The Democratic Peace after the Cold War

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**Updating the Democratic Peace: Evidence from the Post-Cold War World**

**Abstract**

Political scientists and policy makers agree that democratic states were less likely to engage each other in militarized disputes than were other states during the Cold War. Most among them attribute this to the attributes of democratic polities. Some, however, believe that the common and conflicting interests that the East-West conflict induced explain the relatively low democratic-dispute rate. Evidence from the post-Cold War world can help to arbitrate between these very different claims, as the collapse of the Soviet Union destroyed the bipolar system, precipitated a sharp rise in the number of democracies, and shifted dispute-rate patterns. The analyses in this paper show that dyadic dispute rates converge after the Cold War, casting doubt on the idea that a democratic peace exists.
Updating the Democratic Peace: Evidence from the Post-Cold War World

A large number of studies show that militarized interstate disputes (MIDs) rarely occur between democratic states after World War II (e.g., Bremer 1993; Huth and Allee 2002, 2003; Maoz and Russett 1993; Oneal and Russett 1997, 1999a, 1999b; Rousseau et al. 1996). Their authors typically attribute this to the domestic norms and institutions that exist in democratic polities and that constrain their recourse to force when a conflict of interests arises between them.

Other students of international relations, however, attribute variations in dispute-rate patterns to changes in the international system (e.g., Farber and Gowa 1995, 1997; Gowa 1999). Evidence from the pre-1914 multipolar world, they observe, is inconsistent with democratic-peace theory. They attribute the conformity between the data and the theory after World War II to the similar interests among democratic states that the bipolar system induced. In their view, it is common interests rather than common polities that explain the dispute pattern that prevailed between 1950 and 1991.

Arguments for and against the democratic peace have led a parallel existence for a very long time. I argue here that evidence from the post-Cold War world can help resolve this debate, because its participants have very different expectations about the dispute-rate pattern they expect to prevail after the Soviet collapse. Proponents of democratic-peace theory should expect conflicts of interest between democracies to be as rare after 1991 as they were during the Cold War. Those who believe that systemic attributes motivate conflict patterns should expect the shift to a “one-superpower world” to trigger
a convergence in dispute rates across dyad types (Ikenberry, Mastanduno, and Wohlforth 2009, 1).

In this paper, I examine the post-Cold War data. The results I present here show that the variation in dispute rates by dyadic regime type that exists during the Cold War drops sharply in the wake of the Soviet collapse. Between 1992 and 2001, the dispute rate of country pairs with two democracies does not differ significantly or substantively from that of country pairs that consist either of two nondemocracies or of one democratic state and one nondemocracy (i.e., mixed dyads). Limiting the analysis to wars alone does not affect this finding.

Immediately below, I review the relevant theory and the criticisms that some level against it. As both are well known, I do so very briefly. I next explain the changes in world politics that occurred when a unipolar system—that is, a system in which “a single state controls a disproportionate share of the politically relevant resources” (Walt 2009, 91)—replaced its bipolar predecessor. I also explain why these changes seemed likely to shift the distribution of disputes across dyad types. Finally, I examine the data.

**Democratic-Peace Theory and Its Critics**

Democratic-peace theory, as Bruce Russett observes, is “a statement about pairs of democratic countries”—that is, its claims apply to interactions between democratic polities (2007, 2). Its premise is that the domestic norms and institutions of democratic states interact in such a way that neither state will resort to violence to settle any conflict of interests that arises between them (e.g., Dixon 1994; Maoz and Russett 1993; Morgan 1993; cf. Remmer 1998, 29). No such constraints operate, however, when a dispute engages other states.
Cross-national variation in norms governing domestic conflict resolution plays a prominent role in democratic-peace theory. In democratic states, the prevailing norm requires citizens to settle disputes between them without using force. In other states, however, force is more often the weapon of choice (Maoz and Russett, 1993, 388). Because each national leader “externalizes” domestic norms, the latter also affect international conflict resolution: voters and their leaders recognize “that it is unnecessary and therefore unwise to get into violent conflict with another country whose government and people are accustomed to the non-violent resolution of conflicts in their country and have the ability to extend that capacity to resolving international conflicts” (Russett 2007, 2-3).

The export of domestic practices also explains the importance democratic-peace theory assigns to national institutions. According to it, the checks and balances that constrain leaders at home apply a fortiori to their decisions about whether to use force abroad. These constraints delay the ability of executive-branch officials to deploy troops, creating windows of opportunity that their officials can exploit to seek settle disputes peacefully. No comparable option exists when conflicts of interests occur between other states, however.

Variation in the size of the political coalitions that leaders depend upon to gain and maintain office also plays a role in some explanations of the democratic peace (e.g., Bueno de Mesquita et al. 2003). In this view, democratic leaders require the support of a relatively large number of constituents, while their counterparts in other states rely on a much smaller base. This makes public goods the coin of the realm in democracies, while the strategic distribution of private goods plays the key role in other types of states. As
defeats in interstate conflict produce nonrival and nonexcludable “goods,” democracies are both more reluctant to initiate conflicts and more determined to prosecute vigorously any that occur than are nondemocracies (Reiter and Stam 2002).

Other participants in the debate about the democratic peace are skeptical about the role of norms. In their view, citizens settle their disputes peacefully because they interact in the shadow of state power. In allocating to their government a monopoly over the legitimate use of force, voters empower it to punish violations of any laws it establishes, including private recourse to force. Because the government wields a credible threat of punishment and applies it uniformly, abstaining from the use of violence is an equilibrium outcome of the interactions that engage constituents in democratic polities.

Skeptics add that the shadow of power also explains peaceful conflict resolution in the account of war that has become the industry standard. When complete information exists and conflict is costly, a range of peaceful settlements exists that makes all states better off than going to war (e.g., Fearon 1995). This implies that all prospective belligerents, not just democracies, have a compelling interest in resolving their conflicts of interest without resorting to violence. Thus, all else equal, regime type should not affect the way in which international disputes end.

While some recent analyses of crisis bargaining argue that the transparency that allegedly exists in democratic states enables them to signal their resolve more easily than can authoritarian states, their authors make clear that their models do not generate a theoretical foundation for the democratic peace. Instead, their analyses sometimes “anticipate monadic democratic pacifism” (Gartzke 2007, 169) and sometimes predict a rise in the risk of war in equilibrium (e.g., Fearon 1994; Schultz 1998, 840; 1999, 246–
Modeling crises as repeated interactions, in addition, can also reduce the incidence of war as it induces all states, irrespective of their regime type, to reveal their resolve honestly (Sartori 2005).

Finally, those who locate the source of conflict dynamics in the international system observe that existing evidence is inconsistent with democratic-peace theory. Several studies show that dispute rates do not vary by dyadic type before 1914 (e.g., Maoz and Abdolali 1989; Farber and Gowa 1995, 1997; cf. Thompson and Tucker 1997). Their authors attribute this finding partly to the conflicts of interests that divided the major powers, including the democracies among them. That dispute rates varied by regime type during the Cold War, they argue, is due to the Soviet threat that created strong common interests among Western democracies, making conflicts between them unlikely.

Currently, most students of the democratic-peace debate maintain that it is “as close as anything we have to an empirical law” in international relations (Levy 1989, 270). Some, however, are not convinced. For reasons I describe immediately below, the unipolar era offers an as yet unexploited source of data that can yield new insights into an issue that is of interest to both academics and practitioners of international politics.

After the Cold War

Students of international relations expect different international systems to create different patterns of interactions among their constituent states (e.g., Waltz 1979; Gilpin 1981). They point, for example, to the different alliance patterns that the pre-World War

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1Guisinger and Smith (2002) argue that democratic leaders care more about their reputations because their hold on office is somewhat tenuous. They do not consider that the higher rents that office-holding autocrats capture can offset the relatively low cost of unseating democratic leaders.

2For a different argument about the democratic peace, see, e.g., Gartzke 1998, 2007.
I and post-World War II systems produced. They note that the erosion of the Cold-War system led to a series of events that had seemed all but inconceivable until they actually occurred—e.g., the liberation of Eastern Europe from Soviet control; the fall of the Berlin Wall; the dissolution of the Warsaw Pact; the collapse of the U.S.S.R., the reunification of Germany; and the accession of both East European states and former Soviet republics to the North Atlantic Treaty Organization, the European Union, and the World Trade Organization.

The Soviet implosion and the collapse of the bipolar system also induced a shift in conflict patterns. After 1945, superpower efforts to establish and maintain the tacit rules of the postwar world motivated a series of disputes between nondemocracies. Between 1950 and 1991, for example, a MID occurred in about 36 percent of major-power dyad years that crossed the East-West divide—that is, country pairs that included Britain, France, or the United States on one side and the U.S.S.R. or China on the other.\(^3\) The Soviet collapse triggered a decline of about 42 percent in East-West major-power disputes. Thus, the post-Cold War world should witness a drop in the dispute rate of mixed dyads.

The bipolar system sparked also prompted a series of conflicts that reflected the superpower competition for influence in a postcolonial world. Proxy wars erupted in the Third World as the United States and the Soviet Union “fought in many regions and over many decades” to establish tacit spheres of influence (Frieden, Lake, and Schultz 2010, 28). Their competition fueled repeated outbreaks of violence in the Middle East and

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\(^3\)I use the “State System Membership List, v2004.1” of the Correlates of War (COW) project (http://correlatesofwar.org) to identify major powers, as discussed below.
South Asia as well as U.S. interventions in Latin America and elsewhere (Westad 2007). It also led to large-scale wars in Korea and Vietnam.

As in the case of major-power disputes, these conflicts pitted nondemocracies against each other. As a result, the bipolar system created a conflict pattern that was orthogonal to democratic-peace theory yet nonetheless seems very likely to have contributed to its empirical success. The Russian state that emerged after 1991 was neither willing nor able to engage in these proxy wars. As such, the post-Cold War world seemed likely to generate a more uniform distribution of disputes across dyad types than had its predecessor. The waning of the East-West conflict also seemed likely to weaken the bonds that had held many postwar alliances together.

Finally, the Soviet implosion led to a precipitous decline in the appeal of state-dominated polities and markets, opening “the door to democratic transitions in Eastern Europe and parts of Central Asia” and reinforcing changes occurring both in Latin America and elsewhere (Walt 2005, 54). Figure 1 shows the sharp rise in the number of democratic states that occurred as bipolarity ended: while 55 democratic polities existed in 1991, 67 had emerged as of 2001.\(^4\) The proportion of democratic dyads in the system increased accordingly: between 1950 and 1991, about 8 percent of all dyads in the system consisted of two democracies; the corresponding statistic for the post-Cold War periods is 17 percent.

[Insert Figure 1 here]

The increase in the proportion of jointly-democratic dyads renders the post-Cold War period invulnerable to the charge some democratic-peace proponents levy against

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\(^4\)I use Polity IV for regime data (www.cidcm.umd.edu/inscr/polity), as I explain in more detail below.
the pre-1914 data—that is, that the scarcity of democracies makes an analysis of the pre-World War I evidence uninformative (Ray 1998; 35; Leeds 2003, 435). The rise in the number of democracies also increased the heterogeneity among them. While advanced industrialized states account for almost 30 percent of all democratic dyads between 1950 and 1991, for example, they account for only about 10 percent thereafter. Thus, recent history provides the “most obvious place” to test democratic-peace theory, as Erik Gartzke notes, because a system with a relatively large numbers of democratic states creates “the hardest test of the proposition that democracies do not make war on each other” (2007, 173, n. 36).

Nonetheless, legitimate concerns exist about whether sufficient data exist to make a test of dispute-rate patterns after the Cold War useful. The issue of greatest concern is that information about MIDs is available only through 2001. It is, of course, true that a longer run of data would generate more precise estimates of dispute rates. Nonetheless, the post-Cold War sample alone includes about 124,000 observations, more than twice the size of the pre-1914 sample and about 40 percent as many as in the Cold-War sample. Moreover, as the results below show, the precision of the estimates does not vary across the Cold War and post-Cold War periods.

There is no guarantee, of course, that the years between 1992 and 2001 will be typical of those that follow. It may be that the full effect of a systems change on dispute-rate patterns will not emerge for some time. The only alternative, however, is to continue to assume that the relationship between dispute rates and dyadic polity type is the same after the Cold War as it was during it. Given the importance of the democratic-peace debate to both policy makers and to academic observers of international relations, it
seems to make sense to update the evidence about it. Both policy makers and academics can judge for themselves the extent to which they should shift their priors as a result.

Data

To make the analyses that follow comparable to those in previous studies, I rely wherever possible on the same unit of analysis and the same data sources as do most contributions to the democratic-peace literature. As is the industry standard, an observation records the occurrence of a Militarized Interstate Dispute (MID)—that is, an interstate conflict in “which the threat, display or use of military force short of war by one member states is explicitly directed towards the government, official representatives, official forces, property, or territory of another state” (Jones, Bremer, and Singer 1996, 168). If a dispute results in at least 1,000 battle deaths, it is labeled a war (Jones, Bremer, and Singer 1996, 171).

I code the onset rather than the duration of a MID because the democratic-peace debate is about the incidence of disputes rather than about their duration. If a dispute extends beyond a year, I code subsequent observations of the same dispute between members of a given country pair as zeroes. While this helps to resolve a statistical issue associated with the assumption of independence across cases, it also reflects the fact that the factors affecting conflict duration are “quite different from what makes conflicts start” (Bennett and Stam 2000, 662).

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There are 2018 MIDs between 1950 and 2001.\(^6\) As there are about 557,124 observations in the same period, the dispute rate is 0.36 percent.\(^7\) In about 200 cases, more than one MID occurs between the same two states in a single year. The MID data set considers conflicts as discrete disputes only if “the respective governments clearly kept their diplomatic behavior regarding the disputes separate before, during, and after the conflicts” (Jones, Bremer, and Singer 1996, 175). Wars occur in 102 instances or about 0.02 percent of the overall sample. They account for about 5 percent of all MIDs.

The appropriate dependent variable is a matter of some debate. Many studies include all MIDs (e.g., Bremer 1993; Cederman 2001; Cederman and Rao 2001; Gartzke 1998, 2000; Gochman and Maoz 1984; Maoz and Abdolali 1989; Maoz and Russett 1993; O’Neal et al. 1996; Pevehouse and Russett 2006). Others include only wars. Yet, a dispute qualifies as a MID only if the conflict of interests it reflects is serious enough to cause a war or “to carry the implication of war”—that is, if it involves “the explicit threat to resort to armed force, the display or mobilization of armed force” (Jones, Bremer, and Singer 1996, 166-67).

Analyzing the incidence of all militarized disputes is consistent with the crisis-bargaining approach that dominates the theoretical literature about war. According to it,

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\(^6\)Some studies only consider “politically relevant” dyads—i.e., those with contiguous members or that include at least one major power (e.g., Maoz and Russett 1993; Oneal et al. 1996; Cederman and Rao 2001). Nothing in the theory, however, implies that the democratic peace should be limited to this subset of states. About 20 percent of all MIDs in the sample involve “politically-irrelevant” countries, suggesting that the two criteria do not accurately identify states at risk.

\(^7\)Because of missing polity data, 69 MIDs drop out of the sample I use below. Thus for the observations in the analyses below, the MID rate for the 1950-2001 period is 0.44 percent. Twenty-three of these observations, however, are included in the sample that I use when I test the sensitivity of the results to recoding as a nondemocracy any “interrupted government (i.e., those with a score of -66). As I note below, the results are robust to this change. Complete results for all results reported in this paper are available from the author.
a crisis exists when a conflict of interests leads a state to threaten the use of “military force in the event it does not get what it wants” (Frieden, Lake, and Schultz 2010, 90). MIDs satisfy this criterion, as each of them involves an explicit government-sanctioned threat to use force (Jones, Bremer, and Singer 1996, 168).

As such, democratic-peace theory implies that MIDs between democracies should be rare events. Democracies that become “embroiled in an international crisis” will not “fear the use of force,” because each state recognizes that the other is committed to a peaceful resolution of their conflict of interests (Gelpi and Griesdorf 2001, 636). As a result, neither wields a credible threat to wage war in order to convince the other to yield. By definition, however, all MIDs carry the implication of war. Thus, a MID of any type between democracies should be a rare event (Mousseau, Hegre, and Oneal 2003, 277).

Nonetheless, some students of the democratic peace maintain that only wars are relevant to democratic-peace theory (e.g., Dixon 1994; Doyle 1986, 2005; Ward and Gleditsch 1998). In their view, any MID that does not involve war is a case of peaceful conflict resolution. Because this paper focuses on the data about dispute rates across time, I do not attempt to resolve the merits of different interpretations of democratic-peace theory here. Instead, I examine both disputes in general and wars alone.

It is important to note, however, that battle casualties do not necessarily reflect the severity of the threat to peace that a militarized dispute represents. Many observers, for example, regard the Cuban missile crisis as the most dangerous crisis of the Cold-War era, and some view the 1961 Berlin crisis as a serious contender for second place. If the severity of a MID were judged on the basis of casualty levels, however, neither the Cuban missile crisis nor the Berlin crisis would qualify as a serious dispute. Yet, the risk
of a nuclear war loomed particularly large during the missile crisis and contributed to its peaceful resolution.

I code 1992 as the first post-Cold War year. The series of events that led to the collapse of both the Soviet bloc and the U.S.S.R. began earlier, of course. Mikhail Gorbachev became General Secretary of the Communist Party in March 1985. Even four years later, however, few recognized that the U.S.S.R., “its empire, its ideology—and therefore the Cold War itself—was a sand pile ready to slide” (Gaddis 2005, 218). By the end of 1989, the Soviet empire in Eastern Europe had crumbled, as had the Berlin Wall. In December 1991, Gorbachev dissolved the U.S.S.R. itself. “And so,” as John Lewis Gaddis observes, “the Cold War ended, much more abruptly than it had begun” (2005, 259).8

As is standard, I use the Polity IV data set to code government types. When data are missing, it is almost always because states have populations of less than 500,000, the level necessary to gain entry into Polity IV (e.g., Andorra, Kiribati, Monaco, and Tonga). Polity scores reflect the “competitiveness of political participation, the openness and competitiveness of executive recruitment, and the level of constraints on the chief executives” (Jaggers and Gurr 1995, 471). The Polity data set assigns governments an annual score ranging between zero and ten on each of the democracy and autocracy scales. As is standard, I measure democracy by subtracting a regime’s score on the autocracy scale from its score on the democracy scale.

I include three types of country pairs in the analysis: democracies, mixed dyads, and nondemocracies. I code a country pair as democratic if both its member states score

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8As I note below, the results are robust to recoding the onset of the post-Cold War system as 1989.
at least a seven on the Polity IV scale in any given year. This means that any democratic state coded as such here has a “highly coherent set of institutional structures,” including a competitive polity, an elected leader, and constraints on executive power (Jaggers and Gurr 1995, 479). Thus, no state in the sample is considered democratic if Keith Jaggers and Ted Robert Gurr regard its government as “particularly vulnerable” to regime reversal (1995, 479) or if Edward D. Mansfield and Jack Snyder (2005) regard it as a transitional democracy.\textsuperscript{9} Restricting the population of democracies in this way should alleviate concerns that it is new or inchoate polities that drive the results.

I include mixed dyads, country pairs in which one state is a democracy and the other is not, in the analysis because the discussion above implies that conflict dynamics in the bipolar era seemed likely to create an unusually high number of disputes between their members. In addition, previous studies reject the hypothesis that disputes between mixed-dyad members occur at the same rate as do MIDs between democratic states or between two nondemocracies (e.g., Maoz 1997, 171). The third country-pair type in the analyses below is nondemocratic dyads—that is, two states which each receive a score of less than seven on the combined polity scale. In the sample as a whole, democratic dyads account for about 10 percent of all observations. The corresponding statistics for mixed and nondemocratic dyads are about 43 percent and 47 percent, respectively.

\textsuperscript{9}Some studies use the minimum democracy score of dyad members as the independent variable. This corresponds to the idea that the probability of a MID decreases with an increase in the lower of the polity scores of the members of a country pair. However interesting this may be, it is not the hypothesis that democratic-peace theory advances, which is about “pairs of democratic countries” (Russett 2007, 2). Coding dyads in this way also conflates all dyad types, making it impossible to test the central hypothesis in this paper about variation in cross-dyadic dispute rates. To test the “weak-link” idea, I added 10 to each polity score of states to facilitate the interpretation of the results—e.g., a polity that receives a score of -10 is recoded to zero here. The results show that increases in the minimum democracy score exert a negative and statistically significant impact on MIDs both during and after the Cold War. The variable, however, has no significant impact on war rates after 1991 (p-value = 0.398).
As is conventional, I also control for whether states share borders. Using the Correlates of War (COW) Direct Contiguity data set, I code states as contiguous if either a land border or 12 miles or less of water separate them. The limited ability of most states to project power suggests and a large number of empirical studies show that contiguous states are much more likely to engage in disputes than are other states (e.g., Bremer 1993). Indeed, the roughly 3 percent of dyads that include contiguous states account for more than half of all disputes. Using EUGene, I also include a covariate that measures the log of the distance between capital cities, calculated using the “great-circle” distance formula (Bennett and Stam 2007, 17).

Previous studies show that allied states are less likely to engage in conflicts with each other than are other states, controlling for contiguity (Bremer 1993). Thus, I include in the analyses a covariate that assigns a value of one to country pairs that include allied states; it is zero otherwise. To do so, I use the data set that Brett Ashley Leeds and others assembled (Leeds et al., 2002). They define alliances as agreements that are “signed by official representatives of at least two independent states, that include promises to aid a partner in the event of military conflict, to remain neutral in the event of conflict, to refrain from military conflict with one another, or to consult/cooperate in the event of international crises that create a potential for military conflict” (Leeds et al., 2002, 238).

They note, however, that the existence of an alliance connotes that states have committed themselves to cooperate with each other “in the event of conflict with third parties” (2005, 5). In contrast to defense pacts, neutrality agreements, and offensive

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10www.cow2.la.psu.edu/COW2%20Data/DirectContiguity/DCV3desc.htm.

11atop.rice.edu/data and cow2.la.psu.edu (Leeds et al., 2002; Leeds and Mattes 2007).
alliances, they add, consultative pacts are relatively “vague in their commitments,” creating a potential for but not a promise of joint action in a crisis. As a result, I code defense, neutrality, or offense pacts as alliances. About 11 percent of dyad years in the sample include two allies. Because the end of the Cold War seems likely to have shifted the extent to which states in the system depended on their formal allies for the defense of their common interests, I create two alliance variables: the first takes on a value of one if an alliance exists during the Cold War and is zero otherwise; the other assumes a value of one in cases in which alliances exist after 1991.

I also control for three power-related variables. That major powers are much more likely to engage each other or other states in conflict is well established (see, e.g., Bremer 1993; Oneal and Russett 1997). Although dyads that include a major power account for only about 8 percent of the sample, they witness about 36 percent of its MIDs. Using COW data, I code Britain, China, France, the U.S.S.R., and the U.S. as major powers between 1989 and 2001. Japan and Germany acquire major-power status in 1991.

Two dummy variables capture the effect of major-power involvement. The first assigns a value of one to any dyad that includes one major power; it is zero otherwise. The second creates an indicator of dyads in which both states are major powers. Given that the end of the Cold War reduced East-West conflicts, the incidence of conflict between major powers should fall after 1991. I also use the composite index of national capability scores in the National Material Capabilities data set to construct a variable that equals the ratio of the larger state’s capability index to the sum of both states’ indices in

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12As I note, the results are robust to recoding consultative pacts as alliances.
each year (Singer, Bremer, and Stuckey 1972). As this ratio increases, crisis outcomes become easier to forecast, which should lead dispute rates to fall.

Finally, it seems plausible that past conflicts between members of a particular dyad affect the probability of future disputes between them. Because ignoring this duration dependence can inflate the statistical significance of the estimates, Nathaniel Beck, Jonathan Katz, and Richard Tucker (1998) recommend controlling for the time elapsed between disputes involving members of the same dyad (Peaceyrs). To smooth out changes in the baseline hazard rate, they also recommend using a natural cubic spline function with several knots. I include such a function with knots at one, four, and seven years. Thus, the model I first estimate is:

\[
MID_{ijt} = \alpha + \beta_1(DemDyad)_{ijt} + \beta_2(MixDyad)_{ijt} + \beta_3(Contiguity)_{ijt} + \beta_4\ln(Dist)_{ijt} + \beta_5(OneMajor)_{ijt} + \beta_6(TwoMajor)_{ijt} + \beta_7(Ratio)_{ijt} + \beta_8(Ally)_{ijt} + \beta_9(Peaceyrs)_{ijt} + \beta_{10}(Spline1) + \beta_{11}(Spline2) + \beta_{12}(Spline3) + \varepsilon_{ijt}
\]

I then estimate the same model but substitute wars for MIDs.

Other studies sometimes include additional covariates (e.g., measures of UN voting patterns (e.g., Gartzke 2000)). Because no consensus exists about the correct specification and because adding intervening variables underestimates the coefficients of related variables (Ray 2005), I use a relatively spare model here. I report below on the sensitivity of the results to the inclusion of some of the more commonly used covariates.

**Results**

**MIDs**

Table 1 presents the results of bivariate analyses of MIDs. In the first row are dispute rates by dyadic regime type during the Cold War. As in earlier studies, the data

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13[www.cow2.la.psu.edu/COW2%20Data/Capabilities/nmc3-02.html](http://www.cow2.la.psu.edu/COW2%20Data/Capabilities/nmc3-02.html).
in this row are consistent with the idea that disputes between democracies rarely occur between 1950 and 1991. States with democratic polities engage each other in disputes less than half as often as do members of mixed dyads and about one-third less often than do two nondemocratic states.

[Insert Table 1 here]

The second row of Table 1, which records post-Cold War dispute rates, displays a remarkably different pattern. As the discussion above implies, the advent of a unipolar system leads to a sharp drop in the incidence of disputes between mixed-dyad members. The MID rate of these country pairs drops by about 40 percent relative to the Cold-War years. Between 1992 and 2001, MIDs occur about 50 percent more often between democracies than between states in mixed dyads and about 25 percent more often than do MIDs involving nondemocracies. These cross-tabs are consistent with the hypothesis that systemic change shifted the distribution of dispute rates across dyad types.

One example of a post–Cold War MID between two democracies occurs in 1995, when Venezuela responds to a raid by Colombian guerrillas by forcibly expelling about 1000 Colombian immigrants.14 A 1994 democratic MID occurs when Nicaraguan forces seize Costa Rican civil guards who had crossed the border to pursue illegal immigrants. A post–Cold War dispute between nondemocracies occurs in 1994, when Ethiopian and Sudanese troops clash over a charge that Sudanese citizens expropriated Ethiopian property.15

14 http://migration.ucdavis.edu/mn/more.php?id=627_0_5_0.
15 These descriptions are from the MID 3.0 Dispute Narrative (cow2.la.psu.edu).
Table 2, column 1, presents the results of a logit analysis of disputes between 1992 and 2001. As in equation (1), the analysis controls for joint democracy; mixed dyads; contiguity; country pairs in which one or both states are major powers; the relative power of the states in each dyad, the logged distance between them; their alliance status; and duration dependence. The base group consists of country pairs in which dyads include two states that are nondemocracies.

[Insert Table 2 here]

The results in column 1 show that the dispute rate of democratic dyads is identical to the rate at which base-group states engage each other in MIDs (p-value = 0.987).16 It is also statistically indistinguishable from that of mixed-dyad members (p-value = 0.177). After the Cold War, only the dispute rates of mixed-dyad members and base-group states differ significantly from each other. The former witness a dispute between them about 40 percent more often than do the latter (p-value = 0.035). Using CLARIFY shows that the predicted dispute rate of democracies is about 0.04 percent after 1991 (King, Tomz, and Wittenberg 2000). The corresponding rate is the same for base-group states and is about 0.06 percent for mixed-dyad members.17

To make clear the contrast between the Cold-War era and the post-Cold War period, Table 2, col. 2, presents the results of an analysis of the years between 1950 and 1991. The specification is otherwise identical to that in the first column of the table. As in the first row of Table 1, the results are consistent with the idea that a democratic peace

16 All p-values I report in the tables and text are two-sided. Since the confidence interval on the joint-democracy variable includes both positive and negative values, it is not possible to reject the possibility that the null hypothesis is false.

17 I set all other variables at their median except for ratio which is set at its mean
exists. They show that democracies are much less likely than are states in either mixed
dyads or in the base group to engage each other in disputes during the Cold War (p-value
= 0.000 and 0.003 respectively). The predicted dispute rate of democracies during the
Cold War is about 0.02 percent. The corresponding mixed-dyad rate is about 0.07
percent and that of two nondemocracies is 0.04 percent. As the discussion above predicts,
then, variation in dispute rates across dyad types declines after 1991.

The set of results that Table 2 presents are consistent with the discussion of the
contrast between bipolar and unipolar systems. Although mixed-dyad members are more
likely to engage each other in a MID than are base-group states throughout the postwar
era, a comparison of the results in Table 2 shows that much more variation exists in
cross-dyadic dispute rates during than after the Cold War. The differences between the
dispute rate of mixed-dyad members and that of either democratic or nondemocratic

In both sets of results that Table 2 presents, the other covariates behave as
expected.18 Disputes are about eight times as likely between contiguous states. As the
power of one state increases relative to the other or the distance between them increases,
the probability that they witness a MID drops sharply. Disputes between dyads that
include one major power occur at least five times as often as they do when neither state is
a major power. Country pairs that include two major powers are at least five more likely
to engage each other in a MID than are dyads with only one major power. The MID rate
of Cold-War allies is about 17 percent lower than is that of states that do not share
political-military interests, a difference that is not statistically significant (p-value =

18The coefficients on the dichotomous variables represent the change in the log odds of a MID
(i.e., $e^\beta - 1$) that occurs when their values shift from zero to one.
0.206). After 1991, however, the alliance effect is both larger, effecting a drop in dispute rates of about 45 percent, and statistically significant (p-value = 0.005). This is in contrast to the alliance effects predicted in the discussion above.

Finally, I pool the data across the entire postwar period. I generate two variables for each dyad type that differ from each other only with respect to when they occur. For example, I create two joint-democracy variables. I set the first to one if a country pair includes two democratic states in a year between 1950 and 1991 (CW/democratic dyad); it is zero otherwise. The second assumes a value of one if a dyad is jointly-democratic in any year between 1992 and 2001 (PCW/democratic dyad); it is zero otherwise. I create analogous covariates for each of the other two dyad types. As the discussion above implies that the impact of major-power dyads and of alliance ties is likely to vary across international systems, I also create separate variables for Cold-War and post-Cold War major-power dyads and for Cold-War and post-Cold War alliances. Table 3 presents the results of the pooled analysis.

[Insert Table 3 here]

The results in the table show that cross-dyadic dispute rate variation drops sharply after 1991. As before, the shift from a nondemocratic to a democratic dyad during the Cold War leads to a large and statistically significant decline in dispute rates relative to both mixed dyads and country pairs that include two nondemocracies (p-value = 0.000 in both cases). These differences shrink after 1991. The MID rate of democracies is neither substantively nor significantly lower than is that of mixed dyads or nondemocracies after the Cold War (p-value = 0.248 and 0.924, respectively). The predicted MID rate for jointly-democratic country pairs increases from about 0.02 percent before 1992 to about
0.05 percent thereafter. The MID rate of nondemocracies increases by a much smaller amount, rising from 0.04 to 0.05 percent.

The coefficient on mixed dyads stays about the same across the postwar era. This is so partly because the two-major power variable picks up some of the decline that occurs in mixed-dyad disputes. MIDs between two major powers between 1992 and 2001 occur at only about 40 percent of their Cold-War rate. This substantively large and statistically significant drop (p-value = 0.012) is almost entirely attributable to the fading of the East-West fault line, as about 92 percent of all dyad years of postwar conflicts between two major powers involve countries on opposite sides of the Iron Curtain. In contrast, no change occurs in the tendency of alliances to suppress conflicts: their impact is negative and significant in both periods but does not vary across them (p-value = 0.250).

I turn next to an analysis of wars.

**Wars**

Table 4 presents the results of a cross-tab of war rates by regime type. Although exceedingly rare across the postwar world, the average rate of war decreases after 1991. Its distribution across regime types also shifts. As in the case of MIDs more generally, the Cold-War evidence is consistent with democratic-peace theory. The war rate of mixed dyads converges to that of democratic country pairs after the Cold War. Among the approximately 29,000 democratic-country pairs in the post-1991 sample, only one war occurs. There are 45 instances of war involving mixed dyads before 1992, a rate of 0.03 percent; the corresponding statistics for the post-Cold War period are one and
Thus, as in the case of all MIDs, war rates during the Cold War are consistent with earlier studies about the democratic peace, but the post-Cold War rates are not.

[Insert Table 4 here]

The results in Table 5 confirm the results in Table 4. The first column in Table 5 displays the results of a logit analysis of wars after 1991. The specification is identical to that in equation (1), except that the dependent variable now assigns a value of one only to MIDs in which the belligerents incur at least 1000 casualties. Although the coefficient on the joint-democracy variable is negative, it is not significantly different from either the base group or mixed-dyad members (p-values = 0.333 and 0.235, respectively). The predicted probabilities of war between members of democratic, mixed, and nondemocratic country pairs are 0.02, 0.00, and 0.02 respectively. As no war occurs between two major powers after 1991, the two-major power variable drops out of the analysis. The one major-power variable does so as well, as only one war occurs between states in a mixed dyad and it involves a major power.

[Insert Table 5 here]

The second column of Table 5 presents the results of an analysis of war between 1950 and 1991. As in the democratic-peace literature, the results show that wars between democracies are relatively rare events. Wars between members of mixed dyads or between nondemocracies occur about nine times more often than do wars between democracies. These differences are both very large and statistically significant (p-value =

\[19\] Both during and after the Cold War, only one war occurs between democracies. According to the COW data, wars occur between Cyprus and Turkey in 1974 and between India and Pakistan in 1993.
0.013 for mixed dyads and democracies; p-value = 0.043 for base-group states and democracies).

In both sets of analyses in Table 5, states that are allies are much less likely to engage each other in war than are other states: they do so at about one-fifth the rate of other states during the Cold War (p-value = 0.000) and about 20 percent as often since 1991 (p-value = 0.008). As is true of postwar MIDs, the rate at which states engage each other in war drops as the power ratio and the distance between them increases. During the Cold War, a major-power presence exerts a very large positive and significant impact on the incidence of war (p-values = 0.000 in both cases).

Pooling the war data confirms that the distribution of war rates across dyad types also varies with the change in international systems. As Table 6 shows, Cold-War democracies engage each other in war significantly less often than do either mixed-dyad members (p-value = 0.013) or two nondemocracies (p-value = 0.021). Thereafter, however, no significant difference exists in the rate at which two democracies engage each other in war and the rate at which either two nondemocracies do so (p-value = 0.232) or the rate at which mixed dyads do so (p-value = 0.322).

Robustness tests

The results reported above are robust to several changes in the pooled analyses of disputes and wars. These include using a model designed for rare events (King and Zeng 2001a, 2001b); controlling for dyadic wealth, measured as the ratio of the smaller of the annual per capita energy use of dyad members over the sum of their energy use; recoding
consultative agreements as alliances;\textsuperscript{20} adding a control for the extent to which two nations vote similarly in the UN General Assembly;\textsuperscript{21} dropping controls for duration dependence; redefining contiguity to include states separated by 24 miles of water or less; defining a state as democratic if its Polity IV score is six or higher; including separate Cold-War and post-Cold War measures for every covariate; and dating the beginning of the post-Cold War system to 1989.

I also check whether the results are robust to recoding as nondemocracies the states that Polity IV labels “interrupted.” These are cases in which an occupation by a foreign power leads to the overthrow of the government in the occupied country. Because Polity IV codes regime type in these cases as missing, all observations involving occupied powers drop out of the analysis. Among these are six cases of Cold-War disputes and 17 instances of MIDs that occur after 1991, including the intervention in Afghanistan. To test whether the results I report above are sensitive to this coding, I recode interrupted states as nondemocracies. This change does not affect the results I report above.

I also test whether the results are sensitive to redefining regime types to exclude relatively “newborn” democracies, since some observers suggest that a democratic peace holds only between “mature” democracies. I redefine a state as democratic only if it has a relatively “durable” polity—that is, if it has had what Jaggers and Gurr describe as a coherent democratic polity for at least five years running. Thus, I code a country pair as jointly-democratic if and only if both of its members are “durable” democracies. I recode

\textsuperscript{20} Only about one percent of all alliances are consultative pacts.

\textsuperscript{21} For these data, see Erik Gartzke’s affinity index (http://dss.ucsd.edu/~egartzke). I use the s2uni variable, which interpolates missing values.
other dyads accordingly. This reduces the population of democratic dyads in the sample to about 7 percent. These changes do not affect the MID results I report above.\footnote{While the number of disputes between durable democracies is lower than is the number of disputes between democracies in general, the population of democracies is also smaller in the first case than in the second. Dispute rates of durable democracies and of durable mixed dyads, therefore, increase slightly.} In the case of wars, the Cold-War durable-democracy variable drops out of the analysis because no wars occur between relatively long-standing democracies before 1992, and the post-1991 mixed-dyad variable drops for an analogous reason. The coefficient on durable democracies does not vary significantly relative to the base group after 1991.

I also add dyadic fixed effects to a conditional-logit analysis to control for unobserved heterogeneity. The results show that a shift in a Cold-War dyad to a joint democracy does not have a significant impact on dispute rates (p-value = 0.945). After 1991, the same change leads to a large, positive, and statistically significant coefficient on joint-democracy. It is about half again as high as is that of either mixed dyads of base-group states (p-values = 0.0035 and 0.048, respectively). It is not possible to analyze war using dyadic fixed effects, because the relative dearth of war results in dropping about 99 percent of the observations.

**Conclusion**

That disputes between democracies during the Cold War are rare events seems indisputable. Yet, as James Lee Ray observes, “the majority of democratic states that have ever existed have emerged during the Cold War.” Because this “historical epoch may prove idiosyncratic with respect to relationships among democratic states,” he adds, “only time will tell whether the large number of democratic states that have emerged in recent years will fight wars against each other in the absence of a serious threat from the
Moreover, he observes, “the greater number of democratic states in the post-Cold War ear may increase opportunities for conflicts that will cast grave doubts on the democratic peace proposition” (1998, 43).

The evidence that this paper examines supports Ray’s intuition. It shows that the relative rarity of militarized disputes between democracies during the Cold War does not survive its end. Instead, dispute rates by dyad type converge after the collapse of the bipolar system. Together with the pre-1914 evidence, the results I present here are consistent with arguments that the Cold-War pattern is due to common interests among democratic states and to the disputes that the East-West conflict sparked.

Perhaps counter intuitively, the results in this paper nonetheless suggest that prospects for real-world peace may be brighter than those implicit in democratic-peace theory. The latter seems to suggest that enlarging the community of democratic states can secure the foundations of global peace. As interpreted by the Bush administration, the theory implies that “peace and cooperation will come when and only when all important states are democratic” (Jervis 2009, 205). Yet, as recent history reaffirms, even Herculean efforts to transform authoritarian regimes often fail. As the analyses in this paper imply that regime change is neither necessary nor sufficient to reduce international crises, it can be interpreted as good news for those interested in advancing global peace.
References


Table 1
Probability of MIDs by Polity Type and Period: Percentage of Dyad Years in Conflict

<table>
<thead>
<tr>
<th>Dyad Type</th>
<th>Joint Democracy</th>
<th>Mixed Dyads</th>
<th>Nondemocracies</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950–91</td>
<td>0.26</td>
<td>0.57</td>
<td>0.39</td>
<td>0.39</td>
</tr>
<tr>
<td></td>
<td>[24,889]</td>
<td>[129,387]</td>
<td>[165,642]</td>
<td>[319,918]</td>
</tr>
<tr>
<td>1992–2001</td>
<td>0.52</td>
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<td>0.42</td>
<td>0.40</td>
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<td></td>
<td>[21,103]</td>
<td>[60,481]</td>
<td>[42,341]</td>
<td>[123,927]</td>
</tr>
</tbody>
</table>

Note: The numbers in brackets are sample sizes
Table 2
Analysis of MIDs by Dyad Type and Period

<table>
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<tr>
<th></th>
<th>(1) 1992-2001</th>
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<th></th>
<th>(2) 1950-91</th>
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<th></th>
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</thead>
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<td></td>
<td></td>
<td>(0.35)</td>
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Logit analyses using Stata11. Robust standard errors clustered on dyads reported in parentheses. Controls for duration dependence included but not reported.
<table>
<thead>
<tr>
<th>Category</th>
<th>Coefficient</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW/democratic dyads</td>
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<td>PCW/democratic dyads</td>
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<td>CW/mixed dyads</td>
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<td>PCW/mixed dyads</td>
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<td>(0.14)</td>
</tr>
<tr>
<td>CW/nondemocratic dyads</td>
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<td>(0.12)</td>
</tr>
<tr>
<td>Contiguity</td>
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<td>(0.17)</td>
</tr>
<tr>
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<td>(0.08)</td>
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Pseudo $R^2$ 0.38
N 436682

PCW = 1992-2001; CW = 1950-91. Logit analyses using Stata11. Robust standard errors clustered on dyads reported in parentheses. Controls for duration dependence included but not reported.
<table>
<thead>
<tr>
<th>Dyad Type</th>
<th>Joint Democracy</th>
<th>Mixed Dyads</th>
<th>Nondemocracies</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950–91</td>
<td>0.00</td>
<td>0.03</td>
<td>0.02</td>
<td>0.03</td>
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<td>[24,889]</td>
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<td>1992–2001</td>
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<td>[21,103]</td>
<td>[60,481]</td>
<td>[42,341]</td>
<td>[123,925]</td>
</tr>
</tbody>
</table>

Note: The numbers in brackets are sample sizes.
Table 5
Analysis of Wars by Dyad Type and Period

<table>
<thead>
<tr>
<th></th>
<th>(1) 1992-2001</th>
<th>(2) 1950-91</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democratic dyad</td>
<td>-0.77</td>
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<td>(0.80)</td>
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<td>(0.12)</td>
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<td>Ratio</td>
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</tr>
<tr>
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<tr>
<td>N</td>
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<td>313101</td>
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Logit analyses using Stata11. Robust standard errors clustered on dyads reported in parentheses. Controls for duration dependence included but not reported. There are only two knots in the spline function for the post-Cold War period.
### Table 6
Analysis of Wars by Dyad Type
1950-2001

<table>
<thead>
<tr>
<th>Dyad Type</th>
<th>Coefficient</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW/democratic dyads</td>
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<td>(1.13)</td>
</tr>
<tr>
<td>PCW/democratic dyads</td>
<td>-1.12</td>
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</tr>
<tr>
<td>CW/mixed dyads</td>
<td>0.04</td>
<td>(0.42)</td>
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<tr>
<td>PCW/mixed dyads</td>
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<td>(1.07)</td>
</tr>
<tr>
<td>CW/nondemocratic dyads</td>
<td>-0.40</td>
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<tr>
<td>Contiguity</td>
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<td>(0.36)</td>
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<tr>
<td>Ratio</td>
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<td>(0.74)</td>
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<tr>
<td>CW/one major power</td>
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<td>CW/two major powers</td>
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<tr>
<td>CW/alliance</td>
<td>-1.55</td>
<td>(0.43)</td>
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<tr>
<td>PCW/alliance</td>
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<td>(0.83)</td>
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</tbody>
</table>

Pseudo R² 0.20
N 436870

PCW = 1992-2001; CW = 1950-91. Logit analyses using Stata11. Robust standard errors clustered on dyads reported in parentheses. Controls for duration dependence included but not reported.
Figure 1

Democratic States: 1945-2001


# democratic states: 1945-2001