Evaluating the Monadic Democratic Peace

Stephen L. Quackenbush

Assistant Professor
Department of Political Science
University of Missouri
Columbia, MO 65211
(573) 882-2082
quackenbushs@missouri.edu

Michael Rudy

PhD Candidate
Department of Political Science
University of Missouri
Columbia, MO 65211
MichaelRudy@missouri.edu

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Abstract

The democratic peace is a well established empirical law in the international relations literature. Two key findings mark the cornerstone of the democratic peace: first, democracies almost never fight other democracies, and second, democracies regularly fight non-democracies. Although most empirical analyses and theoretical explanations have focused on the dyadic nature of the democratic peace, some have argued that democratic norms make democracies more peaceful than other regime types in general, not just in their relations with other democracies. In this paper, we evaluate the monadic democratic peace to examine support for the claim that democracies are more peaceful in general than non-democracies. Examining the frequency of conflict, the likelihood of dispute initiation, and the relationship between democracy and war casualties, our results indicate that, while the dyadic democratic peace is strongly supported, there is little, if any, empirical support for the monadic democratic peace.

The democratic peace is a well established empirical law in the international relations literature. Two key findings are generally considered to mark the cornerstone of the democratic peace: first, democracies almost never fight other democracies, and second, democracies regularly fight non-democracies (Maoz and Russett 1993). Although most empirical analyses and theoretical explanations have focused on the dyadic nature of the democratic peace, some (e.g., Rummel 1995; Ray 2000; Huth and Allee 2002) have argued that democratic norms make democracies more peaceful than other regime types in general, not just in their relations with other democracies.

Unfortunately, empirical evaluations of the monadic democratic peace have tended to be bivariate and rely upon simple statistical tests such as comparison of means. Furthermore, the 2001 attack by the United States and other democracies on Afghanistan, and the 2003 attack by the United States and other democracies on Iraq are recent, very salient events that call for the peaceful nature of democracies in general to be reexamined.

Accordingly, we seek to evaluate the monadic democratic peace to examine support for the claim that democracies are more peaceful in general than non-democracies. We begin with a discussion of the dyadic and monadic democratic peace propositions, leading to six specific hypotheses. Utilizing data from 1816-2001, we examine the relationship between regime type and the frequency of conflict, the likelihood of conflict initiation, and the level of casualties in war in an attempt to provide the most comprehensive test of the monadic democratic peace argument to date. Our results indicate that, while the dyadic democratic peace is strongly supported, there is little, if any, support for the monadic democratic peace.

The Democratic Peace Literature

For over thirty years, the theory that democracies are less conflict prone toward one another has received strong empirical support (Small and Singer 1976; Chan 1997). Although Small and Singer (1976) concluded that the result was probably spurious, many subsequent studies have developed the logic of the democratic peace and confirmed its robust empirical support. Two different (Hewitt and Wilkenfeld 1996; Maoz and Russett 1993) but possibly complimentary (Russett and Oneal 2001) explanations of the democratic peace exist.

The first is the cultural/normative explanation, which contends that democracies are less conflict prone toward one another because they share similar norms of compromise and cooperation within their domestic governments (Dixon 1994). Democracies externalize these norms when in a dispute with other democracies and therefore are more likely to reach negotiated settlements rather than resort to violence (Dixon and Senese 2002). The second explanation, called the institutional or structural explanation, maintains that democracies are peaceful toward one another not because of shared norms but because of the limits placed upon leaders by government institutions (Bueno de Mesquita, Morrow, Siverson, and Smith 1999). Given that they want to remain in power, leaders tend to avoid politically damaging actions such as entering costly wars. But since autocratic leaders do not face as many institutional constraints, conflicts between democracies and non-democracies are driven by the lack of structural constraints (Maoz and Russett 1993).

The normative and structural explanations of the dyadic democratic peace each lead to the same conclusions. Jointly democratic dyads experience significantly less conflict than other pairs of states. Furthermore, democracies are unlikely to initiate disputes against each other. Our first two hypotheses focus on these key expectations of the dyadic democratic peace:

Hypothesis 1 (Dyadic): *Pairs of democracies are less likely to engage in militarized interstate disputes than other pairs of states*.

Hypothesis 2 (Dyadic): *Democracies are much less likely to initiate militarized disputes against other democracies.*

The Monadic Peace Proposition

The empirical literature on the dyadic democratic peace provides countless articles and books that provided quantitative support for the proposition that democracies are less conflict prone toward one another when compared to other dyadic combinations (e.g., Oneal and Russett 1997; Chan 1997; Russett and Oneal 2001). Yet a small but growing trend in the democratic peace research agenda now argues for the possibility that democracies may be even more peaceful than once originally thought (Bremer 1992; Rousseau, Gelpi, Reiter, and Huth 1996; Oneal and Ray 1997; MacMillian 1998, 2003; Ray 2000; Russett and Starr 2000; Huth and Allee 2002). These authors argue that the democratic peace is not purely a dyadic phenomenon but rather a monadic reality. As discussed earlier, the democratic peace first gained widespread recognition with Small and Singer (1976), who found a dyadic relationship but not a monadic one.

Rummel (1983, 1985, 1995), considered by many the father of the monadic peace argument, disagrees and argues that democracies are more pacific than other regimes in general. Even though considerable evidence has mounted for the dyadic democratic peace, the monadic democratic peace has received much less attention. While some have found evidence in favor of the monadic democratic peace argument (e.g., Rioux 1998), considerable empirical evidence has been generated against the monadic peace (Moaz and Abdolali 1989; Maoz and Russett 1993;

Pickering 2002; Bennett and Stam 2004; Buhaug 2005). While these scholars' findings generally favor the dyadic democratic peace, their findings yield little support for a national level peace.

Even though the debate over the monadic peace started in the early 1980s, recent studies, both pro (Huth and Allee 2002; MacMillian 2003) and con (Pickering 2002; Buhaug 2005) stimulated increasing interest in the topic. While the interest in this topic has swelled, there is a decidedly large gap within the literature. No study single has systematically examined and tested the main components of the monadic democratic peace proposition. A brief examination of the literature should illuminate this gap.

Most of the empirical support for the monadic democratic peace proposition has been in bivariate analyses, typically using simple methods such as comparison of means tests. One exception is Bremer (1992), who found that jointly non-democratic dyads are more dangerous than dyads containing at least one democracy. While Bremer's original study provides evidence for a monadic democratic peace, Buhaug (2005) finds that Bremer's results are very sensitive to model selection and measurement issues. When one uses a statistical model (such as logit with cubit splines, general estimating equations (GEE), or a Cox proportional hazard model) more appropriate for dealing with temporal dependence than Bremer's Poisson regression, the impact of regime type disappears. Furthermore, when one uses the more widely accepted Polity-based measure of democracy rather than the one Bremer used (from Chan (1984)), the relationship reverses direction. Therefore, this result should be retested to confirm that Bremer's (1992) findings are not driven by the method or the operationalization of the data.

Even though Bremer's work comes under question, other studies (Rousseau et al. 1996; Benoit 1996; Rioux 1998; Huth and Allee 2002) also generated evidence that democracies are less conflict prone than other regime types. Benoit (1996) found even stronger evidence than

Bremer (1992) for a monadic peace, at least during the 1960-1980 time frame of his study. Rousseau et al. (1996) examine both the monadic and dyadic effects of democracy on crisis initiation and escalation. They find that dyadic effects of democracy are more influential than monadic effects, in both initiation and escalation. However, they also find a weak pacifying effect of one democracy, although this result disappears after they control for satisfaction with the status quo.

Huth and Allee (2002) find that established democracies are much more likely to negotiate rather than threaten or use force when there is a territorial dispute. They find that democracies are more likely to resolve territorial conflicts through non-violent means when compared to non-democracies. Other studies examining the monadic democratic peace have relied primarily on bivariate analyses and comparison of means tests. One such example is Rioux (1998), who finds that democracies are less likely to initiate a crisis when compared to non-democracies.

Whether its wars, militarized interstate disputes, or crises, the main proposition of the monadic democratic peace argument is that democracies are less conflict prone than other regime types. Thus, our first monadic hypothesis is:

> Hypothesis 3 (Monadic): *Democracies are less likely to engage in militarized interstate disputes than other states*.

Nonetheless, it is possible that mixed dyads of one democracy and one non-democracy fight regularly (Maoz and Russett 1993; Russett and Oneal 1997). However, supporters of the monadic democratic peace (Huth and Allee 2002; Rioux 1998; MacMillan 2003) have argued that while democracies may indeed fight as frequently as other states, they are less likely to initiate conflict. Therefore, our second monadic hypothesis is:

Hypothesis 4 (Monadic): *Democracies are much less likely to initiate militarized disputes than are non-democracies.*

While the general view within the literature is that the frequency of democratic conflict in mixed dyads is the ultimate test of whether democracies are more peaceful than other states, Rummel argues otherwise. Rather, he claims that "the correlation between democracy and the frequency of foreign violence should be random" (Rummel 1995, 459). Instead, he argues that while democracies may enter wars as frequently as non-democracies, most of this action involves reactive and defensive violence against the initiatives of non-democratic states (Rummel 1983).

Therefore, he suggests that the better measure to test the pacifying effects of democracies is the severity of wars in which democracies participate. Once a democratic state is involved in a conflict, domestic forces will turn against increased violence, forcing the government to settle the conflict (Rummel 1983). This kind of domestic constraint is not present in authoritarian or totalitarian regimes. Thus, he concludes that the intensity of violence is a better measure of the pacifying effects of democracy. Using a difference of means test, he finds that democracies have a much lower mean battle death total for wars than either autocracies or totalitarian states (Rummel 1995). Accordingly, our fifth hypothesis is:

Hypothesis 5 (Monadic): *Democracies suffer fewer casualties in war than non-democracies*.

While Rummel (1995) only compares the casualty levels suffered in war by different states, we believe that it is important to examine the level of casualties inflicted on their opponents in war as well. If Rummel's (1995, 460) oft-repeated claim that "the more democratic a regime, the less its foreign violence" is correct, then democracies should inflict fewer casualties on their opponents than non-democracies. Thus, our final hypothesis is:

Hypothesis 6 (Monadic): *Democracies inflict fewer casualties on their opponents in war than non-democracies*.

Most of these hypotheses have been tested in previous studies. However, empirical support for the monadic hypotheses has been inconsistent, as have the statistical models and operationalizations used in testing them. Therefore, we endeavor to test each of these hypotheses in a consistent manner using data from 1816-2001.

Research Design

A proper test of these hypotheses requires three different datasets. First, to examine the frequency of democratic conflict as required by hypotheses 1 and 3, we employ a non-directed dyad year dataset covering the 1816-2001 time period. Thus, for each year, we observe whether a dispute occurred within each dyad, regardless of who initiated. However, because dispute initiation is the subject of the second and fourth hypotheses, we employ a directed dyad year dataset, which again ranges from 1816-2001, to test them. Rather than simply observing each pair of states annually, within directed dyads the direction of interaction is observed. Thus, for example, Germany→France is one directed dyad and France→Germany is another. Testing hypotheses 2 and 4 requires us to differentiate between the initiator and the target, which we are only able to do by using directed dyads. For example, in the France→Germany directed dyad, France is 'state A' (the potential initiator) and Germany is 'state B' (the potential target), while in the Germany→France directed dyad, Germany is state A and France is state B. The final two monadic hypotheses are tested using a directed war-dyad dataset , which ranges from 1816-

1997.[1] This enables us to evaluate the impact of a state's regime type on the level of casualties suffered by itself and its' opponent.

For the analyses of MID onset and initiation, we focus on politically active dyads (Quackenbush 2006), which is a refinement of politically relevant dyads typically used in studies of the democratic peace (e.g., Maoz and Russett 1993; Russett and Oneal 1997). These are the dyads with the opportunity for conflict. That is, all politically active dyads *could* fight if they had the willingness to do so.[2] In order to avoid over-counting multi-year disputes, we drop dyad-years with ongoing disputes from our analysis, unless a new dispute is initiated. Furthermore, we eliminate joiner dyads and focus only on pairs of states involved in the dispute at the outset.[3]

Dependent Variables

Three dependent variables are used for this analysis. The first dependent variable, *MID*, simply codes whether or not a militarized interstate dispute (MID) occurred for each non-directed dyad year under consideration. If a MID occurred during a particular dyad year, *MID* equals '1;' otherwise, it is '0.' The second dependent variable, MID initiation, codes whether a state initiates a MID within the directed dyad year. When a state initiates a MID in a dyad year, initiation equals '1', otherwise it is '0.' Both of these dependent variables are derived from

[1] The first two datasets were created using EUGene, version 3.1 (Bennett and Stam 2000a) and the war casualty dataset was created by merging version 3.0 of the COW Inter-State War data with other variables obtained through EUGene.

[2] We also conducted the analyses using all dyads and politically relevant dyads, with no significant changes in the results.

[3] See Bennett and Stam (2000c) for a complete discussion of these issues.

version 3 of the MID data set (Ghosn, Palmer, and Bremer 2004).[4] The final dependent variable is the natural logarithm of total battle deaths endured by a war participant's armed forces in the war. The data come from version 3.0 of the COW Interstate War dataset (Sarkees 2000).[5]

Independent variables

Democracy. Our primary independent variables all seek to measure the regime type of each state in the international system from 1816-2001. We use the polity2 variable of the Polity IV data (Marshall and Jaggers 2002), which ranges from -10 to 10. In order to obtain a robust understanding of the impact of regime type on conflict, we use several different measures to test our hypotheses.

First, we use a dichotomous measure by coding each state as a democracy if its polity2 score is greater than or equal to 5, or a non-democracy otherwise.[6] Accordingly for the non-

[4] A militarized interstate dispute is a conflict between two or more states involving a threat, display, or use of military force. We focus on MIDs because they are the most frequent form of serious international conflict. Furthermore, MIDs have been the primary focus of empirical analyses of the democratic peace (e.g., Maoz and Russett 1993; Oneal and Russett 1997; Senese 1997).

[5] We also examined the impact of regime type on the duration of peace between disputes and escalation of disputes to war. The conclusions from these analyses are identical to the findings presented here. Thus, we only present the findings regarding dispute onset, initiation, and war casualties, as these provide the most direct tests our hypotheses.

[6] Our results remain consistent across different thresholds (such as 6 or 7) for the dichotomization of democracy.

directed analyses, *both democratic* equals 1 if both countries are democracies, and 0 otherwise. Similarly, *one democratic* equals 1 if either regime is democratic, or 0 if neither state in the dyad is a democracy. For the directed analyses, we include separate measures for the two states: *State A democratic* equals 1 if the potential initiator is a democracy and *State B democratic* equals 1 if the potential target is a democracy; each variable equals zero otherwise.

We focus primarily on dichotomous measures of democracy in the tests to follow because the monadic peace proposition focuses on the distinction between democracies and non-democracies; i.e., on a dichotomy. However, to ensure that our findings are not an artifact of our dichotomization, we also test for the effects of democracy using continuous measures. To do so, we use *Minimum democracy* – the polity2 score of the least democratic state in the dyad – and *Maximum democracy* – the polity2 score of the most democratic state. Finally, to test for dyadic effects, we also employ an interaction term, *Minimum democracy * Maximum democracy*.

These measures of democracy provide the key variables needed to test our hypotheses. However, a number of alternative explanations of international behavior exist. Therefore, several control variables, representing the major foci of recent conflict studies, are used to test the robustness of the results obtained.

Relative Power. There is little dispute that relative power has an important effect on international conflict behavior. It is therefore important to control for its effect in the present analysis. We use the composite indicator of national capabilities (CINC) from the Correlates of War project (Singer, Bremer, and Stuckey 1972) to measure military capabilities for each state. To determine the balance of forces in a dyad, we create a ratio of State A's capabilities to the total capabilities of the dyad. The final variable, *relative power*, ranges from 0 (when State A is weak compared to State B) to 1 (when State A is very strong compared to State B).

Power Parity. Considerable evidence exists that power parity between states increases the probability of conflict (Reed 2000; Bremer 1992). To generate the power parity, we again use each state's CINC scores. The procedure is simple; the weaker state's CINC score is divided by that of the stronger state to generate a power ratio. The ratio ranges from 0 (total preponderance) to 1 (exact parity between the two states).

Major Power Status. Previous studies have demonstrated that the presence of a major power within a dyad can significantly increase the severity of war. Therefore, it is important to control for its influence in our analyses of casualty levels. If the dyad contains a major power, as identified by the Correlates of War project, we code *One Major Power* as 1, or 0 otherwise.

S score. Signorino and Ritter's (1999) *S* score measures the similarity of foreign policy positions between states. Some (e.g., Gartzke 1998) have argued that the 'democratic peace' is a spurious correlation driven by similarity of interests. To control for this, we include the *S Score* in our analyses. The variable ranges from –1 to 1, with positive values indicating increasingly similar alliance portfolios and negative values representing increasingly dissimilar portfolios.

Distance. Geographic proximity has repeatedly been found (e.g., Bremer 1992) to be an important predictor of international conflict. To control for the effects of proximity, the distance between states in a dyad is measured. We take the natural logarithm of the distance between capital cities, except for the USSR and US when other cities are included, and states with land borders are considered to be zero miles apart (Bennett and Stam 2000a).

Peace Years Spline. The final control variable is of more a methodological than substantive character. Beck, Katz, and Tucker (1998) argued that it is important for studies using pooled dyadic time series to account for time dependence within dyads. In other words, while the standard statistical assumption is that each observation is independent, observations of different

years of the same dyad are not truly independent. We account for time dependence by employing Beck, Katz, and Tucker's method of including peace years and three cubic spline variables that account for time dependence.

Methods of analysis

In order to test our hypotheses regarding the impact of regime type while controlling for the effects of these other variables, we utilize multivariate regression analysis.[7] We analyze MID onset and MID initiation using logit models because our dependent variables are dichotomous. However, since the dependent variables in our analyses of war casualties are continuous, we use ordinary least squares (OLS) regression. However, the assumption of independence between observations is violated because of the cross-sectional time series nature of the data (Beck 1996; Bennett and Stam 2000b). To correct for this, we use robust standard errors clustered on the dyad for the logit models and robust standard errors clustered on the war for the OLS regressions.

Frequency of Democratic Conflict

We begin our empirical analysis of the monadic democratic peace proposition by examining the impact of regime type on the frequency of international conflict. Table 1 displays the results of a series of logit models where the dependent variable is the occurrence of a militarized interstate dispute within a (non-directed) dyad year. In model 1, we evaluate the impact of joint democracy in order to test hypothesis 1. The effect of *Both democratic* is negative and highly significant, indicating that when both states in a dyad are democratic, disputes are much less likely to occur. The effects of the control variables are all in the expected directions,

[7] We use Stata 9.1 for all of the statistical analyses.

although the S-score and power parity are not significant. Thus, the dyadic democratic peace proposition is strongly supported even when controlling for other important causes of international conflict.

In order to evaluate the first part of the monadic democratic peace proposition (as stated in hypothesis 3), we include a variable – *One democratic* – that indicates the effect of having at least one democracy in a dyad in the second model. If the democratic peace is truly a monadic, rather than just a dyadic phenomenon, then having just one democracy in a dyad should reduce the likelihood of conflict within that dyad. Surprisingly, the observed effect is just the opposite; the presence of a democracy within a dyad significantly *increases* the likelihood of international conflict.

Although we have dichotomized democracy in a manner consistent with many previous studies (e.g., Oneal and Ray 1997), it is possible that the results in model 2 are driven by this dichotomization. Therefore, we also test the impact of regime type on international conflict using the full 21-point polity scale from the Polity IV data. Model 3 uses *Minimum democracy* – the democracy score of the least democratic state in the dyad – and *Maximum democracy* – the polity score of the most democratic state. The minimum democracy level of the dyad has a highly significant, negative effect, confirming the results of previous studies examining the democratic "weak-link" effect (e.g., Dixon 1994; Oneal and Russett 1997; Senese 1999). However, whereas the impact of the maximum democracy level is also highly significant, it increases the probability of militarized dispute occurrence.

The combined effects of the minimum and maximum democracy level in the dyad are quite similar to that found by Oneal and Russett (1997; cf. Oneal and Ray 1997). Although they remain highly supportive of the dyadic democratic peace, they provide strong evidence against

the monadic democratic peace. As Oneal and Russett state, "democracies and autocracies fight like cats and dogs" (1997, 283). The probability of either two autocracies (polity = -10) or a pair of democracies (polity = 10) becoming involved in a dispute is quite low (0.0032 and 0.0035, respectively). However, it is 238% higher, 0.0108, for a mixed (autocratic-democratic) dyad. Thus, hypothesis 3 is strongly contradicted by the historical record.

However, it is generally agreed that the impact of one side's level of democracy is conditional on the other state's democracy level. Therefore, we include an interaction term, *Minimum democracy * Maximum democracy*, in the final model in Table 1. When their interactive effects are controlled for, the independent effects of the democracy variables completely disappears. However, the interaction term is has a negative and highly significant coefficient. Thus, the impact of regime type on international conflict is very much dyadic, not monadic, in nature.

Pairs of democracies are consistently the least likely to fight. However, contrary to what one would expect if democracies are more peaceful in general than non-democracies, mixed dyads are decidedly more conflict prone than pairs of non-democracies.

Democracy and Conflict Initiation

The dyadic results discussed above make it clear that whereas the presence of two democracies in a dyad has a profound pacifying effect, the presence of one democracy in a dyad does not. Thus, when we focus on the frequency of international conflict, there is strong support for the dyadic democratic peace, but no support for the monadic democratic peace.

However, supporters of the monadic democratic peace (Huth and Allee 2002; Rioux 1998; MacMillan 2003) have argued that while democracies may indeed fight as frequently as

other states, they are less likely to initiate conflict. Therefore, it is important to examine the impact of democracy on militarized interstate dispute initiation. We do this through an analysis of directed dyad years, where the dependent variable is dispute initiation.

Table 2 shows the results of logit models for the prediction of dispute initiation. The first model demonstrates that if both states within a dyad are democratic, then each state is significantly less likely to initiate a MID. The control variables are all in line with expectations. As states' foreign policy positions become more similar (as reflected the *S-score*), as the distance between the states increases, or as the number of peace years since the last dispute increases, each state is less likely to initiate conflict. Finally, the stronger that a state is relative to its potential adversary, the more likely it is to initiate a militarized interstate dispute. The results for these control variables are consistent across each of the four models.

These results again demonstrate strong support for the dyadic democratic peace. However, they do not speak to the question of whether democracies are more peaceful than non-democracies even in their relationships with non-democracies. Model 2 provides an initial way to examine this issue. Rather than focusing on joint democracy, in this model we scrutinize the impact of having one democracy in a dyad. If the monadic democratic peace argument is correct, we would expect that dyads with at least one democracy are less likely to experience dispute initiation.

Contrary to these expectations, the effect of *one democratic* is positive and highly significant. Thus, the presence of a democracy actually *increases* the likelihood of dispute initiation. This finding directly contradicts the monadic democratic peace argument's expectation that democracies are more peaceful than other states. Nonetheless, these results do not allow us to examine whether mixed dyads are more conflict prone because democracies are more likely to

initiate disputes with non-democracies, or because democracies are more likely to be targets of autocratic aggression.

Model 3 addresses this question by including separate variables for whether State A (the potential initiator) and State B (the potential target) are democratic. The effect of *State B democratic* is positive and highly significant, indicating that democracies are indeed more likely to be targeted by non-democracies. However, although the effect of *State A democratic* is negative, it does not come close to a reasonable level of significance ($p = 0.399$). Again, the expectations of the monadic democratic peace argument are not supported by the historical record.

However, model 3 does not account for the impact of joint democracy on initiation. In order to do so, we include an interaction term, *State A democratic * State B democratic*, in model 4 (Rousseau, et al. 1996 account for monadic and dyadic effects of democracy in the same fashion). Once the effects of joint democracy are controlled for, we find that not only are democratic states significantly more likely to be targeted by autocracies, they are also significantly more likely to initiate disputes against non-democracies. However, democracies are significantly less likely to initiate disputes against other democracies, as indicated by the strong, highly significant, negative effect of the interaction term.[8]

Together, these results provide strong support for dyadic democratic peace theory. The likelihood of initiation in a jointly democratic dyad is reduced by 16% when compared to a dyad

[8] Cox and Drury (2006) find that democracies also initiate economic sanctions against non-democracies with considerable regularity, but not against other democracies.

with no democracies.[9] However, initiation is more likely in a mixed dyad than in a non-democratic dyad: the probability that the democracy initiates versus the autocracy is increased by 32%, and the probability that the non-democracy initiates versus the democracy is increased by 80%. Thus, contrary to the expectations of the monadic democratic peace argument, democracies are more likely to initiate disputes versus non-democracies than non-democracies are.

Democracy and War Casualties

The historical record clearly demonstrates that democracies are not less likely to fight in general than other states. Only in their relationships with other democracies are democracies especially peaceful. In fact, mixed dyads of one democracy and one autocracy are the most conflict prone. These findings here are in accordance with what has been argued and found in many previous studies (e.g., Wright 1942, Doyle 1983, Dixon 1994, Starr 1992, Morgan and Campbell 1991, Kilgour 1991, Geva, et al. 1993, Bueno de Mesquita and Lalman 1992, and Weede 1992). As Maoz and Russett summarize, there appears to be "something in the internal makeup of democratic states that prevents them from fighting one another *despite the fact that they are not less conflict-prone than nondemocracies* (1993, 624, emphasis in the original).

While we agree with this general view within the literature that the observation of a high frequency of democratic conflict in mixed dyads contradicts the idea that democracies are more peaceful than other states, Rummel argues otherwise. Rather, he claims that "the correlation between democracy and the frequency of foreign violence should be random" (Rummel 1995,

[9] These predicted probabilities are calculated based on model 4 in Table 2. Only the democracy variables are changed; other variables are held at their means.

459). Instead, Rummel argues that democracies have less foreign violence than other states and in particular, that they suffer fewer casualties during war than nondemocracies.

Accordingly, to test this additional claim of the monadic democratic peace argument, we explore the impact of democracy on casualty levels in war. Regression results for the prediction of war casualties are shown in Table 3. In the first model, we examine the total casualties within the dyad for the war. The presence of a democracy in a dyad has no significant impact on the level of casualties. Unsurprisingly, the presence of a major power greatly increases the level of casualties, although the relative power between the states does not have a significant impact.

In the second model, we reexamine the relationship between a state's regime type and its level of casualties reported by Rummel (1995). Rummel found that democracies suffer significantly fewer casualties during war than nondemocracies; however, he did not control for any other factors. We incorporate the most basic controls for power, and find that while *State A democratic* does in fact have a negative impact on State A's casualty level, the effect is not quite statistically significant ($p = 0.069$).

It appears that there is some support for Rummel's argument that democracies suffer fewer war casualties than non-democracies. However, if democracies in fact have less foreign violence than other states then they should also inflict fewer casualties on their opponents in war, a relationship that Rummel failed to examine. We look at this in the third model in Table 3. The effect of *State A democratic* is positive and significant on State B's casualty level. Thus, while Rummel (1995) may be correct that democracies get fewer of their own citizens killed during war, they also kill significantly more of their opponents' citizens.

If we examine predicted probabilities (with other variables set to their means), we find that democracies are expected to suffer an average of 5,985 battle deaths per war, compared to an

average of 22,302 deaths for non-democracies (a decrease of over 70%). However, non-democracies inflict an average of 11,016 battle deaths on their opponents, whereas democracies kill an average of 52,325: an increase of 375%. It is not surprising that democracies are effective at killing more of the enemy while minimizing their own casualties. Given the strong evidence that democracies are more effective at fighting wars (e.g., Reiter and Stam 2002; Lake 1992; Biddle and Long 2004), this should be expected (also see Rioux 1998). However, it provides strong evidence against Rummel's (1995, 460) claim that "the more democratic a regime, the less its foreign violence", and in turn, the monadic democratic peace proposition.

Conclusion

In this paper, we have evaluated empirical support for the monadic democratic peace. We laid out and tested 6 hypotheses dealing with the relationship between regime type and dispute involvement, dispute initiation, and war casualties. The first two hypotheses, dealing with the dyadic democratic peace, are both strongly supported by the historical record from 1816-2001. However, the other four hypotheses, dealing with the monadic democratic peace are not. Whether we focus on the frequency of international conflict, initiation of militarized interstate disputes, or levels of casualties in war, the monadic democratic peace argument receives no empirical support.

Given these findings, we are puzzled at the continued attention that the monadic democratic peace argument receives. If democracies not only fight non-democracies with considerable regularity, but are also more likely to initiate disputes against non-democracies than autocracies are and inflict significantly more casualties on their opponents in war than non-democracies do, then we are hard pressed to understand the empirical basis for claims that

democracies are more peaceful in general than other states.

While we have no illusions that this is the final word on the monadic peace, we feel safe in concluding, for now at least, that the democratic peace is a dyadic phenomenon, not monadic. Given the strong dyadic effects of regime type found here, one promising avenue for future research is continued research on the effects of political distance between states. Our results indicate that joint democratic and joint non-democratic dyads are quite peaceful, while mixed dyads are much more conflict prone. Therefore, it appears that political distance—or the dissimilarity between regime types—has a more important effect on international conflict than the distinction between democracy and non-democracy (Oneal and Russett 1997; Oneal and Ray 1997). Certainly this issue is an important area of focus as scholars seek to further our understanding of the relationship between regime type and international conflict.

Table 1. Logit Results for Prediction of Militarized Interstate Dispute Occurrence

Variable		*Model 1*	*Model 2*	*Model 3*	*Model 4*
Both democratic	β	-0.8269***	—	—	—
	Se_β	0.1122			
One democratic		—	0.2732***	—	—
			0.0784		
Minimum democracy		—	—	-0.0572***	0.0035
				0.0059	0.0134
Maximum democracy		—	—	0.0611***	0.0040
				0.0058	0.0126
Minimum democracy * Maximum democracy		—	—	—	-0.0073***
					0.0015
S Score		-0.2465	-0.3550	-0.1426	-0.2364
		0.2232	0.2248	0.2279	0.2299
ln(Distance)		-0.2489***	-0.2640***	-0.2683***	-0.2669***
		0.0136	0.0136	0.0129	0.0130
Power Parity		0.0723	0.1879	0.1635	0.1492
		0.1517	0.1507	0.1488	0.1497
Peace Years		-0.2979***	-0.2977***	-0.2941***	-0.2923***
		0.0171	0.0170	0.0168	0.0169
Constant		-1.0894***	-1.2216***	-1.6118***	-1.0693***
		0.1890	0.1850	0.1940	0.2206
χ^2		1953.6	1849.3	2107.1	2175.0
p		0.0000	0.0000	0.0000	0.0000
Log-likelihood		-9247.5	-9298.6	-9144.9	-9123.9
N		193,404	193,404	191,117	191,117

Notes: $*p < 0.05$, $**p < 0.01$, $***p < 0.001$
Peace years cubic spline variables not shown. Standard errors are robust standard errors adjusted for clustering within dyads.

Table 2. Logit Results for Prediction of Militarized Interstate Dispute Initiation

Variable		*Model 1*	*Model 2*	*Model 3*	*Model 4*
Both democratic	β	-0.6654***	—	—	—
	Se_β	0.1092			
One democratic		—	0.3142***	—	—
			0.0789		
State A democratic		—	—	-0.0927	0.2989**
				0.0810	0.0941
State B democratic		—	—	0.2541***	0.6024***
				0.0727	0.0872
State A democratic * State B democratic		—	—	—	-1.0892***
					0.1394
S Score		-0.4470	-0.5213*	-0.5920*	-0.4852
		0.2630	0.2645	0.2746	0.2717
ln(Distance)		-0.2321***	-0.2492***	-0.2227***	-0.2306***
		0.0133	0.0135	0.0135	0.0133
Relative Power		0.6553***	0.6389***	0.7429***	0.7453***
		0.0835	0.0813	0.0882	0.0885
Peace Years		-0.3333***	-0.3345***	-0.3332***	-0.3274***
		0.0175	0.0174	0.0178	0.0174
Constant		-1.9691***	-2.0755***	-1.9409***	-2.1260***
		0.2462	0.2375	0.2511	0.2448
χ^2		2447.6	2439.7	2392.1	2544.2
p		0.0000	0.0000	0.0000	0.0000
Log-likelihood		-11897.0	-11923.1	-11178.0	-11119.8
N		391,294	391,294	331,632	331,632

Notes: $*p < 0.05$, $**p < 0.01$, $***p < 0.001$
Peace years cubic spline variables not shown. Standard errors are robust standard errors adjusted for clustering within dyads.

Table 3. OLS Results for Prediction of War Casualties

Variable		**Dependent Variable**		
		Total Casualties	*State A Casualties*	*State B Casualties*
One democratic	β	0.1504	—	—
	Se_β	0.3954		
State A democratic		—	-1.3154	1.5581*
			0.6960	0.6252
One Major Power		1.7255***	1.6575**	1.6704***
		0.4950	0.4737	0.4414
Relative Power		-0.1818	1.9208***	-2.4958***
		0.2093	0.3109	0.4306
Constant		10.3626***	8.0369***	9.5958***
		0.5864	0.4408	0.7690
F		5.43	13.35	22.63
p		0.0019	0.0000	0.0000
N		615	611	611

Notes: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$
The dependent variable in each model is the natural logarithm of casualties.
Standard errors are robust standard errors adjusted for clustering within wars.

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