The Influence of International Organizations on Militarized Interstate Dispute Initiation and Duration

Megan Shannon, University of Colorado Boulder
Daniel Morey, University of Kentucky
Frederick Boehmke, University of Iowa

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Megan Shannon
University of Mississippi

Daniel Morey
University of Kentucky

AND

Frederick J. Boehmke
University of Iowa

We argue that international organizations 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 international organization (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 (Russett and Oneal 2001; Boehmer, Gartzke, and Nordstrom 2004). 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 the 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

1 We thank Kevin Clarke, Brian Lai, Tim Nordstrom, and Clayton Thyne for helpful comments. All authors contributed equally to the development of the article. Their names are listed in reverse alphabetical order. Data used in this article can be downloaded from http://myweb.uiowa.edu/fboehmke/methods.html.

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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 Militarized Interstate Dispute (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 nonrandom 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.\(^2\) 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 this 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 (Boehmer et al. 2004; Bearce and Omori 2005; Pevehouse and Russett 2006; Haftel 2007). 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 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

\(^2\) Our results mirror findings by Boehmer et al. (2004) that only the most structured IOs and security-based IOs reduce conflict onset.
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 David 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 membership 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 Greig 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 make it all the more important for us to investigate the influence of shared IO membership 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 provokes 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 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, help uphold cease-fires (Fortna 2004; Werner and Yuen 2005) and peace agreements (Walter 2002; Mitchell and Hensel 2007). 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 2009). 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 29, 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 membership. International institutions are only able to legitimately enforce peaceful behavior among their members, so they are unlikely to sanction nonmembers. 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 International Monetary Fund sanctioned Ethiopia for excessive military spending. The Ethiopian and Eritrean conflict illustrates the portfolio influence of IOs—instiutions 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 1: 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 increases 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, and fail 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 et al. (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 (Morrow 1999; Haftel 2007). 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 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 MIDs Dataset (version 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 one thousand battle deaths for classification make 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 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 membership and duration of international conflict, we need to know to what extent states share membership in international bodies. To capture this, we create the variable Joint IO Memberships, a count of all IOs to which both states belong. As discussed in the Ethiopia-Eritrea case, multiple IOs became involved and provided different pressure points 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). As this data set 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, 1961–1964 values are based on linear interpolation using the values for that dyad in 1960 and 1965 and analogously for 1951–1954 and 1956–1959.\(^3\)

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 do 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 indicate 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, but we want to gain a 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 whether organizations mitigate commitment problems, reduce information asymmetries, or both. The first measure, termed Information Providing Organizations, is the number of shared memberships in highly institutionalized organizations with a security mandate (Boehmer et al. 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

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\(^3\) We tried other methods to deal with this missing data. Using the most recent observed value, for example, produced similar conclusions as linear interpolation (that is, 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 drawn 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 memberships and its lag is about 0.5 before 1970 and over 0.99 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).
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 0.41, 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 et al. (2004) and Shannon (2009). The shared 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 from 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 (Russett and Oneal 2001; Reiter and Stam 2002). 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 because of 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 et al. 2007). AMELIA creates multiple versions of the data (we create five imputed data sets) in which all nonmissing 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 that states which 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 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 et al. 1996). While we are primarily interested in uncovering the relationship between international organization membership 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, nonrandom 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 (Russett et al. 1998; Russett and Oneal 2001; Boehmer et al. 2004; Bearce and Omori 2005; Pevehouse and Russett 2006; Haftel 2007). 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 membership on dispute length.

To control for possible nonrandom sample selection, we utilize an estimator developed by Boehmke et al. (2006). 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 nonrandom 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. Using politically relevant dyads removes pairs of states that have little chance of engaging in conflict. 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. 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.

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6 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.

7 Variable construction is the same in this section as described in the duration section.

8 The splines are generated using Richard Tucker’s btses 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, although the p-value for the coefficient on joint IO memberships in 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.
Results

Joint Membership 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 2 and 3 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. \(^9\) The third column presents the joint selection and duration model using data that impute the missing values of all variables.

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

To evaluate the substantive effect of IO memberships on the survivor function, we set IO memberships at one particular value and calculate the predicted survivor function. Then, we change the value of IO memberships, 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 memberships, we perform three different calculations: from the minimum (0 joint membership) to the maximum (107), from the 10th (11) to the 90th (48) percentile, and from the 25th (17) to the 75th (36) percentile.

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. As 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 (because 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 25th to 75th percentile, 10% fewer from the 10th to the 90th percentile, and 29% fewer from the minimum to the maximum. The difference is at least 4% for all three comparisons.

Fig 1. Effect of Changes in the Number of International Organization (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.)
when the number of days is at least 20 and less than 370, 9% for the change from
the 10th to the 90th percentile and the change from the minimum to the max-
imum between 30 and 250 days, and at least 20% for the minimum to maximum
change between 9 and 301 days. Note that about 40% of the observed durations in
our data fall within these intervals. The effect of joint IO membership is compar-
able to the effect of changing from a minor to a major dyad, which reduces the pro-
portion of conflicts that last 100 days by 12%. 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
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 num-
ber 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 con-
trast 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 partici-
ants while Bueno De Mesquita et al. (2004) exclude joiners. However, the
major explanation behind this finding is the updated temporal range of our
between 1950 and 1992, while our sample includes updated MID data through
2000. This has important implications for the analysis. As Bueno De Mesquita
et al. (2004:260) show, between 1950 and 1992 the average MID between demo-
cratic states was shorter than MIDs between dyads with at least one nondemocratic
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 are virtually equal (130–128 days). Clearly, the finding that
democracies have shorter MIDs cannot be supported 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). 10 10 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 experi-
ence 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 estimate indicates that we risk biased and
inconsistent parameter estimates if we do not control for sample selection

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10 Boehmer et al. (2004) also find the relationship between Joint IO Membership and MID initiation varies
based upon model specification.
(Boehmke et al. 2006). 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 coefficient increasing almost 40% 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 (for example, fishing boat disputes) and has high joint IO membership, which could account for the results reported in Table 1. 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.

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.

**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 doing so. We therefore move to a more specific test of the role of IOs by separately considering the distinct effects of those that 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 membership in Information Providing Organizations has 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 the 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

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11 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.

12 We are thankful to an anonymous reviewer who brought this to our attention.

13 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 subcategorized 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.
problems is correlated with shorter disputes, while membership in IOs that reduce information asymmetries has 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.

<table>
<thead>
<tr>
<th>Selection</th>
<th>Fatal MIDs</th>
<th>Commitment Enhancing IOs</th>
<th>Information Providing IOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint IO Memberships (tens)</td>
<td>-0.031</td>
<td>0.021</td>
<td>-0.045</td>
</tr>
<tr>
<td>Joint Democracy</td>
<td>-0.152*</td>
<td>0.063</td>
<td>-0.190*</td>
</tr>
<tr>
<td>Power Ratio</td>
<td>0.356*</td>
<td>0.099</td>
<td>0.330*</td>
</tr>
<tr>
<td>Major Power Dyad</td>
<td>0.250*</td>
<td>0.062</td>
<td>0.625*</td>
</tr>
<tr>
<td>Distance</td>
<td>-0.473*</td>
<td>0.104</td>
<td>-0.726*</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.124*</td>
<td>0.055</td>
<td>-0.045</td>
</tr>
<tr>
<td>Duration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joint IO Memberships (tens)</td>
<td>0.164*</td>
<td>0.045</td>
<td>0.918*</td>
</tr>
<tr>
<td>Joint Democracy</td>
<td>-0.248</td>
<td>0.228</td>
<td>0.083</td>
</tr>
<tr>
<td>Total Actors</td>
<td>0.002</td>
<td>0.009</td>
<td>-0.056*</td>
</tr>
<tr>
<td>Major Power Dyad</td>
<td>0.202</td>
<td>0.181</td>
<td>0.288*</td>
</tr>
<tr>
<td>High Hostility</td>
<td>-0.612*</td>
<td>0.116</td>
<td>-0.386*</td>
</tr>
<tr>
<td>Power Ratio</td>
<td>-0.243</td>
<td>0.221</td>
<td>-0.122</td>
</tr>
<tr>
<td>Distance</td>
<td>-0.274</td>
<td>0.358</td>
<td>-0.065</td>
</tr>
<tr>
<td>Start Year</td>
<td>0.003</td>
<td>0.005</td>
<td>0.003</td>
</tr>
<tr>
<td>Constant</td>
<td>-6.748</td>
<td>10.599</td>
<td>-7.455**</td>
</tr>
<tr>
<td>p (Duration Dependence)</td>
<td>0.622*</td>
<td>0.024</td>
<td>0.531*</td>
</tr>
<tr>
<td>ρ (Error Correlation)</td>
<td>0.025</td>
<td>0.021</td>
<td>-0.123*</td>
</tr>
<tr>
<td>Observations (Uncensored)</td>
<td>55048 (325)</td>
<td>55048 (1669)</td>
<td>55048 (1669)</td>
</tr>
<tr>
<td>Log Likelihood</td>
<td>-4077.4385</td>
<td>-14724.308</td>
<td>-14715.919</td>
</tr>
</tbody>
</table>

(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 because of space limitations. Robust standard errors clustered on dyad. *Indicates p £ .05, **indicates p £ .1.)
A finding worthy of future study is the divergent effects revealed by the analyses of the two classes of institutions on conflict onset and duration. *Information Providing Organizations* prevent conflict onset \( (p < .05) \) but do not influence duration. *Commitment Enhancing Organizations* decrease duration \( (p < .05) \), as we expected, but do not affect the likelihood of conflict onset. It appears that the information provided by IOs is valuable in the beginning of the bargaining processes, removing asymmetries to decrease the likelihood of conflict. However, once disputes begin, such information is not able to decrease duration, and at that point, the commitment mechanisms of IOs become effective. A fruitful avenue of research might explore why the type of information provided by IOs is enough to prevent conflict but not reduce its duration, and why the commitment mechanisms of IOs are most effective once conflict begins.

**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 et al. 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 membership makes 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 membership 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. 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 toward 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/neoliberal debate.

**Appendix:** Information Providing Organizations and Commitment Enhancing International Organizations

<table>
<thead>
<tr>
<th>Information Providing Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Union</td>
</tr>
<tr>
<td>North Atlantic Treaty Organization</td>
</tr>
<tr>
<td>United Nations</td>
</tr>
<tr>
<td>Warsaw Treaty Organization</td>
</tr>
<tr>
<td>Western European Union</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Commitment Enhancing Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Union</td>
</tr>
<tr>
<td>Andean Community</td>
</tr>
<tr>
<td>Arab League</td>
</tr>
</tbody>
</table>

14 We thank Kevin Clarke for first pointing this possibility out to us.
Appendix (Continued)

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

References

The Influence of International Organizations


