; Goldstein 1992; Randle 1973).⁸⁸ Formal peace agreements settling the political issues of the war were typical in this period.

Since World War II, formal peace agreements codifying political settlements at the end of an interstate war have been the exception rather than the rule.⁸⁹ Explicit treaties on the political outcomes of war, such as the formal peace agreement between Israel and Egypt after the Yom Kippur war, have of late been the exception rather than the rule. In a few cases, states settled their political issues with a less formal agreement. Iraq quietly settled its territorial issue with Iran over the Shatt al-Arab waterway several years after the end of the Iran-Iraq war (and not coincidentally on the eve of the first Gulf War). Iraq also officially conceded its claim to Kuwait when it surrendered in 1991. In a few other cases, belligerents reached an explicit agreement formally renouncing the use of force without, however, settling the political issues over which the war was fought. The Tashkent and Simla agreements between India and Pakistan, in 1965 and 1971 respectively, fall in this category.⁹⁰

Most interstate wars in this period ended with at best a formal armistice or cease-fire agreement, leaving the underlying issues of the war contested. The Korean Armistice Agreement

⁸⁸ Thanks to Carol St. Louis for research assistance on war outcomes from 1900 to 1945.

⁸⁹ Fortna (2004b) codes political settlement along two dimensions: first, whether an agreement commits belligerents to renounce the use of force to settle disputes, restores diplomatic relations, or formally ends a state of war; second, whether belligerents reached an explicit political settlement on the issues over which they fought the war. Both are rare between 1946-2000.

⁹⁰ The latter formalized Pakistan's loss of Bangladesh, but neither settled the Kashmir issue.

left the political issues of that war unresolved. The cease-fires that ended the multiple rounds of fighting between Israel and its Arab neighbors, in 1948 and 1949, in 1956, 1967, 1970, 1973, and 1982 have failed to resolve any of the Middle East issues except, eventually, for those between Israel and Egypt.⁹¹ The Kashmir issue has not been settled by four wars between India and Pakistan. The Football war left the issues dividing El Salvador and Honduras unresolved for more than twenty years until arbitration at the International Court of Justice in 1992 ended their territorial dispute. No one but Turkey has formally recognized the partition of Cyprus in 1974, the Azeri-Armenian war has not officially settled the status of Nagorno-Karabakh, nor did the Ethiopia-Somalia war formally settle the status of the Ogaden. Even decisive defeats such as India's loss of Aksai Chin to China in 1962, have not necessarily led the loser formally to relinquish its claims.

Stam's coding rule, quoted above, suggests that both wars that end with a formal agreement and those that do not might be coded as draws. MID's coding rule makes no mention of formal agreements. But it is possible that a decrease in clear political settlements that are explicitly accepted by both sides has led more interstate wars to be coded as ending indecisively. This seems to be the reason for the coding of the Korean war as a draw, for example.⁹²

If it is either the decline in territorial redistribution or the decline in explicit political settlements, or both, that have led to the increase in wars classified as ties, then of course we need an explanation of these phenomena. Zacher (2001) explains the former as the result of the rise of a strong norm that force should not be used to alter interstate boundaries, what he calls the "territorial integrity norm." In his account, this norm emerged at the end of World War I, pushed largely by Western democratic states motivated instrumentally to limit the destruction caused by wars of territorial aggrandizement, and ideationally by their liberal democratic ethos. Zacher describes the period from World War II to the mid-1970s as the acceptance stage of the norm as

⁹¹ Israel and Jordan also eventually reached a peace agreement in 1994.

⁹² The same trend does not hold for civil wars, however. Explicit political settlements have become more common rather than less common in internal conflicts. But, unlike in interstate wars, belligerents in civil wars rarely reach a negotiated political settlement if one side has clearly beaten the other.

it spread to the developing world (for example, becoming enshrined in the OAU's charter in 1963). From 1976 to the present, the norm became institutionalized, as "no major cases of territorial aggrandizement have occurred in this period" (p.237).⁹³

Jack Snyder has proposed that the norm stems from a combination of dynamics during the Cold War. Both the Soviet Union and the US "shored up their allies against conquest by the other side and were too scared of nuclear escalation to use force to change de jure boundaries." At the same time "the great powers wanted to freeze boundaries as a way of managing the degree of conflict among the secondary powers."⁹⁴ Zacher and Snyder's explanations for the norm are not necessarily contradictory; both cite the instrumental desire of great powers to limit conflict. The norm may well have begun to emerge before WWII, as Zacher argues, but only took hold as strongly as it did afterwards because of Cold War politics.

Interestingly, while the norm against conquest by force has taken root, territorial conflicts have not disappeared. As noted above, wars over territory are more prevalent, as a percentage of all wars, after World War II than before.⁹⁵ The increase in territorial conflicts appears to begin in the interwar years, at about the same time, according to Zacher, that the norm against territorial aggrandizement was developing. So while the norm seems to have been quite effective at stopping states from taking territory by force, it sadly has not stopped them from trying.

The territorial integrity norm may help explain the decline in explicit political settlements as well. States have occasionally taken territory by force since World War II, but the norm means that the world has not necessarily recognized their possession as legitimate. The losers of such territory have thus perhaps been encouraged not to relinquish their de jure claim despite their lack of de facto control. The Arab states have not accepted Israel's right to hold the occupied territories (nor has Israel ever claimed sovereignty over the entirety of the West Bank,

⁹³ Fazal (2001; 2004) notes a similar normative effect in explaining the lack of state death by conquest since World War II, but attributes it to enforcement by the United States.

⁹⁴ Email correspondence with the author, August 7, 2003.

⁹⁵ Wars over regime have also increased in frequency in the post-WWII era, though they continue to remain relatively rare. Wars over policy have declined as a percentage of all wars since WWI. Data are from MID "revision type."

though it did formally annex the Golan Heights in 1981). Pakistan has never accepted India's control of part of Kashmir, India has not conceded Aksai Chin to China, and so on. This suggests that the military outcome of war has become somewhat divorced from the political outcome in a way that has yet to be fully explored.

The territorial integrity norm explanation does not help explain the change in military outcomes of civil wars. To the extent that the norm applies to civil conflicts it simply dictates that should a state split up, it do so along pre-existing administrative boundaries (Zacher 2001, pp.234-6). In internal conflicts, if the shift in outcomes is driven by a change in norms, this more likely stems from the demise of the prohibition against intervention in the internal affairs of other states, as noted above. The rise of human rights norms and changing interpretation of the sovereignty norm have led to an increase in involvement by the international community in civil wars. In addition to the increase in peacekeeping efforts in internal conflicts discussed above, this has included mediation efforts and increasingly forceful intervention to end the fighting or prevent humanitarian disaster. Power-sharing agreements among former combatants, and war crimes tribunals or truth and reconciliation commissions, often espoused by the international community, have also become much more frequent. These changes reflect shifts in the way the international community thinks civil wars **ought** to end. This, combined with increased pressure from outsiders to settle may lead to more compromise agreements in civil wars (Howard 2003).

CONCLUSION

War termination has changed over time. This paper has focused on, but not yet fully answered, the puzzle presented by the increase in the number of wars that end in a draw rather than with a decisive winner and loser. This change took place at the end of World War II for interstate wars and at the end of the Cold War for civil wars. I have presented a number of possible explanations for these findings. Some of the hypotheses relate to factors that affect one belligerents' ability to win the war outright, others concern variables that affect combatants' ability to lay down their arms rather than continue fighting. And a few, as yet untested, reflect the possibility that larger shifts in the meaning of war (or perhaps just historical hindsight) are affecting the way war outcomes are coded.

The evidence from tests so far are more notable for negative findings than for positive ones. The temporal trend in war outcomes does not seem to be explained by third parties joining the fight to prevent their allies' or proxies' defeat, or by shifts in the terrain on which belligerents fight. Population growth and changes in issue salience also fail as plausible explanations. While we do not have data to test them for civil wars, hypotheses about improving intelligence and the achievement of surprise, or about the offense-defense balance do not hold water for interstate wars. There is weak evidence that changes in the relative power of combatants over time is driving war outcomes. Draws are more likely in minor-power dyads which have become more common after World War II, and there may be a shift in favor of rebels in civil wars, though the evidence on this is mixed at best. The strategy hypothesis holds up for civil wars (in which insurgencies have become more common and are most likely to lead to stalemate), but not for interstate wars. Meanwhile, changes in regime type (specifically the decline of anocracy) may help explain the change in interstate wars, but this hypothesis does not hold up for civil wars.

The only straightforwardly positive finding to date supports the argument that the development of peacekeeping explains the rise in the number of ties. This is also the only argument tested so far that can explain the timing of the shift we observe in both civil and interstate wars.

It is possible that the increase in the number of draws is merely an artifact of the coding and the clarity that historical hindsight brings to war outcomes, though this explanation cannot account for the sudden, rather than gradual, rise of indecisive outcomes in interstate wars.⁹⁶ Nor do differences in the extent to which different data sets rely on contemporary sources show up in the data in the way we would expect if the rise of draws were merely an artifact of historical hindsight. Two important shifts in the political meaning of war may have affected the coding of military outcomes. The decline in territorial redistribution after the end of World War II is striking. The greater ambiguity of wars that preserve the territorial status quo relative to those that result in large territorial gains by one side may drive the coding of outcomes. Similarly, the decline in clear political settlements that are codified in formal peace treaties may have increased

⁹⁶ The sudden scholarly interest in civil wars after the Cold War might provide an explanation for the marked shift in civil war codings.

the ambiguity of interstate war outcomes, affecting the way in which they are classified.

These two political explanations are perhaps the most interesting, though the hardest to test. That the norm against territorial exchange or the decline in the practice of reaching formal peace treaties might explain the increase in draws of course begs all the most interesting questions. If the territory norm has affected war outcomes, why has it not affected war occurrence? Why do we see so many territorial wars if it is widely accepted that territorial aggrandizement will not be tolerated? Is this norm related causally to the decline in formal peace treaties? If formal treaties have become so much less frequent in interstate wars, why have they become more common in civil wars? Are changing norms of war termination related to the apparent divorce between battlefield outcomes and political settlements? What are the implications of this divorce, if it indeed exists? Has war become a less effective decision mechanism? And if so, why and what are the implications of this? These are questions that I will continue to pursue as I move forward with this project.

Fig. 1 Draws Over Time

Interstate Wars 1816-2000

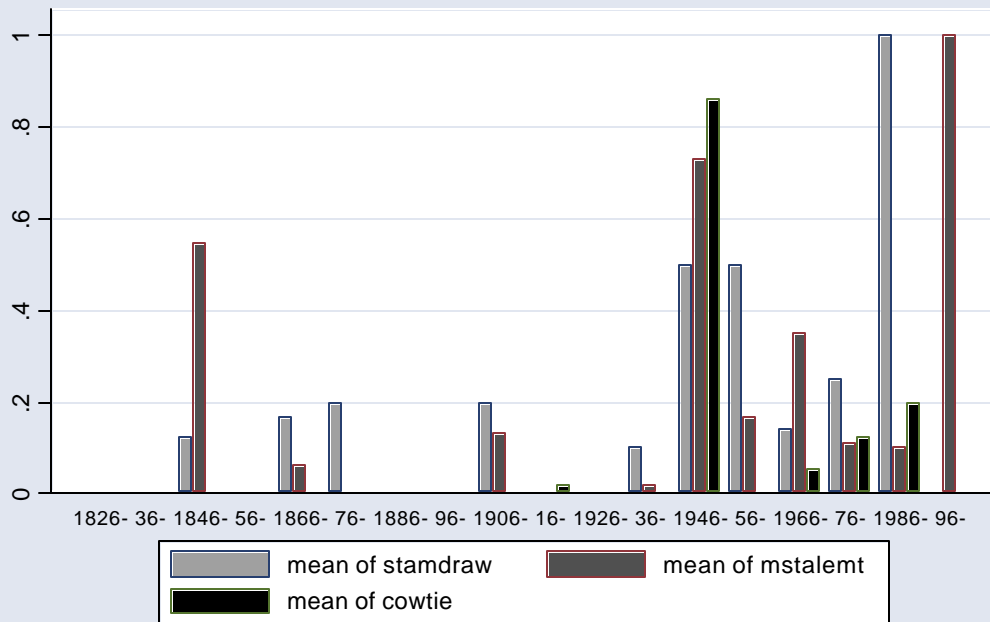
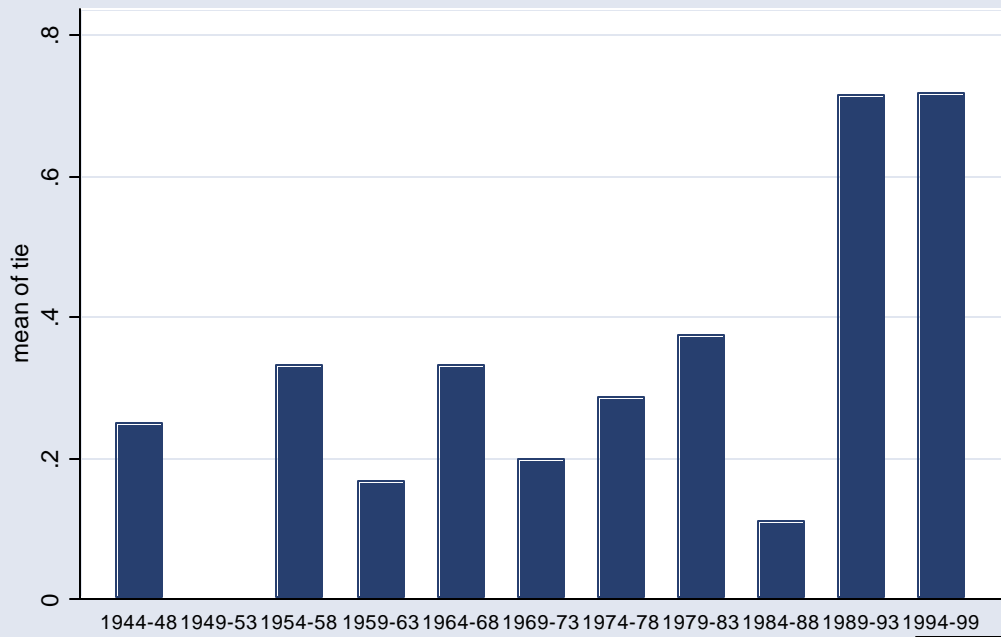


Fig. 2 Draws Over Time
Civil Wars 1944-2000



STATA™

INTERSTATE WARS

Table 1 Dyadic War Outcomes 1816-1992, using Stam's coding

	Victory/Loss	Draw	Total
1816-1945	99 92.58%	8 7.48%	107
post-WWII	26 65.00%	14 35.00%	40
Total	125 85.03%	22 %14.97	147

Pearson's $\chi^2 = 17.33$, $P(\chi^2) < 0.000$
Mann-Whitney test: $Z = -4.15$, $P > |Z| = 0.000$

Table 2 Dyadic War Outcomes 1816-1992, using COW's coding

	Victory/Loss	Tie	Total
1816-1945	195 99.49%	1 0.51%	196
post-WWII	44 55.70%	35 44.30%	79
Total	239 86.91%	36 13.09%	275

Pearson's $\chi^2 = 94.92$, $P(\chi^2) < 0.000$
Mann-Whitney test: $Z = -9.72$, $P > |Z| = 0.000$

Table 3 Dyadic War Outcomes 1816-1992, using MID's coding

	Victory / Loss or Yield	Stalemate or Compromise	Total
1816-1945	176 94.12%	11 5.88%	187
post-WWII	46 52.27%	42 47.73%	88
Total	222 80.73%	53 19.27%	275

Pearson's $\chi^2 = 67.34$, $P(\chi^2) < 0.000$
Mann-Whitney test: $Z = -8.19$, $P > |Z| = 0.000$

CIVIL WARS

Table 4 War Outcomes, COW list of intrastate wars 1816-1997

	Victory/Loss	Draw	Total
1816-1988	167 99.40%	1 0.60%	168
post-Cold War	30 81.08%	7 18.92%	37
Total	197 96.10%	8 3.90%	205

Pearson's $\chi^2 = 27.15$, $P(\chi^2) < 0.000$
Mann-Whitney test: $Z = -5.20$, $P > |Z| = 0.000$

Table 5 War Outcomes, list of civil wars adapted from Doyle and Sambanis 1944-1997

	Victory/Loss	Draw	Total
1944-1988	48 78.69%	13 21.31%	61
post-Cold War	16 29.63%	38 70.37%	54
Total	64 55.65%	51 44.35%	115

Pearson's $\chi^2 = 30.13$, $P(\chi^2) < 0.000$
Mann-Whitney test: $Z = -5.26$, $P > |Z| = 0.000$

Table 6 Change Over Time, Interstate Wars

Variable	1816-1945 mean or percent	1946-1992 mean or percent	Mann-Whitney test of equal distributions ^a	N
relative capabilities	0.64	0.52	0.003 ^b	308
matched dyad (major-major or minor-minor)	45.87%	71.11%	0.000	308
strategy attrition-attrition	79.07%	55.56%	0.009	122
attrition-punishment	2.33%	5.56%	0.363	
attrition-maneuver	18.60%	38.89%	0.018	
surprise	25.58%	41.67%	0.079	122
defense dominant	61.01%	100%	0.000	308
joined wars	66.51%	58.89%	0.205 ^c	308
ease of terrain	0.69	0.80	0.010	122
population (log)	10.70	10.91	0.915	308
territorial war	39.91%	57.30%	0.006 ^b	307
anocracy	63.87%	26.74%	0.000	277
democracy score (total)	-3.93	-2.68	0.132	253
(max)	2.04	4.18	0.008	257
(min)	-5.79	-6.94	0.275	255
peacekeeping	1.83%	71.43%	0.000	302

^a Shows probability of the null hypothesis that the distribution of the variable in the two time periods is equal.

^b Not significant for restricted data of principal belligerents.

^c Significant for restricted data of principal belligerents.

Table 7 Change Over Time, Civil Wars

Variable	1944-1988 mean / percent	1989-1997 mean / percent	Mann-Whitney test of equal distributions ^a	N
government army size	413.60	220.72	0.436	115
rebel victory	29.51%	18.52%	0.172	115
government victory	50.82%	11.11%	0.000	115
insurgency	70.59%	86.96%	0.052	97
intervention	42.62%	53.70%	0.237	115
terrain (log % mountain)	2.828	2.435	0.164	107
population (log)	16.36	15.91	0.102	115
identity war (D&S)	60.66%	64.81%	0.647	115
ethnic war (F&L)	43.14%	58.70%	0.056	97
secessionist (D&S)	34.43%	51.85%	0.060	115
secessionist/autonomy (F&L)	23.53%	32.61%	0.280	97
democracy score	-4.12	-4.00	0.470	111
anocracy	28.33%	37.25%	0.319	111
peacekeeping	13.11%	61.11%	0.000	115

^a Shows probability of the null hypothesis that the distribution of the variable in the two time periods is equal.

Table 8 Effects on the Probability of Interstate Stalemate

Logit regression

	1	2	3	4	5	6	7
	COW Ties			Stam Draws		MID Stalemates	
relative capabilities	1.471 (1.463)			2.037 (1.439)		0.776 (1.192)	
matched dyad		0.613 (0.502)	2.836*** (0.927)		0.629 (0.899)		0.436 (0.492)
strategy (attrition)	3.794 (4.559)		2.779 (4.135)	1.030 (1.459)	0.761 (1.363)	-0.311 (1.229)	
surprise	-1.103 (1.323)		0.117 (1.179)	0.854 (1.009)	1.019 (0.823)	-1.353 (0.970)	
defense dominant				-0.957 (1.245)	-1.082 (1.371)	0.383 (1.338)	-0.017 (1.077)
joined wars	-1.528 (2.036)	0.169 (1.124)	-2.663 (1.909)	-1.922 (1.222)	-1.705 (1.282)	0.779 (1.012)	0.375 (0.841)
ease of terrain	3.802* (1.979)		4.441** (2.127)	-7.280*** (2.228)	-6.671*** (2.060)	-2.932 (1.957)	
population (log)	1.020*** (0.355)	0.747*** (0.255)	1.690*** (0.508)	0.210 (0.229)	0.321 (0.226)	-0.041 (0.213)	0.191 (0.258)
territorial wars	1.704* (0.907)	0.649 (0.948)	1.615 (1.158)	-1.063* (0.590)	-1.255* (0.709)	-0.314 (0.625)	-0.502 (0.712)
anocracy	-4.910** (2.168)	-0.445 (0.608)	-6.706*** (2.260)	-0.410 (0.907)	-0.254 (0.806)	-0.751 (0.568)	-0.992* (0.517)
peacekeeping	2.371** (1.017)	1.783*** (0.528)	2.401*** (0.870)	2.201*** (0.815)	2.044** (0.874)	0.739* (0.433)	1.007* (0.524)
constant	-22.383*** (8.477)	-12.608*** (3.617)	-30.605*** (8.311)	-0.447 (3.446)	-0.900 (3.218)	0.664 (2.753)	-3.957 (3.775)
N	117	244	117	118	118	114	244
pseudo R ²	0.58	0.49	0.61	0.42	0.40	0.16	0.24
log pseudo-likelihood	-13.41	-51.74	-12.48	-33.04	-34.07	-48.42	-96.09

Robust standard errors (clustered on war) in parentheses

* p ≤ 0.10

** p ≤ 0.05

*** p ≤ 0.01

js indicates joint significance

Table 9 Effects on the Probability of Civil War Stalemate

Logit regression

	1	2	3	4	5	6
government army size	-0.0004 (0.0006)					
insurgency	2.305*** (0.734)		2.558*** (0.840)	3.200*** (0.825)	2.950*** (0.778)	2.831*** (0.822)
intervention	-0.144 (0.599)	-0.341 (0.540)	-0.453 (0.671)	-0.704 (0.630)	-0.551 (0.657)	-0.881 (0.684)
mountains (log %)	-0.467** (0.237)		-0.508* (0.280)	-0.381 (0.253)	-0.332 (0.242)	-0.336 (0.251)
population (log)		-0.475** (0.194)	-0.682** (0.313)	-0.858*** (0.324)	-0.895*** (0.321)	-0.786*** (0.258)
identity conflict (D&S)	0.567 (0.614)	0.492 (0.541)				
ethnic conflict (F&L)			0.587 (0.366)			
secessionist conflict (D&S)				1.120** (0.567)		1.059* (0.597)
secessionist / autonomy (F&L)					0.697** (0.344)	
anocracy	1.827*** (0.593)	1.223** (0.517)	2.199*** (0.809)	2.200*** (0.648)	2.032*** (0.654)	
democracy score						0.174*** (0.056)
peacekeeping	3.040*** (0.728)	2.627*** (0.573)	2.815*** (0.739)	3.039*** (0.787)	2.957*** (0.765)	3.419*** (0.831)
constant	-2.803*** (0.987)	5.882* (3.134)	7.618 (4.829)	9.879 (4.960)	9.927** (4.798)	10.3577*** (3.983)
N	94	111	94	94	94	94
pseudo R ²	0.40	0.35	46	0.47	0.47	0.45
log pseudo-likelihood	-38.83	-49.44	-34.90	-34.54	-34.37	-35.62

Robust standard errors (clustered on war) in parentheses

* p ≤ 0.10 ** p ≤ 0.05 *** p ≤ 0.01

Table 10 Summary of Findings

Hypothesis	Interstate Wars	Civil Wars
<u>Achieving Victory</u>		
relative capabilities	weak support	weak support
strategy	no	yes
intelligence – surprise	no	not tested
technology o/d balance	no	not tested
joiners and intervention	no	no
terrain	no	no
<u>Settling for a Draw</u>		
population	no	no
issue salience	no	no
regime type	yes	no
technology of peace	yes	yes

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