

# Hand-Tying versus Muscle-Flexing in Crisis Bargaining

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## **Abstract**

Theories of crisis bargaining suggest that costly signals can enhance the credibility of one's coercive threats. In particular, engaging in conspicuous military mobilizations or demonstrations of force are thought to communicate one's resolve in a crisis. Yet there is disagreement about why this might be the case. One set of theories points to audience costs, emphasizing the hand-tying political effects of visible military action. A different collection of theories argues that mobilizations create bargaining leverage by shifting the balance of power in favor of the mobilizing side. This paper uses new data on coercive threats in international crises to discriminate between these two explanations. It makes two key contributions. First, it presents systematic evidence that military mobilizations during a crisis bolster the effectiveness of coercive threats. Second, it demonstrates that such signals are likely effective because they alter the local balance of military power, not because they generate audience costs.

# Introduction

What makes coercive threats credible? In military crises, states generally hope to achieve their political objectives without fighting costly wars. Coercive threats can help accomplish this by convincing the adversary that it is better to back down than to fight. Yet how can states make these threats more effective? One common answer is that conspicuous military mobilizations or demonstrations of military force can communicate the credibility of a state's threats during a crisis (e.g., Fearon 1997; Lai 2004; Slantchev 2005, 2011). Yet while public military maneuvers are widely considered to be effective signals of resolve, there is disagreement about why this may be the case.

One view argues that military maneuvers create *hand-tying* effects by making it politically costly for leaders – especially democratic leaders – to back down.<sup>1</sup> These costs, known as “audience costs,” are a form of political punishment imposed on a state's leader if he or she fails to follow through on a public threat. The prospect of losing domestic support – or even political office – is thought to discourage leaders in democracies from renegeing on commitments after escalating a dispute through public statements or conspicuous shows of force. In this view, the political sanctioning mechanisms in democracies are institutionalized and therefore observable to outsiders, thereby allowing democracies to more effectively communicate private information about their resolve through military signals. According to this literature on “democratic credibility,” public military mobilizations or demonstrations of force tie the hands of democratic leaders, creating incentives to risk war rather than back down and face the wrath of the domestic audience.<sup>2</sup> This commitment process demonstrates that the actor is highly resolved, thereby alleviating uncertainty about the state's willingness to fight. The ability to generate audience costs through military signals, according to this perspective, gives democracies an advantage in crisis bargaining.

A different perspective argues that military actions during crises bolster bargaining leverage not by shaping political incentives, but instead by shifting the local balance of military

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<sup>1</sup>See, for example, Fearon (1994); Schultz (1998); Gelpi and Griesdorf (2001).

<sup>2</sup>Weeks (2008, 2012) argues that some autocratic states also have institutionalized and observable sanctioning mechanisms.

power in favor of the mobilizing side.<sup>3</sup> According to this logic, which we term “muscle-flexing,” military signals improve an actor’s probability of prevailing on the battlefield if war breaks out. Military maneuvers that entail the actual movement of forces to the potential theater of operations alter the local balance of power. In this view, military action increases the mobilizer’s readiness for war, raises the opponent’s predicted costs of fighting, and reduces uncertainty about the probable outcome of war (Slantchev 2011). This perspective expects that military mobilizations and deployments, which change the balance of power, will be more effective signaling devices than symbolic displays of military force, which do not shift the balance of power.

In short, these two theoretical explanations offer different – though not necessarily competing – predictions about when military signals will make coercive threats more effective. The first explanation points to the role of political institutions, arguing that transparent institutions allow democracies to demonstrate resolve more effectively than non-democracies. The logic of muscle-flexing implies that military signals matter because of their military – not political – effects.

In this paper, we attempt to discriminate between these two sets of arguments by analyzing the effects of military signals on the outcomes of compellent threats (Sechser 2011; Post 2014). When do target states acquiesce to threats and when do they resist? While political and military effects both likely contribute to the increased effectiveness of coercive threats, this paper aims to determine which of these two effects dominates in crisis bargaining. Using data on over 210 compellent threats between 1918 and 2001, quantitative analyses demonstrate that military mobilizations seem to work mainly through changes in the local balance of power. The regime type of the signaler is unrelated to the effects of military signals in our analysis; by contrast, signals that shift the balance of power increase the success rate of coercive threats more than signals that have primarily symbolic effects. We conclude that while conspicuous military maneuvers may signal resolve through several channels, they are effective primarily when they alter adversaries’ estimates of the probable winner in wartime.

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<sup>3</sup>See, for example, Slantchev (2011); Tarar (2013).

The paper proceeds as follows. First, we outline the conceptions of military mobilization according to the logics of hand-tying and muscle-flexing as they exist in the current literature. We then derive hypotheses from these two logics concerning the conditions under which military signals are most likely to affect the credibility of threats. The second section describes the paper’s research design and data. In the third section we conduct a series of empirical tests on how military signals impact the success of coercive threats. We find that military signals are effective signals of resolve but that these signals are most effective when they alter the local balance of power, and this effect does not vary with audience cost capacity. The fourth section concludes with implications of these findings for theories of military mobilization and costly signaling more generally.

## Military Signals and Coercive Threats

One of the most debated issues in international relations scholarship is how a state can establish the credibility of its commitments – in particular, threats that would be costly to execute (e.g., Fearon 1997; Huth 1999; Kurizaki 2007; Trager 2010; Whang, McLean, and Kuberski 2013; McManus 2014). Schelling (1966: 36) argues that making a threat credible requires two steps: 1) having the intentions “to carry out a threat, even deliberately acquiring them” if necessary; and then 2) “communicating them persuasively to make other countries behave.” However, a state can easily make a threat credible through waging war – so why doesn’t a state just fight to protect all of its commitments or defend the truthfulness of its threats and promises? The answer to this puzzle relates to the costliness of war, which makes war an inefficient process for resolving disputes. A state would prefer to maintain its commitments without paying the financial and human costs of waging war.

The high costs of war should ensure that a range of settlements exists that both sides prefer to war, but Fearon (1995) identifies three reasons a peaceful settlement does not always occur between rational actors: private information and incentives to misrepresent that information, commitment problems, and issue indivisibilities. This paper focuses on the informational explanation. When states have complete information about each other’s

resolve and capabilities, they should be able to resolve their disagreements without resorting to force. However, when information is distributed asymmetrically – if either side has private information about their resolve or capabilities – then states may be unable to agree on a mutually beneficial settlement. To overcome the problem of incomplete information, actors can reveal their true resolve (their willingness to wage war over the issue) if the signals they send are costly in such a way that a resolved type is more likely to bear the costs of those signals than an unresolved type. Highly resolved types can distinguish themselves from unresolved types by taking actions to increase the probability of war that a state with a low expected probability of war would generally shy away from. Less resolved states may occasionally risk these actions in an effort to convince audiences that their resolve is high in an effort to gain additional concessions (Nalebuff 1991).

These theories of crisis bargaining suggest that costly signals can enhance the credibility of one’s coercive threats. A military signal, which can entail a military exercise, troop mobilization, show of force, deployment of military assets, or other military maneuver, is one form of costly signal. According to a number of theories,<sup>4</sup> military signals demonstrate resolve and increase the probability of coercive threat success. This paper evaluates two sets of theories that attempt to explain *why* military signals are effective. Both agree that militarized signals increase threat credibility, but they disagree on how they influence the crisis participants’ incentives and calculations. One view is that military signals alter the political incentives of leaders, creating disincentives to backing down. This *hand-tying* political effect commits the mobilizing state to stand firm, and it confronts the adversary with the choice of either making concessions or escalating the dispute to war. On the other hand, military signals may generate bargaining leverage by shifting the balance of power in favor of the mobilizing side. This *muscle-flexing* military effect puts the adversary at a disadvantage should the dispute escalate to war. Based on either logic, the high costs of war suggest that when the target is faced with a resolved challenger willing to issue a military signal, the target should be more likely to make the concessions necessary to resolve the dispute peacefully. By outlining the implications of these two logics, we seek to understand whether military

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<sup>4</sup>Fearon (1997); Lai (2004); Slantchev (2005, 2011); Sechser and Fuhrmann (2013)

signals influence crisis outcomes primarily through these hand-tying political effects or the bargaining leverage created by muscle-flexing.<sup>5</sup>

### *Democratic Hand-Tying*

According to the logic of hand-tying, military maneuvers work as costly signals by creating political costs that a democratic leader will suffer if he fails to follow through on his foreign policy promises. In the context of coercive threats, a leader will incur domestic audience costs if he threatens publicly and subsequently reneges on his threat without achieving the stated policy goals. In turn, public military mobilization is a visible threat of military action that domestic audiences can use to assess crisis performance. These actions tie hands because they further commit the leader to a policy position, and that leader will have to pay costs if he gets caught in a bluff. While domestic political groups in both democracies and autocracies can coordinate to sanction and thereby impose audience costs on their leader (Weeks 2008, 2012), “democratic credibility” theories argue that democracies have an easier time generating audience costs and/or that democratic institutions make these costs more transparent to international audiences in bargaining (Fearon 1994; Schultz 1998, 1999, 2001a).

The mobilization of the military, according to this set of theories, amounts to a dramatic public declaration to an opponent about the state’s willingness to wage war. The publicizing of the commitment through a military signal presents the opponent with a highly resolved challenger, so the target should be more likely to concede and avoid escalation to war. Theories of audience costs argue that publics view a leader who does not follow through on his threats in international crises as incompetent or having tarnished the nation’s “credibility, face, or honor.”<sup>6</sup> This literature assumes that the public strongly prefers consistency

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<sup>5</sup>We acknowledge that military signals also have cost-sinking effects in crisis bargaining. However, the sunk costs perspective renders the apparent success of military signals puzzling. The financial costs of mobilization are insufficient for demonstrating resolve (Fearon 1994: 580), so focusing on this type of signal has led scholars to ignore military mobilization as a useful signaling device (Fearon 1997; Jervis 1970; Rector 2003). Military mobilization gains its signaling value through its influence on states’ strategic calculations and incentives to follow through on a threat, not through its monetary cost (Fearon 1994; Slantchev 2005).

<sup>6</sup>Fearon (1994: 581). See also Tomz (2007).

between a leader’s statements and actions (Chaudoin 2014).<sup>7</sup> For democratic leaders especially, maintaining office is a primary concern, so they should avoid making promises that they will not keep. Instead of focusing on the public’s view of the crisis, Schultz (1998, 1999, 2001*a*) demonstrates how opposition parties within the democratic state use crises as opportunities to oppose and embarrass the head of state. While his theory relies on audience costs as a latent constraint in democratic regimes,<sup>8</sup> he argues that institutional transparency, not advantages in audience costs, allows democracies to better reveal preferences during bargaining.

Each of these rationales is consistent with the hand-tying logic we test here. Both conspicuous military maneuvers and public threats act as a clear signal that the domestic political audience – whether the public or the political parties – will punish a leader that reneges on his threat. For example, President Obama declared in August 2012 that the Syrian use of chemical weapons would be “a red line,” prompting a U.S. invasion into the area. He coupled his red line position against Syrian chemical weapons with limited demonstrations of air and naval power in the Mediterranean Sea and near Southern Turkey. According to this set of theories, such a statement coupled with military maneuvers ties the President’s hands. A year later, on August 21, 2013, reports eventually confirmed as true spread that the Syrian regime had killed hundreds in a poison-gas attack in eastern Damascus. When Syria crossed the red line and President Obama did not follow through on his threat, the American press, Republican party, and public sharply criticized his lack of action, imposing “audience costs” on him for his inconsistency.

According to hand-tying logic, as democracies escalate from verbal threats to military signals, they should more easily and quickly generate hand-tying advantages over nondemoc-

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<sup>7</sup>Recent experimental evidence demonstrates that citizens in the United States do disapprove of leaders that renege on their commitments (Tomz 2007; Trager and Vavreck 2011; Levendusky and Horowitz 2012), although this work does not necessarily demonstrate that public disapproval translates into punishment at the ballot box. Indeed, it is difficult to test whether audience costs actually exist, because strategic-minded leaders should avoid incurring them by only issuing threats they intend to uphold (Schultz 2001*b*, 2012; Potter and Baum 2014). Empirical studies therefore rely on indirect measures of audience costs to demonstrate the impact of hand-tying, showing that democracies are more likely to prevail in interstate disputes (e.g., Eyerman and Hart 1996; Partell and Palmer 1999; Schultz 1999, 2001*a*).

<sup>8</sup>The domestic opposition has incentives to oppose the governing party primarily because it seeks election by the domestic constituency to replace the governing party in office.



racies. Thus, theories of audience costs predict that a democracy can credibly communicate its preferences with fewer escalatory steps than an equivalent nondemocracy (Fearon 1994: 585). In line with these theoretical predictions, Gelpi and Griesdorf (2001) show that democracies tend to win international crises more frequently when they demonstrate resolve through military action. According to this argument, militarized action increases audience costs with the level of escalation. Military signals increase the visibility and salience of the crisis, and democratic institutions make the military mobilization process even more visible (Russett 1993; Schultz 2001*a*). These increased audience costs should bolster the incentives of a leader to stand firm; democratic transparency subsequently increases threat credibility. Thus, while military demonstrations may enhance the credibility of threats for all regime types, hand-tying theories predict that democratic states can better leverage these military signals.

This leads to our first hypothesis. If military signals work mainly through the mechanism of political hand-tying, then they should be comparatively more effective when used by democracies.

**Hypothesis 1.** *Military signals from democracies will increase threat success, on average, more than military signals from non-democracies.*

## *Muscle-Flexing*

A different (though not necessarily competing) view of signaling emphasizes what we term “muscle-flexing” as a potential explanation for the success of military signals. Theories in this vein argue that military mobilization creates bargaining leverage by shifting the balance of power in favor of the mobilizing side. In contrast to the logic of hand-tying, muscle-flexing is thought to increase the mobilizer’s bargaining leverage regardless of its regime type. Military mobilization contributes positively to the probability of victory in a dispute and thus increases its expected utility for war (Slantchev 2005). By increasing a state’s expected value for fighting, such signals also increase its willingness to fight, thereby communicating credibility. Conversely, it decreases the opponent’s probability of victory in war, thereby decreasing that state’s value for fighting. We turn to this logic in more detail below.<sup>9</sup>

Hand-tying and muscle-flexing theories of military signaling are similar in an important respect: they both emphasize the importance of a public signal. For hand-tying theories, signals need to be public in order to engage domestic audiences. However, for muscle-flexing theories, signals need to be visible to the adversary so it can update its beliefs about the local balance of power. States that merely want to prepare for war – and are less concerned about resolving problems of asymmetric information – can mobilize secretly to gain the advantage of a surprise attack (Lai 2004; Slantchev 2010). For example, some scholars argue that China chose not to clearly demonstrate its willingness to enter the Korean War in order to prepare a surprise attack against American forces in 1950 (Jervis 1970; Sartori 2005). States that publicly mobilize their military, however, may be trying to communicate their willingness to accept concessions short of war by sacrificing the element of surprise.<sup>10</sup>

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<sup>9</sup>We are aware that what we classify as “muscle-flexing” can be consumed under the umbrella definition of “hand-tying.” As Fuhrmann and Sechser (2014: 922) note, “the objective of a hand-tying signal is to manipulate the sender’s future payoffs in order to make a desired course of action more attractive.” Under this broad interpretation, both hand-tying and muscle-flexing tie hands by altering future payoffs and creating incentives to continue the crisis. However, the two effects described in this paper tie hands in very different ways, one through manipulating *political* incentives and the other by creating *military* advantages. Political hand-tying through audience costs motivates the leader to continue the crises, and the mechanism relies on the domestic political process of signaling states. Military hand-tying signals resolve by preparing the state for war, and the mechanism relies on shifting the local balance of power. We term the latter “muscle-flexing” to distinguish it from political hand-tying.

<sup>10</sup>To be sure, shifting the balance of power – even locally – can create commitment problems in

Muscle-flexing theories focus primarily on military moves that effect a discernible change in the local balance of power. This logic implies an important distinction among military signals. Actual mobilizations or deployments of military assets are likely to have a stronger effect, according to this view, compared to public displays of preexisting military forces. Those military moves that strongly shift the balance of power will be more effective at inducing compliance. For example, when bombers fly over an adversary’s capital city as a show of force, this does not shift the balance of power in the same way as, say, the deployment of naval vessels or movement of ground forces to the potential theater of operations. As Schelling (1966: 91) argues, some demonstrations of force are purely efforts to manipulate risk by increasing the chance of an accident – they do not alter the balance of power between the disputants. On the other hand, the movement of thousands of troops to the arena of operations generates a local military advantage that did not exist previously. For example, when the United States sent infantry, warships, and air assets into the Persian Gulf in 1991 to reinforce its demand that Iraq evacuate Kuwait, this action changed the balance of military power in the Kuwaiti theater and prepared the United States for a successful military operation.

This discussion leads to a second set of hypotheses. To assess whether military signals increase threat effectiveness through their influence on the local balance of power, we distinguish between military signals that involve the actual movement of military assets into a conflict theater and demonstrations of force that have no meaningful effect on the local balance of power. We predict that those military signals that entail a change in the local

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bargaining (Fearon 1995: 381). Revising the crisis balance of power may narrow or even close off the bargaining range if it creates large first strike or offensive advantages (Rector 2003; Mackey 2014; Tarar 2013; Slantchev 2011). Tarar (2013: 343) finds that military mobilization can generate bargaining leverage up to a certain point – but past a certain threshold, the power shift caused by the signaler’s mobilization “overwhelms the signaling role and mobilization leads to certain war” waged by the target (Powell 2004, 2006).

However, military mobilizations communicate credibility by increasing the risk of war according to the logics of both hand-tying and muscle-flexing. The very purpose of a costly signal is to manipulate the risk of war to establish credibility (Schultz 2001*a*). Tying hands through audience costs may create a situation where parties to a dispute prefer conflict to paying the costs for backing down (Fearon 1994). Muscle-flexing logic implies that the power-shift mechanisms of military mobilization increase the probability of target compliance but also risk prompting the opponent to wage war rather than concede. In both, military mobilization signals resolve by risking war, but sometimes by making war more attractive for one or both actors

balance of power will be more effective than symbolic shows of force.

**Hypothesis 2.** *Military signals that entail a movement of military assets will increase the effectiveness of coercive threats more than demonstrations of force.*

Further, this effect should be similar for democracies and nondemocracies:

**Hypothesis 3.** *The coercive effect of moving military assets does not depend on the signaler's regime type.*

### ***Brinkmanship***

A third view of signaling emphasizes military signals as exercises in *brinkmanship*, manipulating the shared risk of war (Schelling 1960, 1966). According to this logic, military mobilizations increase credibility through “the threat that leaves something to chance.” Conspicuous military actions – whether shows of force or full military mobilization – increase the risk of an accident. This risk introduces an uncertainty element: any military move increases the chances of escalation and inadvertent war. Schelling (1966: 109) notes that it is the “sheer inability to predict the consequences of our action and to keep things under control, and the enemy’s similar inability, that can intimidate the enemy. . .” The risk-enhancing effect of military signals demonstrates the nation’s resolve and willingness to wage war.

This discussion leads to our third and final hypothesis. According to the logic of brinkmanship, we would expect all military signals to introduce an additional element of risk into the equation. Military signals should in turn be more effective than purely verbal threats at inducing compliance. Because both raise the risks of crisis escalation, this logic predicts that demonstrations and movements of military forces will be equally effective.

**Hypothesis 4.** *Military signals – whether they entail a movement of military assets or a demonstration of force – will equally increase the effectiveness of coercive threats.*

**Hypothesis 5.** *Military signals will increase the effectiveness of coercive threats compared with no military signal.*

Further, this effect should be similar for both demonstrations of force and military mobilizations.

**Hypothesis 6.** *The coercive effect of moving military assets versus demonstrations of force will be equal.*

## Methods and Data

To evaluate these hypotheses, we turn to a dataset of coercive threats. The Militarized Compellent Threat (MCT) dataset contains information about 210 “compellent” threats issued between 1918 and 2001. The dataset defines a compellent threat as “an explicit demand by one state (the challenger) that another state (the target) alter the status quo in some material way, backed by a threat of military force if the target does not comply” (Sechser 2011: 380). In other words, the dataset contains episodes with two components: a verbal coercive *demand* issued from one state to another, coupled with the *threat* of military force. Each observation in the dataset contains a single challenger and target, so that episodes involving multiple participants on one side are broken up into dyads.

The MCT dataset offers important advantages, as well as limitations, for testing the hand-tying and muscle-flexing logics of military action in international disputes. One key advantage is that it allows for the straightforward evaluation of the outcomes of dispute episodes. Each episode is triggered by a coercive demand, which must be issued verbally in order to be included in the dataset.<sup>11</sup> The advantage of this feature is that it mitigates ambiguity about what was demanded, so that scholars can easily determine whether the demand was successful or not. At the same time, it is important to acknowledge that many – perhaps even most – coercive demands in international crises are not made explicitly. This feature therefore enhances the internal reliability of the analysis, though at some cost to generalizability.

Second, there are advantages to evaluating the mechanisms of military signaling in compellence episodes, rather than deterrence episodes. As Schelling notes, compellence is distinct from deterrence in that the objective of the threatening state is to change the status quo, rather than maintain it. In other words, for the target to comply, it must take some conspic-

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<sup>11</sup>Note that the MCT dataset requires only that the demands be made verbally; the threat of force can be made either verbally or via a demonstrative military signal.

uous action – for example, relinquish a possession or institute a policy change. By contrast, in deterrence, compliance involves simply refraining from action. Deterrence episodes therefore create a difficult inference problem: a target that appears to “comply” with a deterrent demand may have never planned to act at all.<sup>12</sup> We therefore cannot necessarily attribute compliance to the threat. Using deterrence episodes to evaluate the effects of military signaling therefore could lead to mistaken inferences. In compellence, by contrast, this inference problem is less severe, since it would occur only if a target was threatened when it already planned to act. While such instances may exist, it seems likely that they are rarer than their deterrence counterpart. At the same time, compellent threats represent only a narrow slice of the coercive diplomacy spectrum, so we cannot necessarily extrapolate the findings below to deterrent threats. As above, our choice of data aims to bolster internal validity at the expense of generalizability. We leave the analysis of military signaling in deterrence episodes for future research.

### *Dependent Variable*

Military signaling during crises is designed to influence crisis outcomes: states employing such signals are, in principle, more likely to achieve their objectives without a fight. The dependent variable in the analyses below is therefore the success or failure of a coercive threat. A successful threat meets two conditions: first, the target complies voluntarily and in full with the challenger’s demands, and second, the challenger does not engage in military action that inflicts more than 100 fatalities on the target. The second criterion ensures that we are able to distinguish coercive victories from victories achieved by the successful use of military force. The logic of military signaling argues that signals ought to induce action by the target, so it would be inappropriate to include “victories” that are won through military campaigns, since they achieve their objectives through physical force rather than through fear (Downes and Sechser 2012).

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<sup>12</sup>Lebow and Stein (1990) and Huth and Russett (1990) debated this issue in their well-known exchange about deterrence theory in *World Politics* 25 years ago.

## *Independent Variables: Military Signals and Regime Type*

Our primary measurement of military signaling comes from the MCT dataset. The variable MILITARY SIGNAL indicates whether the challenger employed a military exercise, troop mobilization, show of force, deployment of military assets, or other military signal to bolster its verbal threat. This variable offers a rough picture of the frequency with which challengers employ military signals during coercive diplomacy. In the MCT dataset, challengers employ some form of military signal roughly 75% of the time, electing to rely on verbal threats of force the remaining 25% of the time.

Given that both sets of theories argue that military signals increase the credibility of threats, however, we cannot simply examine how states respond to general demonstrations of force: we must distinguish between hand-tying and muscle-flexing signals. As we discussed earlier, military signals can come in at least two varieties: measures that involve the redeployment of military forces to the potential conflict zone, and public maneuvers that are designed to showcase the challenger's forces but not alter the local balance of power. The MCT dataset, however, does not distinguish between different types of military signals. For this more fine-grained data, we turn to Post's (2014) research on military signaling. Post collected data on the type of signal employed in each MCT episode, coding whether the signal involved land, naval, or air forces, or some combination thereof. Signals that involved land or naval forces almost always entailed the redeployment of physical assets; by contrast, signals involving exclusively air assets typically employed flyovers or high-profile exercises, but not the deployment of assets. We therefore can use these classifications to create two variables for testing the hypotheses in the previous section. The first variable, MOBILIZATION, indicates whether a challenger moved military assets into the likely zone of conflict during a dispute. The second variable, SHOW OF FORCE, indicates military signals that do not involve additions to the challenger's local military forces. These signals most often include displays or shows of force, such as missile tests, bomber overflights, or exercises involving troops already present in the conflict zone.

The logic of hand-tying emphasizes that some governmental regimes – specifically, democracies – are better able to tie their hands through public actions than others. We employ

a standard indicator of democracy, using the 21-point Polity scale to denote states whose overall regime score is 16 or above. We also create a second measure which indicates a challenger's *relative* ability to generate audience costs, compared to its target, to test the hypothesis that democracies enjoy a signaling advantage only if they are able to generate more audience costs than their opponent (Gelpi and Griesdorf 2001). The variable CHALLENGER AUDIENCE COST ADVANTAGE therefore indicates whether the challenger has a higher Polity score than its target.

### *Control Variables*

We include several additional variables to account for other factors that might influence the success and failure of coercive threats. First, BALANCE OF POWER measures the challenger's share of material capabilities in a dyad, as defined by the Correlates of War Project's Composite Indicator of National Capabilities (CINC) score (Singer 1987). The CINC variable contains information about individual states' annual share of global capabilities across six dimensions: military personnel, military expenditures, energy consumption, iron and steel production, urban population, and total population. The CINC score is calculated by computing a state's proportion of capabilities in each of the six categories, and then averaging the six proportions.

Second, we code for the type of issue at stake in each dispute. Most research on coercive diplomacy points to the importance of the stakes in a dispute to explain why some threats succeed and others do not.<sup>13</sup> Identifying the issue therefore is critical to an empirical analysis of the effectiveness of coercive threats. The MCT dataset classifies four types of demands: territorial demands (including ownership of military bases and troop withdrawals), reparations demands, demands for leadership or regime change, and demands for policy changes. Of the 210 cases in the MCT dataset, all but 11 fall into one of these four categories; these are placed in a fifth category, simply labeled "other." The analysis below includes dummy variables for TERRITORY, REPARATIONS, LEADERSHIP, and POLICY, with "other" being the

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<sup>13</sup>See, for instance, Snyder and Diesing (1977); Huth (1988); George and Simons (1994); Art and Cronin (2003).



reference category.

Finally, the analysis includes a control variable for geographic proximity. The variable CONTIGUITY codes disputants as contiguous if they either share a land border or are separated by less than 150 miles of water.<sup>14</sup> This information is derived from the Correlates of War Direct Contiguity dataset.

## Results

What makes coercive threats work? Below we present two sets of logistic regressions to evaluate the hypotheses described in the first section of this paper. The first set of tests evaluates the interactive effects of regime type and demonstrations of military force during crisis bargaining. If the hand-tying logic of military signaling is accurate, then democracies should accrue larger advantages from engaging in military actions during crises than non-democracies. The second set of tests presents more refined data on military signals, distinguishing between signals that have primarily symbolic effects versus signals that carry more meaningful consequences for the local balance of power. In each set of tests, the result is the same: military signals appear to be effective primarily because of their military consequences, rather than their hand-tying effects.

The first set of tests, contained in Models 1 and 2 of Table 1, considers the interactive effects of democracy and demonstrations of military force. Note first that in all four models in Table 1, the variable for military signals (DEMONSTRATION) is positive and statically significant at the 99% level or above. In Model 1, for example, an “average” state employing military signals after issuing a coercive threat can increase its chances of success more than fivefold, from less than 6% to more than 32%.<sup>15</sup> This suggests that military signals indeed have a strong positive effect on the effectiveness of coercive threats: states which employ them during crises are much more likely to succeed.

The question remains, however, whether this effect is primarily due to the political or

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<sup>14</sup>This definition is also used by Schultz (2001*a*: 265).

<sup>15</sup>For this and all marginal effects reported here, other variables are held at their mean or median values. Marginal effects are calculated using *Clarify* (Tomz, Wittenberg, and King 2003) and are statistically significant at the 95% level or above unless otherwise noted.

	1	2	3	4
	<i>Democracy</i>	<i>Democracy</i>	<i>Audience Cost Advantage</i>	<i>Audience Cost Advantage</i>
DEMOCRATIC CHALLENGER	-0.302 (0.392)	-15.404*** (0.541)	-0.044 (0.524)	-0.039 (0.521)
SIGNAL	2.118*** (0.479)	1.596** (0.517)	2.080*** (0.488)	2.195** (0.678)
SIGNAL × DEMOCRACY		15.367*** (0.678)		
CHALLENGER AUDIENCE COST ADVANTAGE			-0.470 (0.557)	-0.270 (0.991)and
‘ SIGNAL × AUDIENCE COST ADVANTAGE				-0.231 (0.957)
DEMOCRATIC TARGET	1.188** (0.450)	1.291** (0.470)	0.955* (0.468)	0.953* (0.470)
BALANCE OF POWER	-0.986 (0.707)	-0.997 (0.694)	-1.081† (0.636)	-1.080† (0.636)
and [1em] TERRITORY	-0.178 (0.342)	-0.189 (0.351)	-0.264 (0.354)	-0.258 (0.356)
REPARATIONS	-0.791 (0.500)	-0.715 (0.524)	-0.755 (0.476)	-0.756 (0.476)
LEADERSHIP	2.549*** (0.625)	2.408*** (0.592)	2.427*** (0.630)	2.460*** (0.654)
POLICY	0.170 (0.324)	0.081 (0.327)	0.146 (0.321)	0.150 (0.323)
CONTIGUITY	-0.048 (0.399)	0.007 (0.421)	-0.012 (0.400)	-0.007 (0.400)
CONSTANT	-1.881* (0.887)	-1.450 (0.886)	-1.518† (0.844)	-1.629† (0.943)
<i>N</i>	242	242	242	242
Pseudo <i>R</i> <sup>2</sup>	0.221	0.238	0.225	0.225

NOTE: Robust standard errors in parentheses.

†  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table 1.** *Logit estimates of coercive threat success.*

military effects of such actions. Model 1 begins evaluating this question by considering the effects of regime type on the outcomes of coercive threats. In this model, the variable DEMOCRATIC CHALLENGER does not achieve statistical significance, suggesting – contrary to the logic of hand-tying – that democracies do not enjoy a comparative credibility advantage when issuing military threats.<sup>16</sup>

However, Model 1 may not offer an adequate test of Hypothesis 1, which argues that democracies may enjoy advantages primarily (or exclusively) when employing military signals (Gelpi and Griesdorf 2001). To test this more nuanced proposition, an interaction term is required. Model 2 therefore includes the interaction term SIGNAL  $\times$  DEMOCRACY, which carries a value of 1 only if the challenger in a crisis was both a democracy and employed a military signal. At first glance, regime type appears to have an effect: both DEMOCRATIC CHALLENGER and SIGNAL  $\times$  DEMOCRACY are statistically significant in Model 2. However, one notes that they are of roughly equal value, but oppositely signed. In other words, the net effect of changing the challenger to a democracy (given that the challenger employs a signal) is approximately zero.<sup>17</sup> In other words, the effect of military signals is equally strong for both democracies and non-democracies. This is evidence against Hypothesis 1, which expected the effect of military signals to be especially strong for democracies due to their public hand-tying effects.

One might plausibly argue, however, that it is inappropriate to examine the raw effects of regime type. Rather, it might be the case that the hand-tying advantages of military signals accrue only to democracies that can generate audience costs to a greater extent than their opponents (e.g., Gelpi and Griesdorf 2001). Models 3 and 4 evaluate this proposition, including the variable CHALLENGER AUDIENCE COST ADVANTAGE, which is coded 1 whenever the challenger has a higher Polity score than the target. However, in Model 3, CHALLENGER AUDIENCE COST ADVANTAGE does not achieve statistical significance, casting initial doubt on the logic of hand-tying. Likewise, in Model 4, neither CHALLENGER AUDIENCE COST

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<sup>16</sup>See also Snyder and Borghard (2011); Downes and Sechser (2012); Trachtenberg (2012).

<sup>17</sup>Indeed, when the marginal effect of simultaneously changing DEMOCRATIC CHALLENGER and SIGNAL  $\times$  DEMOCRACY to 1, given that the challenger employs a signal, is  $-0.3\%$  and is not statistically significant.

ADVANTAGE nor its interaction with SIGNAL reaches statistical significance. Furthermore, in Model 4 the marginal effect of changing the challenger from a non-democracy to a democracy with an audience cost advantage over its opponent is actually negative ( $-11\%$ ), though this effect is not statistically significant. Overall, this collection of findings casts doubt on the argument that military signals are uniquely effective due to their hand-tying effects.

While these results have somewhat undermined Hypothesis 1, they have said little (except by default) about Hypotheses 2 and 3. The reason is that the analysis thus far has conflated signals with primarily military effects with those that ought to have mainly hand-tying effects. The analysis therefore may have obscured the hand-tying advantages of democracies, while at the same time telling us little about military signals that alter the balance of forces. The regressions reported in Table 2 attempt to correct this limitation by distinguishing between these two kinds of signals. Specifically, these regressions incorporate Post's (2014) data on military signals, which indicate whether a signal involved the actual movement of military assets into a conflict theater. Signals that did so are coded 1 by the variable MOBILIZATION, while signals that involved only shows of force by preexisting military units are coded 1 by the variable SHOW OF FORCE. If the logic of hand-tying is correct, then shows of force – but not necessarily mobilizations – should be uniquely effective when conducted by democracies. Conversely, if military signals are effective mainly due to their effects on the local balance of power, then mobilizations should have a greater effect – and that effect should be consistent across regime types.

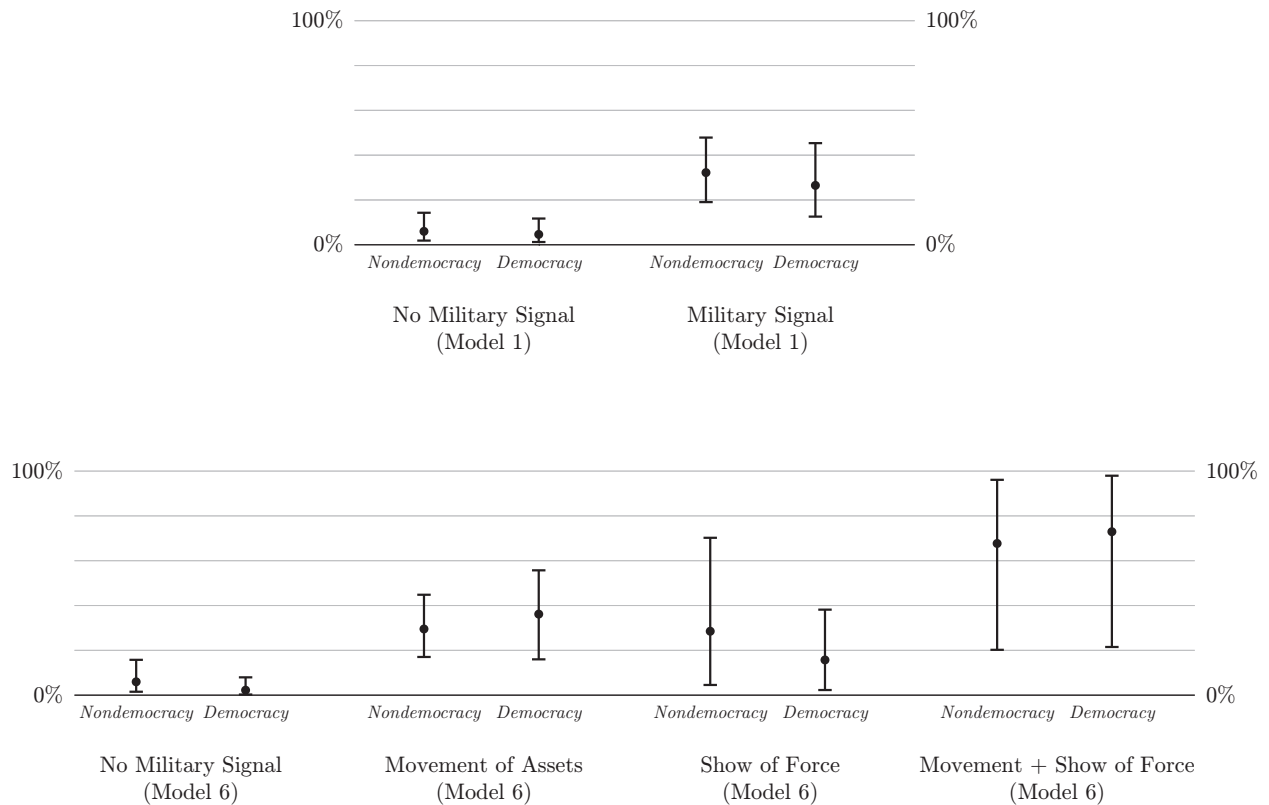
A first glimpse comes from comparing the marginal effects of the variables MOBILIZATION and SHOW OF FORCE in Models 5 and 7. In both models, both variables are positive and statistically significant at the 95% level or above, but the coefficient for MOBILIZATION is larger. Indeed, the marginal effect for MOBILIZATION on the likelihood of success is roughly twice as large as the effect of SHOW OF FORCE: changing MOBILIZATION from 0 to 1 increases the absolute likelihood of success by 27%, whereas changing SHOW OF FORCE from 0 to 1 does so by 13%. This offers some initial evidence that the muscle-flexing effects of military signals dominate their hand-tying effects.

However, since mobilizations and military asset movements may have *both* military and

	5	6	7	8
	<i>Democracy</i>	<i>Democracy</i>	<i>Audience Cost Advantage</i>	<i>Audience Cost Advantage</i>
DEMOCRATIC CHALLENGER	-0.054 (0.413)	-1.196 (1.040)	0.277 (0.541)	0.252 (0.540)
MOBILIZATION	2.484*** (0.515)	2.047** (0.624)	2.479*** (0.521)	2.059** (0.653)
SHOW OF FORCE	1.589* (0.778)	1.836† (1.099)	1.581* (0.803)	0.906 (1.193)
MOBILIZATION × DEMOCRACY		1.378 (1.108)		
SHOW OF FORCE × DEMOCRACY		0.174 (1.545)		
CHALLENGER AUDIENCE COST ADVANTAGE			-0.614 (0.554)	-1.673 (1.278)
MOBILIZATION × AUDIENCE COST ADVANTAGE				1.155 (1.251)
SHOW OF FORCE × AUDIENCE COST ADVANTAGE				1.459 (1.616)
DEMOCRATIC TARGET	1.234** (0.443)	1.266** (0.454)	0.931* (0.454)	0.943* (0.454)
BALANCE OF POWER	-0.938 (0.716)	-0.952 (0.724)	-1.069† (0.640)	-1.051† (0.632)
TERRITORY	-0.137 (0.362)	-0.104 (0.384)	-0.253 (0.374)	-0.279 (0.381)
REPARATIONS	-0.859† (0.510)	-0.843 (0.523)	-0.822† (0.481)	-0.815† (0.481)
LEADERSHIP	2.514*** (0.637)	2.483*** (0.631)	2.374*** (0.630)	2.277*** (0.613)
POLICY	0.267 (0.343)	0.288 (0.351)	0.233 (0.341)	0.226 (0.340)
CONTIGUITY	-0.108 (0.410)	-0.104 (0.428)	-0.056 (0.410)	-0.074 (0.419)
CONSTANT	-2.325* (0.916)	-1.989* (0.950)	-1.882* (0.880)	-1.481 (0.953)
<i>N</i>	242	242	242	242
Pseudo <i>R</i> <sup>2</sup>	0.236	0.242	0.242	0.245

NOTE: Robust standard errors in parentheses.  
†  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table 2.** *Logit estimates of coercive threat success.*



**Figure 1.** *Predicted probabilities of coercive threat success (95% confidence intervals shown).*

political effects, this is insufficient evidence to declare a verdict. A deeper look is offered by assessing the interaction of these variables with the challenger’s regime type. In Model 6, both military signal variables are interacted with CHALLENGER DEMOCRACY, to test the hypothesis that democracies have a unique advantage when issuing these kinds of signals. However, neither CHALLENGER DEMOCRACY nor the interaction terms achieve statistical significance in this model. In addition, the variable for shows of force does not achieve 95% statistical significance in this model, while the variable for military mobilizations does. This suggests that the movement of military assets is a more effective way to signal one’s intentions than using public displays. This is further evidence against the hand-tying hypothesis, and in favor of the logic of muscle-flexing.

Models 7 and 8 repeat these analyses, but with the inclusion of an AUDIENCE COST ADVANTAGE term. The results, however, remain the same: military mobilizations appear to improve a state’s likelihood of prevailing in a crisis, while shows of force do not. These

effects, moreover, are unaffected by the challenger's regime type or level of audience cost advantage.

Figure 1 illustrates these findings, reporting the predicted probability that a coercive threat will succeed under a variety of conditions. The chart demonstrates that the effects of military signals are virtually equal for democracies and non-democracies. These signals have a positive and reliable effect on the likelihood a threat will succeed, but importantly, this effect does not vary by the challenger's regime type.

To sum up, the regressions in Tables 1 and 2 suggest three main findings. First, military signals do indeed help states prevail in international crises. Second, the effects of military signals are no greater for democracies than for non-democracies, casting doubt on the logic of hand-tying. Third, moving new military assets into a conflict theater has a considerably greater effect on crisis outcomes than public displays of preexisting military forces. Overall, the weight of the evidence points in the direction of muscle-flexing, and away from the logic of hand-tying.

## Conclusions and Implications

When states issue coercive threats during military crises, do military signals make those threats more effective? If so, why? This paper has offered preliminary answers to both of these questions. Specifically, it evaluated two distinct (though not necessarily competing) theoretical explanations for why military signals might communicate credibility in crisis confrontations. The first explanation holds that military actions during crises are effective signals primarily because they are conducted in public, creating political costs for backing down that would not have existed otherwise. In particular, when democratic leaders issue military signals, the prospect of suffering electoral punishment ties their hands and constrains them from backing down. A second explanation offers a different logic, arguing that the primary benefit of military signals is not that they engage political audiences, but rather that they shift the local balance of military power. A military signal is most likely to be effective, in this view, when it involves the movement of military assets to a conflict zone

and improves the chances that a state will prevail if the crisis escalates to war.

Using a dataset containing information about more than 200 coercive threats, the analysis revealed two key findings. First, military signals in general significantly improve the likelihood that a coercive threat will be effective. Challengers that couple substantive demands with low-level military actions can increase their chances of success, on average, more than fivefold – from roughly one-in-twenty to one-in-three. Military signals indeed appear to be a key vehicle for states to communicate credibility in crisis situations.

Second, military signals appear to be effective largely because of their effects on the balance of military power, rather than their political effects. In other words, the logic of “muscle-flexing” seems to dominate the logic of “hand-tying” in military signaling. Military signals that involved the movement of military forces to the conflict zone had a substantially larger effect on crisis outcomes than signals that did not. However, democracies appeared to enjoy no special advantage when issuing military signals of any type.

These findings have at least three potential implications for theories of signaling in international relations. First, they offer new evidence that military signals matter in international crises. While theoretical scholarship has long emphasized the importance of signaling, data limitations have often forced empirical studies to rely on indirect measures of signals to demonstrate the impact of intra-crisis signaling. This study uses data created explicitly for testing theories about military signaling, ultimately confirming the intuition of scholars that costly signals of resolve can have a positive effect on one’s crisis fortunes. Second, this study shows that not all military signals are created equal. It provides initial evidence that hand-tying signals perhaps are not as effective as previously believed, whereas signals that directly impact the local balance of power seem to carry more weight. Future research might explore the theoretical reasons why muscle-flexing might be superior to hand-tying. Finally, this study weighs into the ongoing debate in international relations scholarship about the importance of audience costs. While many studies have found that leaders do pay some political price for backing down from a public commitment to stand firm in a crisis, other studies have questioned whether this translates into a bargaining advantage. The results here suggest that these doubts appear to have some foundation.



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