The Influence of International Organizations on Militarized Dispute Initiation and Duration

Megan Shannon
University of Mississippi

Daniel Morey
University of Kentucky

Frederick J. Boehmke
University of Iowa

Abstract

We argue that IOs decrease the duration of international conflicts by mitigating commitment problems and encouraging combatants to cease hostilities more quickly. Empirical analyses of militarized interstate dispute duration (1950-2000) reveal that increasing shared IO participation reduces the length of disputes, even after accounting for selection into international conflict. We also find that international organizations designed to mitigate commitment problems decrease dispute duration, while IOs capable of reducing information asymmetries do not influence dispute length.

Over the last decade, an exciting research agenda has developed on the ability of international organizations (IOs) to procure peace. Much of this research focuses on the ability of IOs to prevent conflict onset between states, and scholars continue to refine our knowledge of which organizations are most effective in decreasing the likelihood of a dispute (Boehmer, Gartzke, and Nordstrom 2004; Russett and Oneal 2001). Yet by solely investigating the relationship between institutions and the absence of conflict, we miss other means by which IOs may procure peace. While international organizations seek to prevent conflict onset, they also strive to shorten the duration of disputes. Consider the variety of efforts by IOs to manage the 1998-2000 conflict between Ethiopia and Eritrea. A number of institutions, including the United Nations and Organization of African Unity (OAU), sought to shorten the dispute by pressuring for a cease-fire between the two parties. The OAU also brokered negotiations between Ethiopia and Eritrea. Hostilities eventually ceased after a UN peacekeeping force was inserted.

This begs the question: do international organizations decrease the duration of conflict? International organizations have the potential to shorten disputes by assisting the process of bargaining between members. Organizations end disputes more quickly by helping members overcome commitment problems, particularly with enforcement mechanisms that compel states to sign and uphold agreements. Our analyses of MID duration (1950-2000) confirm that as the number of overlapping memberships in international organizations increases, conflict duration decreases. The relationship is robust across different conflict types and after controlling for non-random selection into the sample. We further explore the relationship between IOs and bargaining by testing their ability to mitigate commitment problems against their ability to reduce information asymmetries. The analyses reveal that organizations most able to remove

commitment barriers reduce dispute length, while information providing IOs have no influence on dispute duration.

This research contributes to the burgeoning debate on the pacifying influence of international organizations. Much like recent studies, we show that shared memberships in the broad class of IOs do not reduce the probability of general conflict onset.[1] However we offer the unique and novel finding that international organizations decrease the duration of militarized disputes between members. It appears that while institutions do not offer ample bargaining advantages to prevent dispute onset, they change the process of bargaining enough to decrease the duration of disputes.

International Organizations, Dispute Initiation, and Dispute Duration

Research on international organizations and conflict has bloomed within the last few years. By and large, scholars argue that IOs influence conflict by changing the nature of bargaining between members. Russett, Oneal, and Davis (1998) launched the research agenda by arguing that joint institutional memberships decrease the likelihood of militarized interstate disputes (see also Russett and Oneal 2001). Since then, scholars have begun to specify which IOs have the strongest influence on bargaining, identifying highly institutionalized and/or democratic organizations as those most likely to prevent conflict onset (Bearce and Omori 2005; Boehmer, Gartzke, and Nordstrom 2004; Haftel 2007; Pevehouse and Russett 2006). Other research reveals that IOs help members peacefully settle disputes (Mitchell and Hensel 2007; Mitchell, Kadera, and Crescenzi 2008; Shannon 2009). But while scholars have made a great deal of progress toward understanding the relationship between international organizations and conflict, we still do not understand the full range of IO-brokered bargaining. Specifically, we

[1] Our results mirror findings by Boehmer, Gartzke, and Nordstrom (2004) that only the most structured IOs and security based IOs reduce conflict onset.

have not adequately uncovered if and how IO membership affects dispute bargaining once conflict breaks out.

In fact, while international relations scholars are heavily invested in studying the onset of international conflict, we know relatively little about the processes behind dispute duration (Filson and Werner 2002, 821). Fortunately, recent studies have begun to improve our understanding of why some disputes last longer. Formal research illuminates the factors behind duration by modeling conflict as a process in which states acquire information, revealing that low costs of fighting and misinformation about a defender's capabilities lead to longer conflicts (Filson and Werner 2002; Powell 2004; Smith and Stam 2004). Battles that provide pessimistic information about the attacker's chances of winning therefore decrease dispute duration. Our understanding of conflict duration is furthered by empirical studies which find that certain military strategies decrease dispute duration (Bennett and Stam 1996), as do democratic institutions (Bennett and Stam 1996; Bueno de Mesquita, Koch, and Siverson 2004). Early mediation is also effective in shortening disputes (Regan and Stam 2000). However, some factors can increase dispute duration, including uncertainty about the likely outcome (Slantchev 2004), and the increasing number of participants and major powers (Jones, Bremer, and Singer 1996). Although we have some empirical understanding of different dynamics in the duration of conflict, we do not know how international organizations influence dispute length.

Because many IOs are formed with the express purpose of procuring peace, institutional memberships should lead to shorter disputes between their members. In an anarchic world where states are free to determine their own policies, organizations may not have the power to single-handedly prevent conflict between members. But IOs have the incentive and ability to change the bargaining environment so that members settle disputes more quickly. Given that

conflict jeopardizes the collective goods that IOs provide, we expect institutions to help minimize the duration of disputes within their ranks.

While we expect IOs to shorten disputes, not all scholars applaud institutions and third parties in the same manner. Regan (2002) finds that third party involvement actually increases the length of civil conflicts. Third parties may increase the duration of fighting if they prematurely interrupt disputes where one side has a significant advantage (Werner and Yuen 2005). Commitment problems persist in these conflicts because the stronger combatant realizes it has more to gain from continued fighting than from settling. Diehl (1994) and Grieg and Diehl (2005) find that UN peacekeeping missions are often prematurely deployed to enforce cease-fires. These UN missions may inadvertently lengthen conflicts by rendering combatants complacent to settle. The divergent findings on the role of institutions and third parties in upholding cease-fires and resolving conflicts makes it all the more important for us to investigate the influence of shared IO memberships on conflict duration.

International Organizations, Commitment Problems, and Dispute Duration

A study of dispute duration necessarily asks why states would choose to fight longer rather than shorter conflicts. Inspired by studies of bargaining and war, we argue that disputes endure because states cannot agree to stop fighting (Wagner 2000). Countries fight as long as they are unable to negotiate an end to conflict. According to bargaining models, states find it difficult to resolve disputes for three reasons: they have incentives to misrepresent private information, the issues they are fighting over are indivisible, or they cannot commit to a potential agreement (Fearon 1995). We emphasize that the primary mechanism by which international organizations shorten disputes is by helping combatants overcome commitment problems. Commitment barriers prolong conflicts because they prevent states from negotiating a settlement

to their disputes. If states cannot negotiate, they will continue fighting to achieve their preferred outcome. International organizations reduce the duration of disputes by helping states overcome the commitment problems that stifle negotiations.

Commitment problems are a bargaining obstacle that provoke lengthy conflicts between states. Such problems occur when disputants have an incentive to break an agreement they might reach to end a conflict. Commitment barriers emerge for a variety of reasons, all of which may increase the duration of conflict. One source is the distribution of power between states (Powell 2006). A state may not agree to quit fighting because it fears the opponent will become stronger as a result of settling and seek to extract a better deal in the future. The state may, for instance, be unable to make territorial concessions if it believes that territory will be used strategically by its opponent. Conflict endures because it is too costly to give up territory or make other concessions. Another source of commitment problems comes from the domestic level. Leaders may be unable to agree to quit fighting if they fear they will be punished by a domestic audience for giving in too soon. Finally, commitment problems emerge if combatants do not share trust that their opponent will honor a peace settlement (Kydd 2006). In all commitment problem scenarios, disputes endure because combatants cannot uphold an agreement to quit fighting.

International organizations mitigate commitment problems by increasing the costs of continued fighting and enforcing agreements, both of which encourage combatants to cease hostilities and come to the table. A variety of mechanisms allow institutions to address commitment problems. First, IOs pressure combatants to broker cease-fires. By calling for cease-fires, institutions give states an incentive to halt hostilities. Once states are pressured to reach a cease-fire, they become aware that the international community may be considering

further, more punitive measures to stop a conflict. International organizations often call for cease-fires before turning to additional enforcement mechanisms. Disputants unwilling to broker a cease-fire are forced to consider the prospect of punishments from the international community for continued fighting. Therefore, if IOs pressure combatants to reach a cease-fire, disputants may choose to put down their arms earlier rather than risk international sanctions. International organizations have a long history of pressuring for cease-fire agreements, including the UN's involvement in the first Arab-Israeli war of 1948 and the Organization of African Unity's appeals for a cease-fire during the 1999 conflict between Ethiopia and Eritrea.

Second, IOs mitigate commitment problems by getting states to negotiate, and by enforcing and guaranteeing agreements. Strong enforcement mechanisms and continued pressure from third parties, including IOs, helps uphold cease-fires (Fortna 2004; Werner and Yuen 2005) and peace agreements (Mitchell and Hensel 2007; Walter 2002). If a third party continually enforces a settlement, combatants have more confidence in potential agreements and are more likely to quit fighting. The commitment mechanisms IOs have at their power include brokering negotiations, deploying peacekeepers to separate combatants, observing troop withdrawals, facilitating arms control agreements, and detaining combatants who violate cease-fires. International organizations therefore potentially decrease the length of military disputes by employing enforcement mechanisms that encourage disputants to commit to settlements, because they have greater assurance that the deal will be upheld.

Finally, international organizations threaten and impose sanctions on members who fail to reach agreements and continue fighting. If disputants are unable to broker agreements because they do not want to interrupt the flow of power, IOs coerce them with the threat or use of sanctions. Consider a weak state that settles a conflict, but becomes stronger as a result of the

agreement's terms. That state should consequently renege and use its enhanced power to leverage a better deal. However, if an institution steps in and imposes additional costs for shirking, such bargaining leverage becomes less attractive. Even if the formerly weak state is tempted to renege in the face of increasing power, it ultimately complies because of potential sanctions from the IO. If organizations make it costly for states not to commit by imposing sanctions, states will be more likely to settle. Despite the potential to become more powerful in the future, disputants settle because any potential gains in power are offset by IO-brokered punishments. As a result, IOs can use sanctions to mitigate the commitment problems that prolong conflict.

Research demonstrates that the mere threat of sanctions can modify a target's behavior (Morgan, Bapat, and Krustev 2009). A significant amount of coercion by international actors occurs through the threat, rather than the actual imposition, of sanctions (Drezner 2003). International organizations therefore coerce disputants to cease hostilities by threatening to sanction members. The imposition of sanctions also addresses the commitment problems that plague disputes. In fact, sanctions brokered by international institutions are more effective than unilateral or other types of multilateral sanctions (Bapat and Morgan, forthcoming). The cost of IO-imposed sanctions on disputing parties provides strong incentive for combatants to cease hostilities, shortening the duration of conflict.

As an illustration of the power of IOs to help disputants commit, consider the role of the Organization of American States (OAS) in the 1969 Soccer War. On July 14, El Salvador invaded Honduras and won a series of victories with a larger and better trained army. Four days later, a committee of the OAS recommended a cease-fire and withdrawal of El Salvadoran troops within 72 hours. It also guaranteed protection for each combatant's nationals and deployed OAS

observers. These provisions did not work immediately, and by July 22, El Salvador had not withdrawn and was in fact advancing in some regions. At the meeting of OAS foreign ministers on July 29th, a draft resolution was submitted under Article 7 of the charter labeling El Salvador as an aggressor and establishing sanctions against El Salvadoran coffee exports. Starting in early August, El Salvador ceased its advance and began to withdraw its troops. In this case, the OAS decreased the duration of a potentially long conflict by threatening economic sanctions and deploying other enforcement provisions. El Salvador may have had incentives to break a potential agreement in the face of shifting power, but the OAS made reneging more costly by threatening sanctions. The sanctions increased the likelihood that El Salvador would commit to a settlement, allowing the two sides to end fighting more quickly. Such intervention speaks positively to the ability of IOs to shorten military disputes.

International organizations offer bargaining advantages to their members that should shorten the length of disputes that emerge. Organizations mitigate the commitment phobias associated with settling disputes, allowing states to more quickly come to the table and resolve their grievances. If states fight long disputes because they cannot agree to quit fighting, IOs allow them to cease violence earlier by removing bargaining barriers.

We expect that the bargaining advantages of IOs are greatest for states that have a broad portfolio of institutional memberships. International institutions are only able to legitimately enforce peaceful behavior among their members, so they are unlikely to sanction non-members. This means that countries involved in IOs are subject to a broad range of enforcement techniques. During the 1999 war between Ethiopia and Eritrea, international organizations invoked a variety of enforcement mechanisms. The UN Security Council imposed a weapons embargo on the two countries, and the IMF sanctioned Ethiopia for excessive military spending.

The Ethiopian and Eritrean conflict illustrates the portfolio influence of IOs – institutions often do not invoke enforcement mechanisms in isolation. As disputants share *more* memberships in IOs, there exists a broader range of measures from a variety of organizations to help overcome commitment problems. Common memberships in a number of IOs produce more mechanisms to mitigate commitment barriers, ultimately decreasing the length of disputes that arise. This logic motivates the following hypothesis:

Hypothesis: As states share more memberships in international organizations, they experience shorter militarized interstate disputes.

Alternative Explanation: International Organizations and Information Asymmetries

Although we have so far emphasized the role of commitment problems in prolonging disputes, information asymmetries are also a bargaining obstacle that increase conflict duration. As Fearon (1995) explains, states have an incentive to misrepresent their capabilities and preferences to extract better deals during bargaining. Yet information asymmetries prolong conflict when states underestimate the opponent's willingness to fight long battles, thus failing to acquiesce at the appropriate time. Private information also extends conflict because states underestimate their opponents' capabilities and continue attacking what they incorrectly believe is a weak state. The bargaining model implies that states fight as long as inaccurate information about their opponents' capabilities and resolve persists. As a result, information asymmetries prolong conflict.

International organizations arguably have the potential to reduce conflict duration by providing valuable information about members' intentions. Boehmer, Gartzke, and Nordstrom (2004) argue that certain IOs empower members to signal their resolve. Any organization with

the ability to sanction may help its members send costly signals of resolve, as an IO participant who absorbs sanctions effectively communicates its willingness to continue fighting. Institutions that foster economic interdependence also allow states to signal their resolve, because foregoing the benefits of economic relationships to engage in conflict communicates a willingness to suffer costs (Haftel 2007; Morrow 1999). States that suffer sanctions or sacrifice economic benefits to stay engaged in conflict send more credible signals of resolve than states that do not absorb such costs. International organizations may consequently shorten disputes by allowing members to more credibly signal their resolve.

The argument that IOs shorten disputes by reducing information asymmetries differs from our expectation that IOs help members overcome commitment problems. International organizations are potentially working through two processes – one in which they reveal private information to disputants, and another in which they broker and enforce agreements. To help discern how IOs operate, we design a test in the following section that measures the influence of information providing organizations and commitment enhancing institutions. If either or both types of organizations reduce dispute duration, this illuminates which bargaining obstacles IOs address.

Research Design

The unit of analysis for this study is the dyad-dispute for the years 1950-2000, with all dyads consisting of two states meeting the criteria for membership in the international system as defined by the Correlates of War (COW) Project. To measure dispute involvement, we use Maoz's (2005) Dyadic Militarized Interstate Disputes (MIDs) Dataset (v 2.0). The data report when two states enter into direct militarized conflict. States involved in a multilateral dispute without hostilities would not be coded as experiencing a MID.

We follow recent studies on conflict duration and explore a broad class of MIDs, rather than limiting our study to wars (Bueno De Mesquita *et al.* 2004; Krustev 2006). If we simply investigate wars, we exclude the majority of international disputes, as only 21 wars have occurred since 1950. The required 1,000 battle deaths for classification makes wars the most extreme cases of international conflict. Limiting the sample to a small number of extreme cases prevents us from making broad conclusions regarding the pacifying influence of IOs. Further, by only including wars, we bias the sample toward conflicts that are likely to be long in duration, making it difficult to adequately study how IO memberships affect conflict length.

To measure the length of disputes, we use the total number of days the conflict endures. Drawing again on Maoz's (2005) Dyadic Militarized Interstate Dispute Data (v 2.0) we construct the variable *MID Length*, which equals the total number of days of conflict between dyad members. Maoz's (2005) data controls for how long states remain active in multilateral wars, instead of assigning the total length of a conflict for all participants. Thus, MID Length measures how long two states were active in conflict against each other.

In order to test our hypotheses regarding IO memberships and duration of international conflict, we need to know to what extent states share memberships in international bodies. To capture this, we create the variable *Joint IO Memberships*, a count of all IOs in which both states share membership. As discussed in the Ethiopia-Eritrea case, multiple IOs became involved and provided different pressure points to attempt to terminate the conflict. Our measure is designed to capture this broad portfolio effect. We construct Joint IO Memberships using the Correlates of War Intergovernmental Organization Data, version 2.1 (Pevehouse, Nordstrom, and Warnke, 2004). Since this dataset only records membership in IOs every 5 years prior to 1965, we fill in missing years using linear interpolation between observed values for each dyad. Thus, 1961 to

1964 values are based on linear interpolation using the values for that dyad in 1960 and 1965 and analogously for 1951-1954 and 1956-1959.[2]

One criticism of this measurement strategy is that it does not capture active attempts by IOs to alter the path of conflict. We are hesitant to measure the influence of organizations with active IO intervention for two reasons. First, the available data on intervention in MIDs does not tell us when an IO intervened – it only tells us if an IO intervened (Frazier and Dixon 2006). If an IO intervenes toward the end of a dispute, the analyses may mistakenly conclude that IO intervention increases duration. Because we do not know the timing of IO involvement, we cannot make definitive conclusions about how IO intervention influences dispute length. Second, many of the influences of IOs on conflict duration are passive in nature. Fear over losing future benefits from breaking an agreement does not require any action by the IO (prior to the agreement being broken); membership in the organization is enough to strengthen the desire to abide by commitments. These types of dynamics, prevalent in the IO literature, are excluded if we focus solely on active intervention strategies.

Not only do we seek to uncover the relationship between IOs and conflict duration, we want to gain better understanding of which bargaining obstacles IOs help remove. Recall that institutions are equipped to address two bargaining barriers: commitment problems and information asymmetries. To test how IOs operate, we design two measures that identify if organizations mitigate commitment problems, reduce information asymmetries, or both. The first measure, termed *Information Providing Organizations*, is the number of shared

[2] We tried other methods to deal with this missing data. Using the most recent observed value, for example, produced similar conclusions as linear interpolation (i.e., 1961-1964 are set to the value in 1960). We also attempted to impute these values in Amelia II, but the results were not very precise. Specifically, they appeared to be draws from the overall mean rather than incorporating the linear, increasing time trend, even though we included time in the imputations. As evidence, we note that the correlation between joint IO membership and its lag is about .5 before 1970 and over .99 after 1970 if we used the imputed values to fill in missing observations in the earlier time period. Because other variables had missingness that was not so extensive, we were able to multiply impute those cases using Amelia II (Honaker, King, and Blackwell 2007).

memberships in highly institutionalized organizations with a security mandate (Boehmer, Gartzke, and Nordstrom 2004). These organizations have well-established bureaucracies with extensive amounts of information about their members' capabilities. They also have a mandate to punish aggression within their ranks, facilitating members' ability to signal resolve. The second measure, *Commitment Enhancing Organizations,* includes all highly institutionalized international organizations that call for the peaceful settlement of conflict between members and have the ability to intervene in members' disputes (Shannon 2009). This category includes institutions with explicit charter mandates to broker agreements and significant resources to enforce peace settlements. If institutions influence bargaining by providing information or mitigating commitment problems, then increasing memberships in *Information Providing Organizations* or *Commitment Enhancing Organizations* should reduce dispute duration.

The correlation between *Information Providing Organizations* and *Commitment Enhancing Organizations* is .41, so although some institutions fall into both categories, there is a good amount of difference between the two measures. The appendix lists the organizations that fall into each category, obtained from Boehmer, Gartzke, and Nordstrom (2004) and Shannon (2009). The memberships in each category are summed for each dyad. Memberships in *Information Providing Organizations* ranges from 0 to 3, while memberships in *Commitment Enhancing Organizations* ranges 0 to 8.

In addition to joint memberships in international organizations, we expect other factors to influence the duration of MIDs. We therefore control for several variables that should decrease the duration of a dispute. A number of studies indicate that two democracies are less likely to experience conflict onset and fight shorter wars (Reiter and Stam 2002; Russett and Oneal 2001). We thus include *Joint Democracy*, a dummy variable that equals 1 if both states have a polity

score greater than 6. To avoid biasing our results due to missing data, we update missing values of Joint Democracy using imputed values provided in the Polity IV Data whenever possible. The *Polity2* variable assumes a linear transition for states. Even after calculating missing democracy values in this way, approximately 11% of conflict cases (187 out of 1669) still involved missing data for at least one variable. To correct for this, we imputed the values of this and other variables (except those only observed during a conflict) in the analysis using *AMELIA II* (Honaker, King, and Blackwell 2007).[3] *AMELIA* creates multiple versions of the data (we create five imputed data sets) in which all non-missing data are identical. The values of missing observations vary in each version created, incorporating the level of uncertainty regarding the true value of each missing observation. We run the duration model on each of the data sets and combine the results as described in King *et al.* (2001).

Dyads in which one state is significantly more powerful than the other should not fight as long as dyads who have power parity. Accordingly, we use *Power Ratio*, which reflects the relative balance of military capability between dyad members by dividing the weaker state's power level by the stronger state's level. Power is measured using the Composite Indicator of National Capability (Singer, Bremer, and Stuckey 1972). We also expect states that must travel a long distance will experience shorter disputes, so we include *Distance,* which captures the number of miles between states in the dyad and is coded zero for contiguous states.

Major Power Dyad is a dichotomous variable coded 1 if both states in the dyad are considered major powers by the Correlates of War definition. *Total Actors* is a count of the number of states involved in a MID, with the expectation that multilateral conflicts will last

[3] We included lags and leads for each of the democracy and IO variables as well as a cubic polynomial of time. Our conclusions are not affected by whether we imputed joint democracy directly or impute each country's democracy score and then create joint democracy from these imputations (though note that King *et al*. recommend doing all transformations before imputation, suggesting that former method is preferred).

longer. Enduring conflicts also experience more casualties, so we include *High Hostility,* which measures the highest level of hostility reached during a MID. It is analogous to the variable *Hostility Level* (*HostLev*) in the Correlates of War Militarized Interstate Dispute Data (Ghosen and Palmer 2003). Lastly, *Start Year* is the year in which a conflict begins, to reflect that disputes have become shorter over time as military technology develops (Jones, Bremer, and Singer 1996).

While we are primarily interested in uncovering the relationship between international organization memberships and the duration of conflict, we recognize that dispute length is likely influenced by the selection of conflict. Ignoring sample selection can have serious consequences for inferences about the effect of independent variables, including IO memberships, on the duration of interstate conflicts (see Boehmke, Morey, and Shannon 2006). If the underlying processes that influence the decision to engage in a dispute are not accounted for in a duration model of a dispute, then our conclusions about the influence of IOs on duration may be misguided. Put differently, non-random sample selection would lead the observed sample of MIDs to differ from the population of MIDs in a way that would produce biased and inconsistent coefficient estimates, even for the observed sample of MIDs. For instance, a number of works indicate that IOs decrease the likelihood that two of their members will engage in a dispute (Bearce and Omori 2005; Boehmer, Gartzke, and Nordstrom 2004; Haftel 2007; Pevehouse and Russett 2006; Russett and Oneal 2001; Russett, Oneal, and Davis 1998). If we do not similarly account for the possibility that IOs influence the selection of conflict, then we may be misled about the effect of institutions on the duration of conflict. A joint selection and duration model of disputes helps ensure that we appropriately gauge the effect of IO memberships on dispute length.

To control for possible non-random sample selection, we utilize an estimator developed by Boehmke, Morey and Shannon (2006).[4] The proposed correction parallels those for linear regression, logit, and probit models by developing a full information maximum likelihood estimator that simultaneously explains the selection and duration processes. It estimates the correlation between the error terms in the two equations, allowing the researcher to correct and test for the presence of non-random sample selection. Because the solution relies on the bivariate exponential distribution, it permits the researcher to estimate common duration models such as the exponential or Weibull.

In order to define the sample of at-risk dyads in the first stage of the selection and duration analysis we use all politically relevant dyads between 1950 and 2000.[5] Using politically relevant dyads removes pairs of states that have little chance of engaging in conflict because of the difficulty in overcoming the vast distance between them. The dependent variable in the first stage is *MID Involvement*, coded 1 every year a dyad experiences a new MID and zero in all other years. We again employ Maoz's (2005) Dyadic Militarized Interstate Dispute Dataset to define when a dyad experiences a MID. The variables in the first stage are drawn from prominent explanations of interstate conflict. *Joint Democracy* should reduce the likelihood of two states engaging in conflict, as should a disproportionate power balance. *Major Power* dyads should be more likely to fight, while increasing *Distance* should decrease the odds of conflict.[6] Finally, a count of the number of years since the last MID and a series of cubic splines are added to control for variation in dispute initiation over time.[7]

[4] See Prieger (2002) for a related estimator.
[5] We re-ran our analysis using all dyads in the first stage and the substantive finding that IOs decrease the duration of conflicts does not change.
[6] Variable construction is the same in this section as described in the duration section.
[7] The splines are generated using Richard Tucker's *btscs* program for Stata (version 4.04); the time effects reset at the beginning of each spell. We also ran these analyses using a cubic time trend instead of splines (Carter and Signorino 2007) with little change in the results, though the p-value for the coefficient on joint IO memberships in

Results

Joint Memberships in All International Organizations

Table 1 presents results of three duration models. The first column reports a naïve Weibull duration model that does not control for possible selection effects. The results in columns two and three present results for the duration of international conflict controlling for selection; the selection equation explains when dyads enter MIDs, while the duration equation models the length of the ensuing conflict.[8] The third column presents the joint selection and duration model using data that imputes the missing values of all variables.

[Insert Table 1 About Here.]

The results in Table 1 show strong support for our hypothesis. As states share more joint memberships in IOs they are likely to fight shorter conflicts (the coefficients are reported with a hazard interpretation, for which larger values correspond to greater hazards and therefore shorter durations). The coefficient is significant at the .05-level and is robust across the three different models. As states gain more overlapping memberships they become less likely to fight drawn out conflicts, even after controlling for the effect of IO membership on the probability of conflict initiation.

In order to develop a better sense for the substantive consequences of IO membership for the duration of disputes, we performed a series of calculations using the results in the third column. We perform these calculations for two hypothetical countries, varying the number of joint IO memberships to show how the predicted dispute length changes. The survivor function tells us the proportion of selected disputes that are expected to be ongoing after a given number

---

the selection equations improves and in some models is significant. If we control for system time (years since 1950) rather than peace spell time (time since the end of the most recent MID), however, joint IO memberships has a negative and significant effect on the probability of conflict. The effect is again insignificant if both system and peace spell time are included.

[8] We estimated this model using Boehmke's *dursel* program for Stata (version 2.0).

of days; by examining the survivor function we develop a better sense of how the effects of IO membership accumulate over the entire duration.

To evaluate the substantive effect of IO memberships on the survivor function, we set IO membership at one particular value and calculate the predicted survivor function. Then, we change the value of IO membership, holding the other variables constant, and calculate the new survivor function. Finally, we take the difference between these two predictions at each point in time. Rather than pick one arbitrary hypothetical change in IO membership, we perform three different calculations: from the minimum (0 joint memberships) to the maximum (107), from the 10^{th} (11) to the 90^{th} (48) percentile, and from the 25^{th} (17) to the 75^{th} (36) percentile.

[Insert Figure 1 About Here.]

We summarize the results of our calculations in Figure 1, which plots the change in the survivor function against the number of days of dispute. Since increases in the number of joint IO memberships increase the hazard, they decrease the proportion of disputes that are ongoing at a given point in time. The effect occurs quite quickly, with a sharp increase in the difference, which reaches a maximum around sixty days, and then slowly falls back to zero (since each of the survivor functions must eventually reach zero). To be more specific, conflicts lasting at least 100 days are about 5% fewer when the number of IOs increases from the 25^{th} to 75^{th} percentile, 10% fewer from the 10^{th} to the 90^{th} percentile, and 29% fewer from the minimum to the maximum. The difference is at least four percent for all three comparisons when the number of days is at least 20 and less than 370, nine percent for the change from the 10^{th} to the 90^{th} percentile and the change from the minimum to the maximum between 30 and 250 days, and at least twenty percent for the minimum to maximum change between 9 and 301 days. Note that about forty percent of the observed durations in our data fall within these intervals. The effect of

joint IO membership is comparable to the effect of changing from a minor to a major dyad, which reduces the proportion of conflicts that last 100 days by twelve percent. Increasing joint IO memberships has a large substantive influence on the duration of conflicts and this effect is strongest for the duration intervals of a plurality of all conflicts.

Looking across the models in Table 1, most of the control variables perform as expected. Across all four models, Distance, Power Ratio, and Start Year fail to reach standard significance levels. The lack of significance for Start Year means that our data show no increase (or decrease) in MID duration over time. While geographic distance and power imbalances work to keep states out of conflict, they appear to play no role in the duration once a MID has begun. As the number of states involved in the MID and as the maximum hostility level increases, the duration of the MID grows. There is also evidence that major power dyads fight shorter MIDs.

The lack of significance for Joint Democracy is surprising and stands in contrast to recent studies on MID duration that find democratic dyads experience shorter conflicts (Bueno De Mesquita *et al.* 2004; Krustev 2006). Sample issues do play a small part in the difference in the results; we include all MID participants while Bueno De Mesquita, Koch, and Siverson (2004) excludes joiners. However, the major explanation behind this finding is the updated temporal range of our data. Both Bueno De Mesquita, Koch, and Siverson (2004) and Krustev (2006) analyze MIDs between 1950 and 1992, while our sample includes updated MID data through 2000. This has important implications for the analysis. As Bueno De Mesquita, Koch, and Siverson (2004, 260) show, between 1950 and 1992 the average MID between democratic states was shorter than MIDs between dyads with at least one non-democratic state. However, after 1992 this pattern no longer holds - the average MID length for a democratic dyad is 155 days compared to 128 days for all other dyads. Also, the proportion of joint democratic MIDs to all

MIDs increases substantially after 1992. Examining the jointly democratic MIDs closely reveals that a large portion of the increase in MID duration is caused by the Greece-Turkey dyad. Remove the influence of this dyad and the average durations for democratic and non-democratic dyads is virtually equal (130 to 128 days). Clearly, the finding that democracies have shorter MIDs cannot be support outside the Cold War era, which is reflected in our analyses.

Unlike their dampening effect on conflict duration, IO memberships do not appear to reduce the probability of conflict onset (selection).[9] The coefficient on Joint IO Memberships is negative, but never reaches statistical significance ($p < .05$) in any of the joint selection and duration models in Table 1. The other variables in the selection equation perform as expected. Jointly Democratic dyads and dyads separated by larger distances are less likely to enter into a MID. States with a relative power balance and Major Power dyads are more likely to experience MID onset.

Finally, the error correlation (rho) for all models is negative and significant at the .05 level or better. The correlation parameter directly tests if we can safely ignore sample selection. A significant rho indicates that we risk biased and inconsistent parameter estimates if we do not control for sample selection (Boehmke, Morey, and Shannon 2006).[10] The negative correlation means that unobserved factors that increase the chance of fighting disputes also lead to shorter than expected disputes. Substantively this implies that some unresolved states attempt to bluff an opponent and enter into MIDs, only to fold quickly once combat seems likely. While accounting for sample selection does not affect our primary conclusion regarding the effect of IOs, it does increase our confidence in the effect of major power status on IO duration, with the

[9] Boehmer, Gartzke, and Nordstrom (2004) also find the relationship between Joint IO Membership and MID initiation varies based upon model specification.

[10] Most variables in Table 1 display only modest shifts after controlling for selection. However, there is a large shift in the reported value for the constant and moderate change in the estimate of duration dependence.

coefficient increasing almost 50% relative to the naïve model and becoming significant at the .05 rather than the .10 level.

One potentially confounding issue is that we have included all MIDs in the analyses; the sample includes cases in which force was only threatened and cases involving actual military engagements. It is possible that a class of states, such as democracies, engages in short, low-level conflicts (i.e., fishing boat disputes) and has high joint IO memberships, which could account for the results reported in Table 1.[11] To ensure that the low level conflicts are not driving our findings, we run the analysis on a sample consisting of disputes in which the dyad actually engaged in combat. We include only those MIDs resulting in battle deaths, referring to these as *Fatal MIDs*.[12]

The results for this test are presented in column 1 of Table 2. Even in the most violent interstate clashes, the number of joint IO memberships appears to help shorten conflicts. International organizations decrease dispute duration in the most violent, and arguably important, cases of international conflict. It is also important to note that Joint IO Memberships is still insignificant in the selection model, indicating that IOs do not prevent the onset of fatal disputes. While they appear unable to prevent conflict, IOs seem to limit fighting once it has begun.

[Insert Table 2 About Here.]

Information Providing vs. Commitment Enhancing Organizations

As discussed earlier, we are interested not just in whether IOs decrease dispute duration, but in which types of IOs are most effective in doing so. We therefore move to a more specific

[11] We are thankful to an anonymous reviewer who brought this to our attention.
[12] We do not adopt the term Hostile MID because that nomenclature implies there is a class of MID that is not hostile. All cases of Fatal MIDs are scored as a use of force or war in the MID data, so our measure does correspond to the concept of the Hostile MID. However, we do exclude some uses of force that do not produce battle fatalities; these are normally sub-categorized as raids in the MID data. We feel the use of the Fatal MID distinction better captures those cases with high levels of hostility and poses a challenging test for our theory.

test of the role of IOs by separately considering the distinct effects of those that can help combatants mitigate commitment problems and those that help reduce information asymmetries. To test this, we run additional models that replace the total number of joint IO memberships with the total number of joint memberships in *Information Providing Organizations* and *Commitment Enhancing Organizations*. The results in columns 2 of Table 2 show that organizations designed to address commitment problems have a significant impact upon the duration of conflicts. Dyads with a larger number of joint memberships in *Commitment Enhancing Organizations* experience shorter MIDs. However, column 3 shows that joint memberships in *Information Providing Organizations* have no discernable impact upon conflict duration, although they do appear to help dyads avoid conflict onset. In the test between information asymmetries and commitment problems, the evidence reveals that IOs most likely to mitigate commitment problems are the organizations that help states fight shorter conflicts.

Future research on IOs might develop more refined measures to test the specific bargaining obstacles that IOs are most effective in removing. Our analyses show that memberships in IOs with more potential to address commitment problems are correlated with shorter disputes, while memberships in IOs that reduce information asymmetries have no influence on dispute duration. In thinking about their ability to address disputes, there are a number of reasons to believe that the informational capabilities of IOs are limited. One is that most organizations do not garner enough knowledge about their members' militaries to significantly change the bargaining process. Long, Nordstrom, and Baek (2007) demonstrate that the ability of an organization to provide the necessary information to influence conflict is limited by the design of the institution. Only institutions that establish a high level of military cooperation effectively reveal private information about capabilities and resolve. Most

international organizations lack the institutional leverage to reduce information asymmetries. Additionally, any information an IO might provide must first be revealed by its members. Members are unlikely to reveal information to an IO that they prefer to keep private, because they still want to gain bargaining leverage.

It is more likely the case that fighting itself provides better information about members' resolve and capabilities than an IO is able to offer (Filson and Werner 2002). Slantchev (2004) demonstrates that the information combatants acquire during combat is more valuable than information received before the outbreak of a conflict. While an IO might provide some information before and during a dispute, the type of information revealed may not significantly shorten the conflict. We therefore suspect, and our analyses indicate, that international organizations shorten disputes by helping members overcome commitment problems rather than providing information.

Discussion

Our analyses reveal that international organizations help end disputes between members more quickly. We argue that IOs shorten disputes by mitigating commitment problems. A test between information provision and commitment problems provided strong support for our claim. IOs are an effective tool for helping states achieve peace once they start fighting by helping combatants commit to peace agreements.

Like previous studies, we do not find that higher numbers of memberships in the general class of international organizations decreases the likelihood of conflict onset (Boehmer, Gartzke, and Nordstrom 2004). Yet according to neoliberal institutionalist theory, many of the bargaining advantages of IOs should prevent military conflict between their members. Our analyses do not support this expectation. We suspect that IOs simply are not strong enough or active enough to

prevent conflict onset. One possibility is that IOs are not sufficiently capable or motivated to engage members in bargaining until conflict actually breaks out. For instance, OAS participants may not interact with each other frequently enough to detect and prevent hostilities between two members like El Salvador and Honduras. But once conflict breaks out, and international attention is drawn to the region, institutions are activated to promote bargaining and end the dispute. An organization such as the OAS is then compelled to engage in activities like brokering cease-fires, mediating disputes, and even implementing sanctions.

There may exist various bargaining obstacles that IOs simply cannot remove to prevent the onset of conflict. For instance, an IO is probably unable to reveal any information about disputants' resolve, because members are not likely to reveal such private information to the organization. The process of fighting more effectively uncovers the resolve of the disputants. However, after conflict begins, the IO is motivated to reveal information about troop withdrawals, compliance with cease-fires, and willingness of the combatants to negotiate. International organizations may also be drawn to the conflict to remove commitment barriers by helping disputants broker and uphold agreements. Recent studies in fact show that IO memberships make territorial rivals more likely to negotiate, as well as help states comply with peaceful settlements (Mitchell and Hensel 2007; Shannon 2009). Our analyses reveal that the inertia of international organizations does not allow them to prevent conflict between members. Organizations are more capable and willing to decrease the length of ongoing disputes.

Conclusion

This paper explores the duration of militarized disputes, a rarely investigated facet of state behavior. While many studies of IOs analyze their influence on conflict onset, we recognize that international institutions may help shorten disputes once they begin. International

organizations can help their members overcome bargaining obstacles that prolong conflict, allowing states to more quickly reach agreements and end disputes. Our analyses reveal that joint IO memberships indeed decrease the duration of conflict. These findings should provoke an expanded discussion of how IOs influence bargaining between states, particularly in the realm of international conflict.

Overall, the analyses provide mixed evidence for the liberal institutionalist view of international relations. Shared memberships in international organizations do not appear to reduce a dyad's propensity to enter into a militarized dispute. However, institutions suppress conflicts once they start, allowing combatants to reach termination faster. This effect grows with additional joint memberships. While IOs might not be able to prevent conflict, they are able to help limit its destructive impact.

The finding on conflict duration is especially important because it tests the power of IOs where realist theory would expect them to have the least influence – during open conflict. The analyses account for a number of realist arguments regarding conflict duration, including power parity and major power status. Yet even after controlling for realist influences, international institutions have a strong influence on state behavior. Our findings regarding IOs and the selection of conflict do, however, add weight to realist arguments that international bodies are not effective tools for avoiding conflict.

There is also a possible theoretical connection between conflict duration and a state's willingness to enter into a MID that would alter the findings regarding IOs and conflict. Blainey (1988) argues that anything that makes war longer should make it less likely. Logically then, anything that shortens conflicts should make them more likely to occur (reinforcing the need to control for selection when looking at conflict duration). It may be the case that state leaders

know they can seek aid from international organizations should battlefield outcomes turn against them.[13] This would lower the potential costs of fighting and inadvertently increase the overall utility of conflict. If this is the case, it would have the perverse effect of reducing the ability of IOs to prevent conflict, creating a sort of IO moral hazard problem. It is important to note that our findings do not provide evidence towards either of these possibilities. However, our findings do point to important areas of future research, including exploring the effects of institutional design and the expected utility calculations of leaders. Such research would help to better determine when and how IOs are effective in international relations and provide important new insights into the realist/neo-liberal debate.

[13] We thank Kevin Clarke for first pointing this possibility out to us.

References

Bapat, Navin A., and T. Clifton Morgan. "Multilateral versus Unilateral Sanctions Reconsidered: A Test Using New Data." *International Studies Quarterly, forthcoming.*

Bearce, David H. 2003. "Grasping the Commercial Institutional Peace." *International Studies Quarterly* 47 (3): 347-370.

Bearce, David H. and Sawa Omori. 2005. "How Do Commercial Institutions Promote Peace?" *Journal of Peace Research* 42 (6): 659-678.

Bearce, David H., Kristen M. Flanagan, and Katharine M. Floros. 2006. "Alliance, Internal Information, and Military Conflict Among Member-States." *International Organization* 60: 595-625.

Bennett, D. Scott and Allan C. Stam III. 1996. "The Duration of Interstate Wars, 1816-1985." *The American Political Science Review* 90 (2): 239-257.

Blainey, Geoffrey. 1988. *The Causes of War*, 3rd ed. New York: The Free Press.

Boehmer, Charles, Erik Gartzke, and Timothy Nordstrom. 2004. "Do Intergovernmental Organizations Promote Peace?" *World Politics* 57 (1): 1-38.

Boehmke, Frederick J., Daniel S. Morey, and Megan Shannon. 2006. "Selection Bias and Continuous-Time Duration Models: Consequences and a Proposed Solution." *American Journal of Political Science* 50 (1): 192-207.

Bueno De Mesquita, Bruce, Michael T. Koch, and Randolph M. Siverson. 2004. "Testing Competing Institutional Explanations of the Democratic Peace: The Case of Dispute Duration." *Conflict Management and Peace Science* 21: 255-267.

Carter, David B. and Curt Signorino. 2007. "Back to the Future: Modeling Time Dependence in Binary Data." Paper presented at the annual meeting of America Political Science Association, Chicago.

Correlates of War 2 Project. 2008. "State System Membership List, v2002.1." Online, http://cow2.la.psu.edu.

Diehl, Paul F. 1994. *International Peacekeeping*. Baltimore: Johns Hopkins University Press.

Dixon, William J. 1996. "Third-party Techniques for Preventing Conflict Escalation and Promoting Peaceful Settlement." *International Organization* 50 (4): 653-681.

Drezner, Daniel. 2003. "The Hidden Hand of Economic Coercion." *International Organization* 57(2):643-659.

Fearon, James D. 1995. "Rationalist Explanations for War." *International Organization* 49: 379-414.

Filson, Darren, and Suzanne Werner. 2002. "A Bargaining Model of War and Peace: Anticipating the Onset, Duration, and Outcome of War." *American Journal of Political Science* 46(4):819-837.

Fortna, Virginia. 2004. "Does Peacekeeping Keep Peace? International intervention and the Duration of Peace After Civil War." International Studies Quarterly 48: 269-292.

Frazier, Derrick V. and William J. Dixon. 2006. "Third-Party Intermediaries and Negotiated Settlements, 1946-2000." *International Interactions* 32:385-408.

Ghosen, Faten, and Glenn Palmer. 2003. "Codebook for the Militarized Interstate Dispute Data, Version 3.0." Online: http://cow2.la.psu.edu.

Greig, J. Michael and Paul Diehl. 2005. "The Peacekeeping-Peacemaking Dilemma." *International Studies Quarterly* 49: 621-645.

Haftel, Yoram Z. "Designing for Peace: Regional Integration Arrangements, Institutional Variation, and Militarized Interstate Disputes." *International Organization* 61: 217-237.

Honaker, James; Gary King; and Matthew Blackwell. 2007. *Amelia II: A Program for Missing Data (Windows version).* Cambridge, MA: Harvard University, http://GKing.Harvard.edu/amelia.

Jones, Daniel M., Stuart A. Bremer, and J. David Singer. 1996. "Militarized Interstate Disputes, 1816-1992: Rationale, Coding Rules, and Empirical Patterns." *Conflict Management and Peace Science* 15 (2): 163-213.

King, Gary, James Honaker, Anne Joseph, and Kenneth Scheve. 2001. "Analyzing Incomplete Political Science Data: An Alternative Algorithm for Multiple Imputation." *American Political Science Review* 95 (1): 49-69.

Krustev, Valentin I. 2006. "Interdependence and the Duration of Militarized Conflict." *Journal of Peace Research* 43 (3): 243-260.

Kydd, Andrew. 2003. "Which Side Are You On? Bias, Credibility, and Mediation." *American Journal of Political Science* 47: 597-611.

Kydd, Andrew. 2006. "When Can Mediators Build Trust?" *American Political Science Review* 100(3):449-462.

Long, Andrew, Timothy Nordstrom, and Kyeonghi Baek. 2007. "Allying for Peace: Treaty Obligations and Conflict Between Allies." *Journal of Politics* 69(4):1103-1117.

Maoz, Zeev. 2005. Dyadic MID Dataset (version 2.0): http://psfaculty.ucdavis.edu/zmaoz/dyadmid.html

Mitchell, Sara McLaughlin, Kelly M. Kadera, and Mark J.C. Crescenzi. 2008. "Practicing Democratic Community Norms: Third Party Conflict Management and Successful Settlements." Working Paper, University of Iowa and University of North Carolina.

Mitchell, Sara McLaughlin and Paul R. Hensel. 2007. "International Institutions and Compliance with Agreements." *American Journal of Political Science* 51(4):721-737.

Morgan, T. Clifton, Navin Bapat, and Valentin Krustev. 2009. "The Threat and Imposition of Economic Sanctions." *Conflict Management and Peace Science* 26(1):92-110.

Morrow, James D. 1999. "How Could Trade Affect Conflict?" *Journal of Peace Research* 36 (4): 481-489.

Pevehouse, Jon, Timothy Nordstrom, and Kevin Warnke. 2004. "The Correlates of War 2 International Governmental Organizations Data Version 2.0." *Conflict Management and Peace Science* 21(2):101-119.

Pevehouse, Jon and Bruce Russett. 2006. "Democratic International Governmental Organizations Promote Peace." *International Organization* 60(4):969-1000.

Powell, Robert. 2004. "Bargaining and Learning While Fighting." *American Journal of Political Science* 48(2):344-361.

Powell, Robert. 2006. "War as a Commitment Problem." *International Organization* 60(1):169-203.

Prieger, James E. 2002. "A Flexible Parametric Selection Model for Non-Normal Data with Application to Health Care Usage." *Journal of Applied Econometrics*: 17: 367-392.

Regan, Patrick M. 2002. "Third-party Interventions and the Duration of Intrastate Conflicts." *Journal of Conflict Resolution* 46(1):55-73.

Regan, Patrick M. and Allan C. Stam. 2000. "In the Nick of Time: Conflict Management, Mediation Timing, and the Duration of Interstate Disputes." *International Studies Quarterly* 44 (2): 239-260.

Reiter, Dan and Alan Stam. 2002. *Democracies at War*. Princeton: Princeton University Press.

Russett, Bruce and John R. Oneal. 2001. *Triangulating Peace: Democracy, Interdependence, and International Organizations*. New York: Norton.

Russett, Bruce, John R. Oneal, and David R. Davis. 1998. "The Third Leg of the Kantian Tripod for Peace: International Organizations and Militarized Disputes, 1950-85." *International Organization* 52 (3): 441-467.

Shannon, Megan. 2009. "Preventing War and Providing the Peace? International Organizations and the Management of Territorial Disputes." *Conflict Management and Peace Science* 26(2):144-163.

Singer, J.D., S. Bremer, and J. Stuckey. 1972. "Capability Distribution, Uncertainty, and Major Power War, 1820–1965." In Peace, War, and Numbers, edited by B. M. Russett, pp. 19–48. Beverly Hills, CA: Sage.

Slantchev, Branislav. 2004. "How Initiators End Their Wars: The Duration of Warfare and the Terms of Peace." *American Journal of Political Science* 48(4):813-829.

Smith, Alastair, and Alan Stam. 2004. "Bargaining and the Nature of War." *Journal of Conflict Resolution* 48(6):783-813.

Wagner, R. Harrison. 2000. "Bargaining and War." *American Journal of Political Science* 44(3):469-484.

Walter, Barbara. 2002. *Committing to Peace: The Successful Settlement of Civil Wars*. Princeton: Princeton University Press.

Werner, Suzanne and Amy Yuen. 2005. "Making and Keeping Peace." International Organization 59: 261-292.

Table 1:
Duration of Militarized Interstate Disputes, 1950-2000, Accounting for Sample Selection (Hazard Interpretation)

	Naïve Model			Duration with Selection			Duration with Selection (Multiple Imputation)		
	β		Robust S.E.	β		Robust S.E.	β		Robust S.E.
Selection									
Joint IO Memberships (tens)				0.018		0.014	0.018		0.013
Joint Democracy				-0.254	*	0.048	-0.228	*	0.044
Power Ratio				0.247	*	0.077	0.307	*	0.079
Major Power Dyad				0.637	*	0.158	0.614	*	0.152
Distance				-0.078	*	0.008	-0.698	*	0.085
Constant				-0.576	*	0.053	-0.606	*	0.050
Duration									
Joint IO Memberships (tens)	0.073	*	0.034	0.079	*	0.039	0.079	*	0.037
Joint Democracy	0.052		0.181	0.076		0.187	0.041		0.172
Total Actors	-0.061	*	0.009	-0.064	*	0.009	-0.056	*	0.007
Major Power Dyad	0.259	**	0.133	0.355	*	0.143	0.298	*	0.137
High Hostility	-0.351	*	0.047	-0.382	*	0.050	-0.384	*	0.048
Power Ratio	-0.181		0.157	-0.179		0.162	-0.130		0.169
Distance	-0.001		0.023	-0.007		0.025	-0.047		0.200
Start Year	0.001		0.001	0.001		0.003	0.002		0.003
Constant	-1.479		5.541	-3.001		5.961	-4.885		5.292
p (Duration Dependence)	0.494	*	0.009	0.528	*	0.009	0.531	*	0.009
rho (Error Correlation)				-0.131	*	0.018	-0.126	*	0.019
Observations (Uncensored)	1482			48221 (1482)			55048 (1669)		
Log Likelihood	-3334.272			-12974.429			-14721.665		

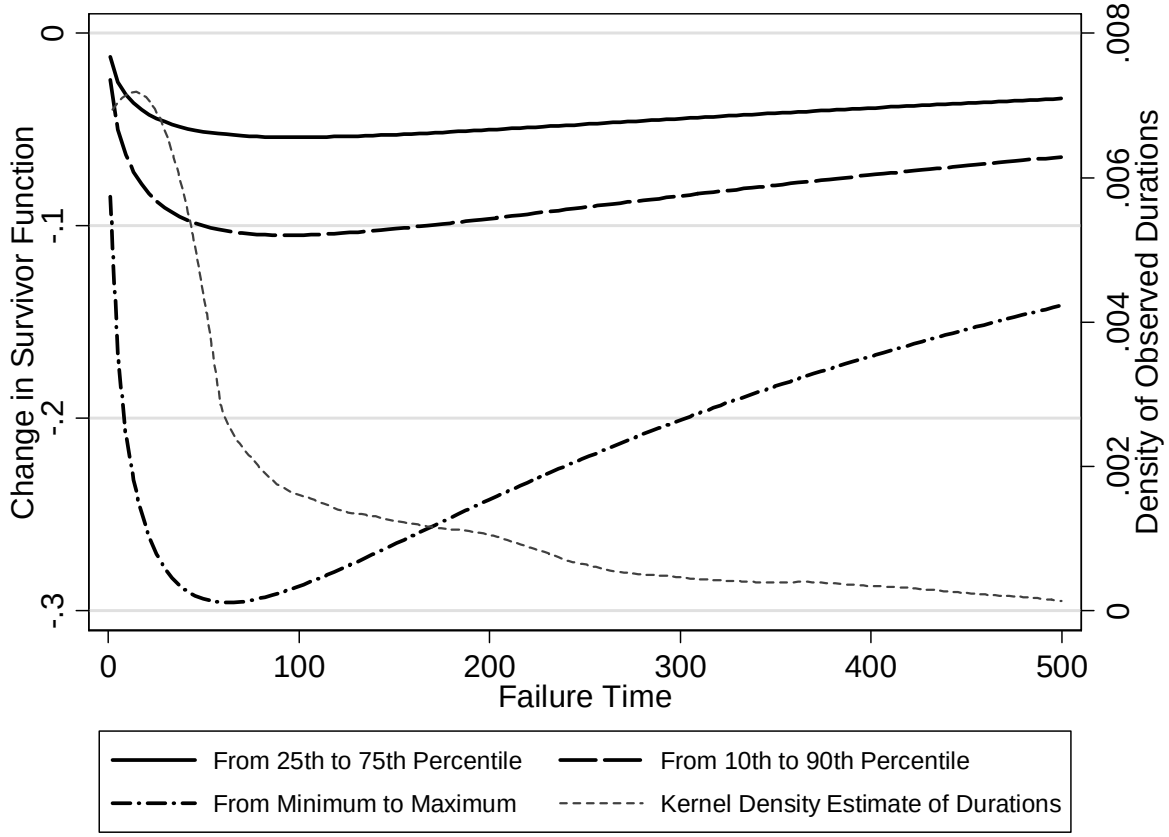
Notes: Estimates obtained from a Weibull duration estimator accounting for non-random sample selection using *dursel* add-on program in Stata (see text for details). Larger coefficients indicate larger hazards, therefore shorter durations. Multiple imputation performed using Amelia II (Honaker *et al.* 2007). Selection equation results for splines and *Peace Years* not reported due to space limitations. Robust standard errors clustered on dyad. * indicates $p \leq .05$, ** indicates $p \leq .1$.

Table 2:
Alternate Specifications of MID Duration, Accounting for Sample Selection (Hazard Interpretation)

	Fatal MIDs			Commitment Enhancing IOs			Information Providing IOs		
	β		Robust S.E.	β		Robust S.E.	β		Robust S.E.
Selection									
Joint IO Memberships (tens)	-0.031		0.021	-0.045		0.169	-0.919	*	0.282
Joint Democracy	-0.152	*	0.063	-0.190	*	0.042	-0.164	*	0.038
Power Ratio	0.356	*	0.099	0.330	*	0.077	0.337	*	0.073
Major Power Dyad	0.250	*	0.062	0.625	*	0.150	0.638	*	0.147
Distance	-0.473	*	0.104	-0.726	*	0.087	-0.744	*	0.087
Constant	-1.124	*	0.055	-0.045		0.169	-0.519	*	0.049
Duration									
Joint IO Memberships (tens)	0.164	*	0.045	0.918	*	0.402	0.163		0.826
Joint Democracy	-0.248		0.228	0.083		0.180	0.142		0.178
Total Actors	0.002		0.009	-0.056	*	0.007	-0.058	*	0.007
Major Power Dyad	0.202		0.181	0.288	*	0.130	0.304	*	0.146
High Hostility	-0.612	*	0.116	-0.386	*	0.048	-0.387	*	0.047
Power Ratio	-0.243		0.221	-0.122		0.157	-0.107		0.175
Distance	-0.274		0.358	-0.065		0.199	-0.113		0.210
Start Year	0.003		0.005	0.003		0.002	0.005	*	0.003
Constant	-6.748		10.599	-7.455	**	4.292	-11.395	*	5.111
p (Duration Dependence)	0.622	*	0.024	0.531	*	0.009	0.529	*	0.009
rho (Error Correlation)	0.025		0.021	-0.123	*	0.019	-0.127	*	0.017
Observations (Uncensored)	55048 (325)			55048 (1669)			55048 (1669)		
Log Likelihood	-4077.4385			-14724.308			-14715.919		

Notes: Estimates obtained from a Weibull duration estimator accounting for non-random sample selection using *dursel* add-on program in Stata (see text for details). Larger coefficients indicate larger hazards, therefore shorter durations. Multiple imputation performed using Amelia II (Honaker *et al.* 2007). Selection equation results for splines and *Peace Years* not reported due to space limitations. Robust standard errors clustered on dyad. * indicates $p \leq .05$, ** indicates $p \leq .1$.

Figure 1:
Effect of Changes in the Number of IO Memberships on the Duration of Militarized Interstate Disputes, 1950-2000



Notes: thicker plotted lines represent the difference in the predicted survivor function arising from a change in the number of joint IO memberships from one value to another, holding all other variables at their mean values. Predictions are based on the duration with selection model with imputed values for all variables reported in Table 1 and are averaged across the predictions in each of the five imputed data sets. The underlying survivor functions correspond to proportion of observations that are predicted to survive until a given point in time, given that those observations have selected into the duration process. The thinner dashed line is a kernel density estimate of the distribution of dispute durations in the sample.

Appendix:
Information Providing Organizations and Commitment Enhancing International Organizations

Information Providing Organizations
European Union
North Atlantic Treaty Organization
United Nations
Warsaw Treaty Organization
Western European Union

Commitment Enhancing Organizations
African Union
Andean Community
Arab League
Arab Maghreb Union
Association of Southeast Asian Nations
Caribbean Commission
Commonwealth of Independent States Charter
Council of Europe
Economic Community of Central African States
Economic Community of West African States
European Union
German Confederation
International Central American Tribunal
League of Nations
North Atlantic Treaty Organization
Nordic Council of Ministers
Organization of African Unity
Organization of American States
Organization of Eastern Caribbean States
Organization of the Islamic Conference
Organization for Security and Cooperation in Europe
Permanent Court of Arbitration
Permanent Court of International Justice Optional Clause
Southern African Development Community
United Nations
Warsaw Treaty Organization
Western European Union