Abstract: In this paper, we argue that non-democratic states become more likely to behave like democratic states, adopting democratic norms, as the proportion of democracies increases. We focus on a particular democratic norm, the tendency to view international commitments as binding (or the *pacta sunt servanda*). We hypothesize that as the proportion of democracies in the international system increases, non-democratic dyads become more likely to make credible commitments. Weibull duration analysis of military alliances produces support for our theoretical hypothesis. While non-democratic dyadic alliances do not last as long as democratic alliances, the expected duration of non-democratic alliances increases substantially as the proportion of democracies in the international system increases.

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Introduction

When states sign treaties in international relations, such pacts made in good faith are supposed to be binding, or what international legal scholars have called the norm, *pacta sunt servanda*. An opposing view is offered by the norm, *rebus sic stantibus*, which permits states to break treaties if a fundamental change occurs in the circumstances that existed at the signing of the agreement. Kegley and Raymond (1990:96) argue that, “neither binding nor flexible conceptions of agreements between states have survived for any sustained length of time without eventual challenge. Although one conception has tended to prevail in some historical periods, that domination has always receded later, only to regain subsequent support.” Such arguments suggest that the dominance of the *pacta sunt servanda* norm has ebbed and flowed over time.

In this paper, we propose an alternative theoretical argument, drawing from (Author), where she asserts that democratic norms become international norms as the proportion of democratic states increases. (Author) focuses on the democratic norm of third party conflict management. We extend this theoretical argument to an additional democratic norm, the propensity for democratic states to uphold the international agreements that they sign (Russett, 1993). Democracies are more likely to accept the *pacta sunt servanda* principle in international interactions largely because their foreign policy behavior is based to a larger extent on the rule of law that stems from institutional features of democracies, including “limited government, respect for judicial processes, and regard for constitutional constraints (Simmons, 1999:211).” While we expect democracies to make more credible international commitments, we also wonder to what extent the *pacta sunt servanda* norm is becoming an international norm, influencing the behavior of non-democratic states as well. Our theoretical argument suggests that as the proportion of
democracies in the system increases, all states should become more likely to live up to their international agreements, as this democratic norm becomes an international norm.¹

This perspective is distinct from formal models of credible commitments. For example, Fearon (1994) suggests that democracies are better able to signal intentions (because they generate audience costs) and hence they are better able to commit to foreign policy actions. The implication is that international agreements signed by democracies, such as military alliances, are more likely to be honored. Formal models, such as Fearon’s model, consider the effects of institutional features on state behavior. They do not generally consider the impact of the changing international environment on state behavior, particularly the influence of norms created by that environment. Our theoretical approach provides an alternative perspective on the potential for credible commitments, suggesting that non-democratic states will more credibly commit to their agreements as the proportion of democracies in the system grows. We test this argument with data on the duration of military alliances. We find that alliances between non-democratic states have become more durable as the proportion of democracies in the world has increased, which is consistent with our view that the pacta sunt servanda norm has become stronger.

The paper is organized as follows. First, we describe the history of the pacta sunt servanda norm. Second, we review arguments relating regime type to the ability of states to credibly commit to agreements. Third, we elaborate our theoretical argument, which predicts that the pacta sunt servanda is growing stronger as the proportion of democratic states increases.

¹ We adopt the following definition of norms: “Norms either define (“constitute”) identities in the first place…or prescribe or proscribe (“regulate”) behaviors for already constituted identities…Taken together, then, norms establish expectations about who the actors will be in a particular environment and about how these particular actors will behave.” (Jepperson, Wendt, and Katzenstein, 1996:54)
Fourth, we present our research design followed by empirical analyses. Finally, we conclude with an overview of the arguments and findings in the paper.

The Pacta Sunt Servanda Norm

One of the fundamental principles of international law and all societies is the *pacta sunt servanda* (pacts made in good faith are binding), the idea that promises will be kept and that agreements will be carried out.\(^2\) Cooperation among states or individuals on the basis of agreements can occur only if there is a presumption that such agreements will be upheld (Bull, 1977: 19). The roots of the norm can be traced to ancient times, especially to the Chaldean, Egyptian, and Chinese civilizations. In such times, an agreement would include the gods of each party to a contract. If one side breached the contract, the gods of the other party could extract their revenge. This sentiment was carried over into most major religious texts including the Bible (Christianity) and the Koran (Islam) (Wehberg, 1959).

By the Renaissance period, exceptions to the general rule became manifest. Machiavelli, for example, believed that a Prince should keep his word, unless political necessity justified putting himself above law and justice. St. Thomas Aquinas also argued that contracts should be fulfilled unless “the circumstances existing in reference to persons or objects at the time of making the contract had changed” (Wehberg, 1959: 776-777). This became known as the doctrine of *clausula rebus sic stantibus* (as matters stand). Hobbes and Spinoza articulated this doctrine further, asserting that agreements could be breached if they conflicted with the security of the state or if fulfilling an agreement would be to the detriment of a leader’s own country. Hegel accepted this view, believing that “the law was a product of the will…contracts could be

\(^2\) For a detailed review of the history of the *pacta sunt servanda* and *rebus sic stantibus*, see Wehberg (1959).
valid only so long as they contributed to the welfare of the state” (Wehberg, 1959:780). Such thinking clearly influenced later Realist writers; the notion that alliances must remain flexible to maintain the balance of power is but one example.

One can clearly see a tension in these two doctrines. The *pacta sunt servanda* is viewed as a basic or general legal principle of international law, one that stands above the will of states. Some international law scholars argue that it has become a part of customary law (Wehberg, 1959: 783). The *clausula rebus sic stantibus*, on the other hand, values the self-interests of states above all else, especially those relating to security and welfare concerns. In other words, states may uphold treaties and international law, but they do so only if it suits their self-interests.³ “Interpreted in its narrowest sense, it [*rebus sic stantibus*] allows a state to terminate an agreement unilaterally if a fundamental change occurs in the circumstances that existed at the signing of the agreement…in its broadest terms, it ostensibly allows unilateral termination if an agreement is considered injurious by one party to the so-called ‘fundamental rights of necessity’ possessed by every state” (Kegley and Raymond, 1990: 90). Defenders of the *pacta sunt servanda* argue that it increases the level of trust and cooperation among states, while decreasing uncertainty, miscalculation, and fear. The *rebus sic stantibus*, on the other hand, enhances the level of uncertainty and fear in international relations, making international conflict more likely. Critics of this position contend that flexibility of commitments promotes greater fluidity among coalitions, increases crosscutting ties, allows for some states to act as “balancers”, and thus helps to preserve the peace.

³ There are numerous examples in history where states invoked the *clausula* including Russia in 1866 to denounce the 1878 Treaty of Berlin, Austria-Hungary in 1908 to justify annexing Bosnia and Herzegovina, Germany in 1914 to violate the neutrality of Belgium, and by Persia (1918) and China (1926) in their criticism of “unequal treaties” (Kegley and Raymond, 1990: 91).
Kegley and Raymond (1990) focus on these two competing systemic norms of treaty commitments in their study of interstate alliances. They argue that the dominance of the norm *pacta sunt servanda* or the norm *rebus sic stantibus* affects not only the probability of states’ compliance with alliance treaties, but also the chances for militarized conflict and crisis escalation to war. “The choice between flexible versus binding conceptions of commitment comprises a fundamental moral issue; the posture of states toward promissory obligations reflects a normative preference that relates directly or indirectly to *all other rules of international conduct*” (Kegley and Raymond, 1990: 44; emphasis added). They assert that while both norms have been prevalent in the history of international law, there has been an ebb and flow with respect to which norm is more predominant in a given time period.

Kegley and Raymond (1990) create an index of alliance commitment that identifies the strength of flexible vs. binding alliance commitments. This index is coded on the basis of legal treatises from 1816-1974, where “each text’s interpretation was classified in terms of whether *pacta sunt servanda* or a broad interpretation of *rebus sic stantibus* was seen by the author as the dominant norm governing obligations between parties to agreements in general and alliance treaties in particular during the period of history being described” (p. 96-97). The index is created by subtracting the percentage of authors who identify a flexible interpretation from the percentage of authors who identify a binding interpretation (and dividing by 100). This index ranges from +1.00 (binding alliance commitments) to –1.00 (flexible alliance commitments).4

An examination of the index reveals some interesting patterns. First, the period following the Napoleonic Wars was characterized by the most flexible norm of treaty commitments in the past 200 years. The index rises towards the middle point of the scale (where both flexible and binding interpretations were viewed as important) in the mid to late 1800’s,

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4 A plot of the index over time is presented in Figure 6.1 on page 126 (Kegley and Raymond, 1990).
followed by a decline shortly after World War I. There was a significant trend towards more binding alliance norms after World War II. While Kegley and Raymond’s prediction of an ebb and flow is supported, there is also an increasing trend over time towards a more binding commitment norm. In other words, the strength of the *pacta sunt servanda* norm has increased over the past two centuries.

Furthermore, the largest increase toward a binding commitment norm begins in the 1920’s, coinciding with the significant post-WWI and post-WWII increase in the proportion of democratic states in the international system (see Figure 1).⁵ We believe that this increasing trend is not coincidental. As we will demonstrate in the next section, democratic states can more credibly commit to international treaties and agreements. Not only are democratic states more likely to make credible commitments, we believe they have facilitated the spread of a system-wide norm favoring binding commitments. We view democracies as entrepreneurs who have promoted and strengthened the *pacta sunt servanda* norm.

### Democratic States and Credible Commitments

We asserted earlier that the propensity for democratic states to uphold the international agreements they sign is a norm among democracies.⁶ In this section, we review several theoretical arguments in the literature supporting this claim. While we recognize that the *pacta sunt servanda* is arguably a customary principle of international law that influences all states, we

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⁵ This proportion is calculated based on the number of states who score six or higher on the Polity 3 and Polity 98 democracy scale divided by the total number of Correlates of War system members. We are a bit troubled by the differences between the two data sets based on the number of democracies identified by the project in the mid to late 1800’s.

⁶ We adopt a definition of commitment similar to Gaubatz (1996:111): “A state makes a commitment to a course of action when it creates a subjective belief on the part of others that it will carry through with a certain course of action...The more interesting commitments are those that bind the state to take some set of actions that do not look to be in its narrow self-interest as an international actor.”
believe that democratic states are particularly amenable to accepting the principle of binding commitments.

Many of the theoretical arguments suggesting that democratic states make more credible commitments stem from a rationalist approach to international relations (e.g. Fearon, 1994; McGillivray & Smith, 2000; Leeds, 1999, 2003). One example is Fearon’s (1994) international crisis model. Treating a crisis as a political “war of attrition”, he assumes that leaders face two types of costs for backing down in a crisis: costs for conceding the issue at stake, and audience costs, or costs a leader faces for escalating a crisis and then backing down (as opposed to conceding the issue upfront). He asserts that states with greater audience costs will be better able to signal resolve and commit to courses of action (Fearon, 1994:581). Furthermore, because democratic leaders are more sensitive to public opinion and face a higher chance of being removed from office, they are able to generate greater audience costs. The model demonstrates that 1) democratic states will be much less likely to back down in crises than authoritarian states, 2) democracies will be less likely to utilize limited probes in foreign policy, and 3) there will be fewer stages of escalation in crises between democracies, because they can signal their intentions to each other more clearly. Fearon (1994:587) argues that his theoretical model has implications beyond crisis bargaining, suggesting for example that, “alliance relations between democracies may be less subject to distrust and suspicion if leaders would pay a domestic cost for reneging on the terms of the alliance.”

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7 We should note that most of the arguments reviewed in this section do not view credible commitments as norms, but rather emphasize how institutional features of democracies influence their ability to make credible commitments. We believe such arguments have implications for the creation and spread of democratic norms.

8 In this brief literature review we make distinctions only between democratic and non-democratic regimes. Cowhey (1993) argues that various features of domestic political institutions influence the ability of a state to commit credibly to international agreements. He identifies three factors that influence how domestic political institutions impact credibility: an emphasis on collective goods, division of power, and transparency. His case studies of the United States and Japan demonstrate some potential differences across democratic regimes in the degree to which they can make and break agreements.
Several other scholars have examined credible commitments in the context of alliance relations. As described earlier, Kegley and Raymond (1990) focus on systemic norms of binding vs. promissory alliance commitments. Their expectation is that periods of strong hegemony will be characterized by more binding alliance norms (where they make linkages to long cycle theory), although their empirical evidence does not generally support this claim. In looking at the impact of alliance norms on international conflict, they find that the more binding the alliance commitment norms, the lower the frequency of major power disputes and the lower the chances for escalation to war.

Taking a rationalist approach, Leeds (1999) argues that the likelihood of compliance with international agreements affects the chances that they will be formed in the first place. “When the actors believe a potential agreement will be upheld, they form the agreement if the benefits of cooperation exceed the costs involved in negotiating the agreement; if there are no benefits to cooperation and no reason to fear noncompliance, cooperation is not impeded” (Leeds, 1999:984). However, if there is uncertainty about the future, then states will be able to send more credible signals about future compliance if they face higher domestic political costs or higher international reputation costs for reneging on the agreement. Leeds’ arguments about accountability are very similar to Fearon’s (1994) arguments about audience costs. She also asserts that the flexibility of political institutions is important as well. Democracies may be advantaged in international bargaining because of greater domestic constraints (Putnam, 1988), but autocratic states may be willing to accept some degree of noncompliance due to their increased levels of flexibility. Such flexibility may increase the chances of cooperation among autocratic states. Taken together, these arguments suggest that jointly democratic and jointly autocratic dyads will exhibit higher levels of cooperation than mixed dyads (composed of one
democracy and one autocracy). However, Leeds finds that democratic dyads exhibit the highest level of cooperation, showing that democracies are best equipped to make credible commitments in international affairs.

Like Fearon and Leeds, Gaubatz (1996) argues that democratic states are more committed to their international obligations, although he attributes this to both institutional and normative characteristics of liberal regimes. He argues that the stability of democratic international commitments is enhanced by regularized leadership change (backed by juridical principles), regime stability, the similarity of liberal democratic political culture, economic and political interdependence, a strong voice for domestic actors, and transparency. His arguments about political culture are similar to those found in the democratic peace literature (e.g. Maoz and Russett, 1993; Russett, 1993), namely that democracies externalize the norms that characterize their domestic political processes. A key norm characterizing a democratic political culture is a respect for the rule of law (Tocqueville, 2000; see also Simmons, 1999, 2000; Slaughter, 1995).

The internal practice of liberal democracy requires a basic respect for legal commitments...International law has long been expressly incorporated into the domestic legal order in the Anglo-American legal tradition and has spread to most of the other major liberal democracies as well. In relations between states, legalism and the reputation of a state for reliability do seem to have at least significant rhetorical appeal in democratic polities...If democratic peoples hold legal norms to be of some overarching legitimacy, then this will increase their sense of the binding nature of international commitments (Gaubatz, 1996: 119).

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9 Leeds’ hypotheses are supported with empirical analysis of COPDAB events data from 1953-1978.
10 Non-democratic leaders may be less likely to be removed from office, but if removal occurs, greater changes in policy positions and preferences are more likely (Gaubatz, 1996:117).
11 Gaubatz notes that while the presence of strong domestic actors can make the signing of agreements more difficult, it also makes it harder for democracies to break their commitments after they have been ratified (see also Putnam, 1988).
All of these studies suggest that among all regime types, democratic states will exhibit the highest level of commitment to their international obligations. Agreements between democracies should last longer and they should involve higher rates of compliance. While previous research has demonstrated a greater tendency for democracies to uphold their international agreements, scholars have not considered the potential systemic impact of an increasing number of democracies.\textsuperscript{12} To what extent does the behavior of democratic states create international norms that become adopted by other states? In the next section, we pose an answer to this question, drawing from (Author’s) work on third party conflict resolution.

\section*{A Systemic View of Credible Commitments}

Drawing from Kantian philosophy and Constructivist work on norms, (Author) argues that democratic norms become international norms as the proportion of democracies in the international system increases. In this section, we provide a brief overview of this theoretical argument, and then discuss how it applies to the democratic norm of binding commitments.

The number of democratic states worldwide increased substantially in the past two hundred years, a trend that is consistent with the arguments articulated by Immanuel Kant in “Perpetual Peace” (1795/1991:99-105). The cornerstones of the Kantian peace are republican forms of government domestically, an international federation of free states, and a principle of cosmopolitanism, or universal hospitality. He argues that the categorical imperative to end warfare can be reached only through the spread of a domestic and international “rule of law”, whose principles are founded on individual freedom, legal equality, and separation of executive and legislative powers. (Author) asserts that the evolutionary process described by Kant is very

\footnote{\textsuperscript{12} In the past century alone, the proportion of democratic states increased from 19\% to over 50\% (Gurr and Jaggers, 2000).}
similar to the process of norm emergence and evolution described by Finnemore and Sikkink (1998).

Finnemore and Sikkink (1998) identify three stages of an international norm’s life cycle: norm emergence, norm acceptance, and internalization. In the first stage, a new norm arises, often due to the efforts of norm entrepreneurs. In the second stage, others begin to accept the norm, as the norm spreads or cascades to other members of the international system. When norm entrepreneurs have convinced enough other states to adopt the norm, a “tipping point” occurs. Institutionalization of the norm in international rules and organizations is important for cascading to occur. Finally, when virtually all states accept the norm, it becomes internalized.

(Author) applies this framework to the evolution of the democratic norm of third party conflict management (Dixon, 1993 1994, 1996; Raymond, 1994; Simmons, 1999), focusing on the first two stages of the norm cycle: norm emergence and norm acceptance. She shows how two prominent democratic states, Great Britain and the United States, played an important role in establishing a norm for third party dispute resolution. These states were entrepreneurs in the use of several forms of third party conflict management. Examples include the arbitral settlements between the United States and Great Britain in the 1794 Jay Treaty and the 1871 Alabama dispute in the aftermath of the Civil War, and the use of fact-finding inquiry in the 1904 Dogger Bank incident. The norm of third party conflict management spread in the international system through a process of socialization and institutionalization in international organizations.

It is useful to view the process of socialization described by Finnemore and Sikkink (1998) through the lens of Kant’s writings. Kant envisioned an endogenous and evolutionary relationship between war and democracy (see also Huntley, 1996; Mitchell, Gates, and Hegre, 1999). (Author) summarizes this argument:
War both creates and destroys states, and brings about new relations between states in the system (Kant, 1784/1991: 48). The experience of civil and international war improves the internal institutions of states over time. To protect this improvement in their domestic republican constitutions (the domestic rule of law), states seek the same improvements in their international relations (the international rule of law). The greater strength and success of republics over time encourages other states to liberalize (competition), while the “rule of law” externalized by democracies in their relations with each other (socialization) creates a more democratic international “rule of law” (Hinsley, 1963; Huntley, 1996).

The primary implication of this argument is that as the proportion of democracies increases, the rules of engagement between democracies should start to diffuse throughout the international system. Democratic norms are more likely to become international norms over time, as the proportion of democracies in the system increases. In Kant’s language, the greater the proportion of republican governments in the world, the more widespread is their international “rule of law”, which stems from their domestic rule of law and is perpetuated by peace among them. War creates more democracies, and the overall strength and success of these republics furthers their growth and influence over time.

Our theory suggests that the democratic makeup of the international system influences the behavior of democratic and non-democratic states alike. The behavior of democratic states may initially be distinctive, but norms of interaction between democracies will spread in the international system. Non-democratic states will become more likely to mimic the behavior of democratic states as the proportion of democracies in the system grows. (Author) provides empirical evidence to support this claim in the context of third party dispute resolution. Analysis of 667 peaceful settlements of territorial claims in the Americas from 1816-1999 demonstrates that third party settlement is sixteen times more likely for non-democratic dyads when the
proportion of democracies in the system is 50% versus zero. Clearly, the systemic environment affects the behavior of non-democratic dyads.

We believe that the theoretical argument applies broadly to democratic norms. In addition to the spread of the democratic norm of third party conflict management, we also believe that the democratic norm of binding commitments is becoming more prominent in international affairs as well. Thus the logic of the argument summarized above can be applied to the *pacta sunt servanda* norm as well.

It is useful to consider the first two stages of the norm’s life cycle (emergence and acceptance) in the context of the *pacta sunt servanda*. With respect to emergence, our discussion of the binding commitment norm earlier in the paper makes it clear that it has been around for a very long time, being traced to ancient civilizations. We are not claiming that democratic states created this norm per se. But we do believe democratic leaders in the modern era have stressed the importance of this norm in their foreign policy statements and behavior, and that we can view them as entrepreneurs for promoting a binding commitment norm.

Many democratic leaders have been vocal in affirming the sanctity of contracts throughout history. With respect to the British guarantee of the neutrality of Belgium in the 19th century, Earl Russell of the House of Lords said:

> Our obligations towards Belgium are most sacred. We have accepted those obligations separately as well as jointly with other Powers…We have not to choose between several courses. We have to follow only one, which is that of honour. We are bound to defend Belgium (Satow, 1925: 307).

A few decades later, American Secretary of State, Cordell Hull expressed a similar sentiment:

> We advocate faithful observance of international agreements…We believe in respect by all nations for the rights of others and performance by all nations of established obligations (Wehberg, 1959: 783).
Following Russia’s repudiation of an 1856 treaty with respect to the neutralization of the Black Sea, all major powers of Europe signed the London Protocol of January 17, 1871, recognizing that no breach in contract could occur without the consent of the other contracting parties (Wehberg, 1959: 784). While the *pacta sunt servanda* norm has existed much longer than democracy, there has been a clear strengthening of the norm as the proportion of democratic states in the world has grown.

A clear example of this trend is the observation that the *pacta sunt servanda* has become more prevalent in international organizations over time. Recall that the institutionalization of a norm in international organizations and rules is an important part of the cascading (or acceptance) process in the evolution of international norms. There are many modern examples of the institutionalization of the *pacta sunt servanda*. The preamble of the Covenant of the League of Nations calls for “a scrupulous respect for all treaty obligations in the dealings of organised peoples with one another”. The preamble of the Charter of the United Nations also recognizes the principle, seeking “to establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained” (http://www.un.org). Regional organizations further affirm the *pacta sunt servanda*, such as the Organization of American States (OAS). Article 18 of the OAS charter asserts: “Respect for and the faithful observance of treaties constitutes standards for the development of peaceful relations among States” (http://www.oas.org). Furthermore, the *pacta sunt servanda* has never been rejected or even doubted by a modern arbitral tribunal (Wehberg, 1959: 784).

In short, the logic of our theoretical argument suggests that the *pacta sunt servanda* norm will become more prevalent in international relations as the proportion of democracies increases. Democracies extend their domestic rule of law to an international rule of law, and thus the norms
of behavior that characterize democratic political processes become international norms as the federation of free states grows. The behavior of democratic states has systemic implications, which in turn affect the behavior of all states. We can state our primary hypothesis as follows.

**H₁:** As the proportion of democracies in the international system increases, non-democratic dyads become more likely to make credible commitments.

**Research Design**

Our theoretical argument suggests that non-democratic dyads should become more likely to credibly commit to their agreements as the proportion of democracies in the system grows, or as the *pacta sunt servanda* norm becomes stronger. To test our primary hypothesis, we adopt a research format similar to Gaubatz’s (1996) study of alliance duration. In his article, Gaubatz estimates the effect of regime type (and other variables) on the duration of military alliances. Our paper is concerned with the systemic spread of democratic norms on the duration of alliances, thus we modify Gaubatz’s approach to evaluate our theoretical claims.

Gaubatz’s (1996) study focuses on studying the institutional structure of states in order to determine if certain characteristics enhance or hurt a state’s ability to make credible commitments. Historically, statesmen thought that democracies were constricted in their ability to make strong commitments because of institutional characteristics such as the influence of majority preferences and the regular change of political leaders and heads of state. However, Gaubatz (1996) argues that democracies are better equipped to make lasting commitments in comparison to their autocratic counterparts. As noted above, his theoretical arguments emphasize both institutional and normative explanations.

Gaubatz (1996) utilizes military alliance duration as a way to measure the strength of international commitments. Gaubatz (1996:123) claims that if “democratic states are unreliable
because of shifting majority preferences, we would expect to see this reflected in the length of time that they are able to maintain alliances.” We agree that examining the duration of treaty commitments is a reasonable approach for testing hypotheses about credible commitments, although we (and Gaubatz) recognize some potential flaws with this approach. Duration could be affected by many factors, thus it may be more useful to study the reliability of alliance commitments in times of war. Leeds (2003), for example, analyzes states’ decisions to do as promised in military alliance treaties in times of war using the Alliance Treaty Obligations and Provisions (ATOP) data set (Leeds et al, 2002). She finds that a number of factors affect a state’s decision to abandon its alliance commitments during times of war. Democratic states are less likely to violate their alliance commitments, while states experiencing changes in military capabilities or domestic political institutions since the time of alliance formation are more likely to forgo their alliance commitments in war.\footnote{Leeds’ emphasis on circumstances that change since the time of alliance formation is very similar to the arguments discussed above regarding the \textit{rebus sic stantibus} principle.} In the future, we would like to expand our empirical analyses using the ATOP data, but due to data availability, we measure credible commitments using alliance duration as a first step.\footnote{It would have been ideal to use the ATOP data to test our primary theoretical hypothesis. However, the ATOP data is (currently) limited in its temporal context, with available data covering the years 1815 to 1944. This would not account for what Huntington (1991) described as the second and third wave of democratization. These waves occurred in the era of decolonization as well as in the post-1989 period with the demise of the Cold War. This would weaken our analyses, in that the ATOP data does not cover the post-World War II growth of the democratic community and the growth of the acceptance of democratic norms like the \textit{pacta sunt servanda}. Therefore, while data such as ATOP would have been ideally suited for our empirical analyses, its temporal restrictions constrained the scope of our data analysis. However, as data becomes more readily available in the future, controlling for the different situations which strains alliance commitments will enable us to more fully analyze the impact of systemic norms on the alliance behavior of non-democracies.}

**Operationalization**

A descriptive summary of the variables included in this study can be found in Table 1. The dependent variable is a measure of alliance duration in years, for the years 1816 through...
This variable is coded using the Correlates of War Formal Interstate Alliance dataset (Version 3.0). This data is censored, since there are some alliances that are still in force. The COW project identifies three types of alliances: defense pacts, neutrality pacts, and ententes. Gibler and Sarkees (2002:2) describe these forms of alliances:

- **Defense Pacts (Type I)** commit states to intervene militarily on the side of any treaty partner that is attacked. Neutrality and Non-Aggression Pacts (Type II) specify that parties remain militarily neutral if any cosignatory is attacked.
- **Finally, Ententes (Type III)** pledge consultation and/or cooperation in a crisis, including armed attack.

We include all three alliance types in our dataset, although as noted below, we control for the type of alliance commitment in the analysis.

A variable measuring the regime type of the dyad is also included in the model (Non-democratic Dyad). This measure was created using the Polity 98 data set (Gurr and Jaggers, 2000). A state is considered to be democratic if it scores six or higher on the Polity democracy scale. Non-democratic Dyad is a dichotomous variable, coded one when the dyad contains at least one non-democratic state and zero when the dyad is composed of two democratic states. We expect non-democratic dyads to have shorter alliances; in other words we expect this variable to have a negative effect on alliance duration (or a positive effect on the risk of alliance failure).

We include another variable (Proportion of Democracies) in order to account for the strength of democratic norms within the system. This variable measures the proportion of democratic states within the state system for a given year. For each year, it is measured by

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15 Gaubatz (1996) utilized an earlier version of the COW Alliance data. We have updated his data set utilizing the recently released alliance data.

16 The decision to include mixed dyads in the non-democratic dyad variable was based on Maoz and Russett’s (1993) argument that the norms of the least democratic state dominate in dyadic interactions. To determine if our results were sensitive to this coding, we also estimated duration models using a joint autocracy measure. The results were very similar to those reported in Table 2.
dividing the number of states scoring a six or higher on the Polity IV scale by the number of Correlates of War (COW) system members.\textsuperscript{17} Our theoretical argument predicts that as the proportion of democratic states in the international system grows, democratic norms (such as the \textit{pacta sunt servanda}) will become more prominent in the international community. Therefore, we expect to find this variable to have a positive effect on the duration of alliances (or a negative effect on the risk of alliance failure).

Recall the hypothesis being tested: as the proportion of democracies in the international system increases, non-democratic dyads become more likely to make credible commitments. More precisely, the duration of non-democratic military alliances should increase as the proportion of democracies increases. The best way to test this hypothesis is to create an interaction term between dyadic non-democracy and the democratic system variable. What we should observe is a marked increase in the duration of alliances between non-democracies as the proportion of democracies increases. In other words, the level and extent of democracy in the system should modify the behavior of non-democratic dyads.

We multiplied the dyadic and systemic regime variables to create an interaction term (Non-democratic dyad * Proportion of democracies). This variable measures the effect of the democratic systemic environment on the duration of non-democratic dyadic alliances. If significant, the effects of this system term should illustrate the acceptance of the \textit{pacta sunt servanda} as an international norm, not just one attributed to democratic states. Again, this variable should have a positive impact on the duration of alliances (or a negative impact on the risk of alliance failure).

\textsuperscript{17} We employed Version 1997.1 of the COW Interstate System data set (Small & Singer, 1982).
Finally, drawing from Gaubatz (1996), several control variables will be included in the model.¹⁸ Gaubatz (1996:135) observed that “democratic dyads tend more often to involve major powers and are more often related by defense pacts.” Therefore, it is important for us to control for these relationships so they do not affect our empirical results by inflating the effect of democratic dyads. The first of these variables controls for the effects of an alliance with a major power; we include two dummy variables indicating the presence of one or two major powers in the dyad.¹⁹ Singer and Small (1966) find major powers to be most capable of creating and maintaining credible commitments. Therefore, they expect to find alliances that contain major powers to have a longer duration than alliances between minor powers. However, Morrow (1991) claims that successful alliances are like patron-client relationships, where one alliance partner provides security while the other partner provides autonomy. He finds that asymmetric alliances are more likely to last longer than symmetric alliances (such as those between two major or minor powers).

Another pair of variables included in this study controls for the alliance type (Defense Pact and Neutrality Pact). Defense is coded one if the alliance is a defense pact and zero otherwise. Neutrality is coded one for a neutrality or non-aggression pact and zero otherwise. The omitted variable category is an entente. Both of these measures are coded using the Correlates of War alliance data. Singer and Small (1966) find that defense pacts have the longest duration rate, which is not surprising considering they are the strongest type of alliance. On the other hand, they find that neutrality agreements and ententes are much more flexible agreements, and therefore, do not last as long as defense pacts. Similarly, we expect to find that defense

¹⁸ The number of control variables we include at this stage is fairly limited, although we plan to check the robustness of our findings based on the inclusion of other factors omitted in this analysis (including a dummy variable for the Cold War period, whether the alliance is multilateral, and levels of trade between the dyad members).

¹⁹ This is based on the COW Project’s coding of major power status (Small & Singer, 1982).
Pacts have a positive impact on the length of alliance duration, while neutrality pacts should have a negative impact on alliance duration.

Following Gaubatz (1996), we use the dyad as our model’s unit of analysis. These dyads are identified using the Correlates of War alliance dataset. One shortcoming of “the use of dyads as the unit of observation [is that it] would give extra weight to multilateral treaties” (Gaubatz 1996, 127). This occurs because a multilateral alliance is coded as bilateral (dyadic) agreements between all the states in the alliance. However, Gaubatz (1996, 127) claims that “if …we are interested conceptually in the underlying relations between individual countries, we will need to turn to the analysis of dyads.” Therefore, we have adopted the dyad as our unit of analysis.

**Weibull Duration Model**

Because the dependent variable in this study is a measure of survival, we employ a Weibull duration model to estimate the coefficients for each of our models. Since a hazard rate (in this instance, alliance duration) cannot be less than 0, using OLS regression would violate the assumption of linearity. Hence, we must use the logarithmic transformation of the hazard rate as our dependent variable. A Weibull model allows “a model in which the log of the hazard [rate] increases or decreases linearly with the log of time” (Allison 1984, 25). The format of the

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20 Gaubatz (1996) includes three different models in his empirical analysis. Along with the dyad model, he uses a second model (Reduced Model 1), which uses the alliance as its focus. The duration variable is constructed using the beginning and ending dates of the alliance itself. Therefore, while states may come and go in an alliance agreement, the duration begins when the first states agree to become allies and terminates when the last state leaves the pact. Finally, the third model (Reduced Model 2) also focuses on the alliance itself, but uses a different measure of alliance duration. This model accounts for the different comings and goings of various states within the context of an alliance agreement. For instance, one alliance may have three different duration measures: one measure for a pair of states that form the alliance and stay until the end; another measure for another alliance partner who may have joined the alliance at a later date but stays until its termination; and another duration measure for an alliance partner who may have left the alliance before any of the other partners. Although these models are not included in this paper, we intend to include them in future analyses.
The Weibull model will help us to account for the change of the hazard rate over time in a linear manner.

Political scientists employ the Weibull model quite frequently in their studies using event history data. Because a Weibull model illustrates that the hazard rate is dependent upon time, it is most commonly used in studies of duration, such as the present one. In such models, alliances that form later in time obviously have a lower probability of a long duration compared to those alliances that are formed earlier. The Weibull model is estimated as follows:

\[ h(t) = \exp(\beta \cdot X + \alpha \ln t) \]

Allison (1984:25) explains that “this model generates a Weibull distribution for the time until event occurrence.” The inclusion of this time aspect in the model allows us to control for time’s effect on the probability of an event occurring.21

Figure 1 illustrates the Kaplan-Meier estimates concerning the alliance survival function. The figure shows the probability of an alliance surviving \( k+1 \) years at time \( k \). The two lines show the different hazard rates for democratic (jointdem1) and non-democratic (jointdem0) dyads. Observing the relationship between democracy and alliance survival, it is obvious that democratic alliances have a higher probability for survival compared to jointly autocratic or mixed dyads. This is consistent with the evidence presented in Gaubatz’s (1996) study. However, our empirical analyses below test the notion that this gap in duration between alliances composed of democratic and non-democratic states can grow smaller as the \textit{pacta sunt servanda} becomes accepted as an international norm.

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21 For a more precise explanation of the Weibull model, see Box-Steffensmeier and Jones (1997) and Allison (1984). In the future, we plan to estimate time-varying covariate duration models because several of our independent variables vary over time (including regime type and the proportion of democracies). We are fairly confident, though, that our results will not be very different. Reed (1997) replicated Gaubatz’s (1996) study of alliance duration using discrete event history analysis (which allows for time-varying covariates) and found that the results were very similar to what Gaubatz reported in his article.
**Empirical Analysis**

Table 2 presents the Weibull estimates of dyadic alliance duration. We present three models in the table. Each model contains four control variables: two variables counting the number of major powers in the dyad (one or two) and two variables coding the COW alliance type (defense or neutrality pact). The models differ based on the dyadic and systemic regime variables included in the estimation. In Model 1, we include only the dyadic measure for non-democracy, whereas in Model 2, we include only the systemic (proportion) measure of democracy. Model 3 includes both of these variables, along with their interaction.

We can see in Model 1 that the expected duration of military alliances is shorter for non-democratic dyads in comparison with democratic dyads.\(^{22}\) The coefficient is positive (increasing the rate of failure, or shortening the expected duration) and it is highly statistically significant (p=.007). In Model 2, we estimate only the effect of the systemic proportion of democracies. Our expectation is that agreements between states should endure for longer periods of time, as the democratic community grows larger. The empirical results support this expectation; the coefficient is negative and statistically significant (p=.000), demonstrating that the duration of alliances increases as the proportion of democracies increases. Finally, we combine these variables into a single model (3) in the last column.

There are several interesting things to observe. First, the sign for non-democratic dyad is still positive and significant, again indicating that alliances between non-democracies are shorter than alliances between democracies. This result is consistent with the theoretical arguments discussed above regarding democracies making more credible commitments. However, the

\(^{22}\) Gaubatz (1996) includes the regime type score of each dyadic partner separately. We replicated this model and found similar results; the more democratic the dyadic member, the longer the expected duration of the alliance.
interaction term between non-democratic dyad and the proportion of democracies in the system is negative, which is consistent with our claim that the systemic environment modifies the behavior of dyads involving at least one non-democracy. In particular, the expected duration of non-democratic military alliances increases as the proportion of democracies in the international system increases. This supports our primary hypothesis that the pacta sunt servanda norm is becoming more prevalent as the system becomes more democratic. In other words, agreements between non-democratic states are more likely to persist in periods where the systemic proportion of democracies is large.

We can see the substantive effect more clearly if we present the results in graphical form. We calculate the expected duration of a dyadic alliance agreement for non-democratic dyads varying the proportion of democracies in the system from zero to .50. The expected values were calculated using Clarify, Version 2.1 (Tomz, Wittenberg, & King, 2003; King, Tomz, & Wittenberg, 2000) and they are presented in Figures 2 and 3.\textsuperscript{23} In Figure 2, we set all control variables at their mode, which gives us a typical case involving defense pacts between minor powers. Figure 3 sets all control variables at their mode except the one major power in dyad variable (which is set to one).

Figure 2 plots the minimum, mean, and maximum expected alliance duration values in order to illustrate the effects of the growth of the proportion of democratic states in the system on the length of alliance duration for non-democratic dyads. It is apparent that the expected duration of a non-democratic alliance increases significantly as the proportion of democracies increases.

\textsuperscript{23} To calculate substantive effects using Clarify, you first estimate the model of interest using STATA. Next, you set the values of the independent variables to some value, and then the program draws 1000 simulations of the parameters from their asymptotic sampling distribution, producing 1000 simulated parameters. These are usually converted to some interesting quantity, such as the first difference or expected value of the dependent variable. We set the non-democratic dyad variable equal to one, and then varied the proportion of democracies and interaction variables from 0 to .50 in increments of .05.
increases from 0 to .50. When only 5% of the states in the international system are democratic, the predicted duration for a non-democratic alliance (defense pact with minor powers) is around 32 years (with a range from 21 to 49 years). When 25% of system members are democratic, the expected duration of a non-democratic alliance increases to 73 years (with a range from 56 to 94 years). Finally, when half of the states in the international system are democratic, the expected alliance duration increases to 205 years. While the variance around the prediction increases for higher values of the proportion of democracies (most likely due to fewer observations from which to make predictions), it is clear that the democratic make-up of the system as a whole has a significant effect on the expected duration of a non-democratic alliance. The effect is in the direction we predicted, with non-democratic dyads becoming more likely to credibly commit to their agreements.

Figure 3 also graphs the minimum, mean, and maximum values of expected alliance duration. However, we controlled for the presence of one major power within the dyad. Figure 3 displays a pattern similar to that found in Figure 2, where the expected duration of non-democratic alliances increases as the proportion of democracies in the system grows. It too demonstrates a larger variation in the predicted expected values for alliance duration as the proportion of democracies in the system becomes larger. We include this figure to illustrate that a non-democratic dyad that includes one major power has a lower expected duration length than a similar dyad with no major powers.

We turn now to a discussion of the results for our control variables. Consistent with Singer and Small (1966), we expected to find that defense pacts would have a positive impact on alliance duration, while neutrality pacts would have a negative impact. The variables for alliance type were both significant in all three models and in the predicted direction, supporting previous
claims about the impact on alliance duration that stems from the type of alliance. However, this was not the case for our major power variables. We reported conflicting previous findings concerning the effect of the inclusion of major powers in alliances on alliance duration. Singer and Small (1966) claimed that alliances comprised of major powers would last longer, while Morrow (1991) found that symmetric alliances (for example, an alliance between two major powers) have a shorter duration span than asymmetric alliances (an alliance between a major power and a minor power). The results shown in Table 2 do not support any of these claims. In fact, we found the inclusion of one or two major powers in an alliance to produce a significantly negative effect on the duration of the alliance.

In summary, we find that the duration of non-democratic military alliances increases substantially as the proportion of democracies in the system increases. This is consistent with our argument about the strengthening of the *pacta sunt servanda* norm. The evidence suggests that all states have become more accepting of binding commitment norms.

**Conclusion**

The rapid growth in the proportion of democratic states in the past two hundred years stands out as one of the most fundamental changes in the international system. Some have argued that the very nature of international relations could be transformed as a result of this trend towards democracy, that the rules and norms of the international system could be altered to reflect those of democracies. “Democracies constitute for the first time in history a majority of the states in the international system. Therefore, the norms governing *their* relations have a better chance now than earlier to become the dominant mode of interaction in world politics” (Chan, 1997:59).
Democratic peace scholars have shown that international interactions between democracies are distinctive in a number of ways. Democracies are not only less likely to fight wars against other, they are also more amenable to third party conflict resolution, less likely to fight over territory, more likely to engage in high levels of trade, and more likely to live up to their international agreements. Like democratic peace scholars, we believe that democratic norms and institutions have a profound impact on the behavior of democracies. However, our approach is unique because we also believe that this distinctiveness in democratic behavior has implications for democratic and non-democratic states alike.

We contend that as the proportion of democracies increases, the rules of engagement between democracies diffuse throughout the international system. Non-democratic states are more likely to behave like democratic states, adopting democratic norms, as the proportion of democracies increases. We focus on a particular democratic norm, the tendency to view international commitments as binding (or the *pacta sunt servanda*). We hypothesize that the duration of non-democratic alliances will increase as the proportion of democracies in the system grows, as the norm favoring binding commitments becomes stronger. Weibull duration analysis of military alliances produces support for our theoretical hypothesis. While non-democratic dyadic alliances do not last as long democratic alliances, the expected duration of non-democratic alliances increases substantially as the proportion of democracies in the international system increases. It is encouraging that we find evidence supporting the general theoretical argument when examining two different democratic norms: third party conflict management and the *pacta sunt servanda*.
References


TABLE 1 Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min.</th>
<th>Max.</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>Duration of alliance in years</td>
<td>19.01</td>
<td>17.30</td>
<td>1</td>
<td>182</td>
<td>1</td>
</tr>
<tr>
<td>Non-democratic Dyad</td>
<td>1 if one or both states are non-democratic; 0 otherwise</td>
<td>0.88</td>
<td>0.33</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Proportion of Democracies</td>
<td>Proportion of COW system members scoring 6 or higher on Polity democracy scale</td>
<td>0.32</td>
<td>0.08</td>
<td>.03</td>
<td>0.51</td>
<td>0.32</td>
</tr>
<tr>
<td>One Major Power</td>
<td>1 if one states is a COW major power; 0 otherwise</td>
<td>0.13</td>
<td>0.34</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Two Major Powers</td>
<td>1 if both states are COW major powers; 0 otherwise</td>
<td>0.03</td>
<td>0.17</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Defense Pact</td>
<td>1 if the alliance is a Defense pact; 0 otherwise</td>
<td>0.65</td>
<td>0.48</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Neutrality Pact</td>
<td>1 if the alliance is a Neutrality or Non-aggression pact; 0 otherwise</td>
<td>0.16</td>
<td>0.37</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
### TABLE 2: Weibull Estimates of Dyadic Alliance Duration

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Est.(S.E.)</td>
<td>Est.(S.E.)</td>
<td>Est.(S.E.)</td>
</tr>
<tr>
<td>Non-democratic Dyad</td>
<td>0.277** (0.103)</td>
<td>--</td>
<td>2.225** (0.748)</td>
</tr>
<tr>
<td>Proportion of Democracies</td>
<td>--</td>
<td>-3.230** (0.359)</td>
<td>2.353 (1.899)</td>
</tr>
<tr>
<td>Non-democratic Dyad*Proportion</td>
<td>--</td>
<td>--</td>
<td>-5.781** (1.949)</td>
</tr>
<tr>
<td>One Major Power</td>
<td>0.378** (0.079)</td>
<td>0.327** (0.079)</td>
<td>0.329** (0.080)</td>
</tr>
<tr>
<td>Two Major Powers</td>
<td>1.007** (0.126)</td>
<td>0.685** (0.133)</td>
<td>0.624** (0.135)</td>
</tr>
<tr>
<td>Defense Pact</td>
<td>-0.579** (0.076)</td>
<td>-0.643** (0.077)</td>
<td>-0.640** (0.077)</td>
</tr>
<tr>
<td>Neutrality Pact</td>
<td>1.600** (0.091)</td>
<td>1.759** (0.090)</td>
<td>1.765** (0.090)</td>
</tr>
<tr>
<td>Intercept</td>
<td>-3.345** (0.134)</td>
<td>-2.013** (0.138)</td>
<td>-4.174** (0.738)</td>
</tr>
<tr>
<td>p</td>
<td>0.829**</td>
<td>0.824**</td>
<td>0.825**</td>
</tr>
<tr>
<td>Log-likelihood:</td>
<td>-2900.725</td>
<td>-2782.633</td>
<td>-2777.908</td>
</tr>
<tr>
<td>LR $\chi^2$ (p-value):</td>
<td>738.42 (p &lt; .001)</td>
<td>866.56 (p &lt; .001)</td>
<td>876.01 (p &lt; .001)</td>
</tr>
<tr>
<td>N:</td>
<td>2407</td>
<td>2260</td>
<td>2260</td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01

Note: Coefficients rather than hazard ratios are reported, where negative coefficients decrease the rate of alliance failure (or increase alliance duration), and positive coefficients increase the rate of alliance failure (or decrease alliance duration).
FIGURE 1

Proportion of Democratic States, 1816-1997

Year

Polity 3
Polity 98
Figure 2: Dyadic Alliance Survival Functions

Kaplan-Meier survival estimates, by jointdem

analysis time
Figure 3: Predicted Alliance Duration for Non-democratic Dyads

Proportion of Democracies in System

Duration (Years)
Minimum
Maximum
Figure 4: Predicted Alliance Duration,
Non-democratic Alliances with One Major Power

Proportion of Democracies in System

Duration (Years)
Minimum
Maximum

Duration (Years)