Rising Power on the Mind

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Abstract

One prominent explanation for international conflict is shifts in bargaining power. This paper asks whether individuals respond to shifting power in ways assumed by these models. I use vignettes describing the United States in an international bargaining situation to explore the microfoundations of power transitions models empirically. The vignettes vary whether the individual is a member of a declining power or a rising power, as well if there are previous commitments in place. Consistent with predictions from the behavioral literature, there are important asymmetries in behavior across these conditions. I also exploit a method in which subjects propose a response the United States should take while also explaining their decisions in their own words. The findings illustrate substantial heterogeneities in individuals’ motivations for their decisions, and include commitment problem logics and an expectation that leaders adopt consistent strategies even if there are advantageous shifts in power. The results of the experiments suggest potential ways that power transition models should be refined so as to have a firmer behavioral basis.
1 Introduction

A common explanation for conflict between countries is shifting power. States that are declining in power may act belligerently to prevent a decline and states that are increasing in power cannot credibly commit to not taking advantage of their newfound power in the future. A large literature has developed that describes why and how the dynamics of shifting power explain international conflict, ranging from power transition theory to formal accounts emphasizing commitment problems (Powell, 2006a; Fearon, 1995). This literature largely adopts a “billiard ball” view of the state in which the influence of the mass public and domestic politics, as well as elite perceptions of both the internal and external environment, is bracketed. This view contrasts with other literatures that see a role for the mass public and domestic politics in international relations (e.g., Baum and Potter, 2008; Tomz, 2007; Rho and Tomz, 2014) and intrastate conflict (Blattman and Miguel, 2010; Walter, 1999, 2002; Kaufman, 2006).

This paper combines the theoretical and empirical motivations of both sets of literatures. It is the first to directly examine whether the mass public holds views that are consistent with theoretical mechanisms suggested by models with shifting power. While a broad cross section of research posits some role for the public in constraining or enabling particular foreign policies,\(^1\) this literature has not directly engaged with ideas prevalent in game theoretic accounts of international bargaining and conflict. Furthermore, much survey work disengages with propositions and insights from game theoretic literatures.

An emerging literature is just now beginning to consider the role of the public in game theoretic models of international conflict. Several articles have addressed ways that the public fits in strategic models involving elite-public interaction (e.g., Tomz, 2007; Chaudoin, 2014; Chapman, 2012). Other work that more inspires the present study looks at how public preferences and responses might inform state decision-making in international strategic contexts (Tingley and Tomz, 2014; Milner and Tingley, 2013). As developed below, citizens can play an important role in driving how states respond

\(^1\)See for example Kriner (2010, pg. 55 and cites there in), Milner and Tingley (2015), and subsequent discussion in this paper.
to shifting power. Additionally, citizens play a role in micro-level dynamics in intrastate disputes that involve shifting power (Blattman and Miguel, 2010). Of course, to the extent that it is reasonable to use citizens as convenience samples of elites, the results reported in this paper also speak to elite decisions as well. Given these arguments, developed more below, this paper provides innovative tests of arguments about shifting power that have immediate relevance to international and intrastate bargaining. In light of the fact that prominent work suggests an important role the public plays in constraining elite choices in foreign policy (Aldrich, Sullivan, and Borgida, 1989) and the centrality of shifting power explanations of war, this paper is an important first step in bringing together heretofore disparate public opinion and game theoretic literatures.

One empirical focus of this paper is to behaviorally test the simple proposition generated by theoretical models of shifting power that, from the perspective of those in the declining power, larger shifts in power generate greater credibility concerns and more bellicosity than do smaller shifts in power. If there is no shift in power, then there is no commitment problem. At a certain point, however, a shift in power becomes large enough to engender these concerns. The paper uses a series of original survey experiments to interrogate this claim. The baseline manipulation uses a conflict situation involving the United States and estimates the effect that differences in the size of the power shift make for individuals’ support for conflict, something only done previously using abstract bargaining games. I tested this in several ways, hypothetically (with a fictional opponent) and with a real-world vignette (priming subjects about the rise of Chinese power following that country’s announcement of expanded airspace administration, presented in the online appendix). As the shift in power becomes larger and more salient, I observe increasing greater credibility concerns and support for the use of force.

In the cases with the US as a declining power, I uncover a broad variety of motivating factors for individuals’ preferred responses, including a concern for commitment problem logics. The responses reveal that some people do evaluate the situation strategically. But other individuals focus less on the strategic aspects of the situation and more on basic structural features such as costs and benefits. Still others wanted to explore alternative
ways of dealing with the problem rather than through military force. The focus on strategic considerations versus cost/benefit considerations represent distinct ways of evaluating the same situation. And as shown below, there is heterogeneity in these evaluations both among people with similar policy choices and with dissimilar ones.

A second empirical focus of this paper is to examine the impulse to initiate conflict among citizens in a newly powerful state. In the literature that explains how shifting power can lead to conflict, both rising and declining powers are motivated to belligerence. Power transition models assume that a state with newfound power may want to obtain more favorable terms. Given that such a power transition has happened, will individuals in the more advantaged state actually want to take advantage of the other state? In a second experimental design, I look at the United States as a rising power, rather than a declining one. I find substantial variation in individuals’ responses. Some want to take advantage of newfound power, but most do not. As in the first design, I unpack this variation by analyzing how individuals evaluated the situation. I suggest that some of the observed responses that prefer not to take advantage of newfound power are explained by work on both perspective taking and prospect theory.

A final manipulation to the experimental vignette changes whether or not previous public commitments were made with the country that the United States potentially finds itself in conflict with. The crucial motivation for this manipulation is that shifting power arguments posit a “commitment problem.” A natural question from a behavioral perspective is whether public commitments reduce the commitment problem. Interestingly, my results do show that public commitments mitigate the effects of large shifts in power. What explains this finding? Previous work in both international relations and American politics suggests that many individuals have a psychological motivation for behavioral consistency. This paper provides additional evidence for this perspective and highlights that commitments can lead to expectations of consistency that trump concerns about credible commitments or potential future gains. Nevertheless, as in some previous work on audience costs Tomz (2007), some individuals are more concerned about consistency than others (see also Levy, McKoy, Poast et al., 2015), illustrating the presence of het-
erogeneous behavioral patterns.

More broadly, my findings about heterogeneity in individual responses to international conflict parallel related work that emphasises individual heterogeneity (McDermott, Johnson, Cowden et al., 2007; Kertzer and McGraw, 2012; Rathburn, Kertzer, and Paradis, 2015; Kertzer, 2015; Saunders, 2016; Hafner-Burton, Haggard, Lake et al., 2015). To explicitly document this heterogeneity respondents were asked both for their preferred course of action as well as why they chose that course of action. This lets us unpack beliefs to help showcase the tight connections between beliefs and preferences (Hermann, 2015). I analyzed the open-ended survey responses using new methodological tools described at length in Roberts, Stewart, Tingley et al. (2014). These tools extract common topics mentioned in the responses and link the propensity to talk about each topic with the respondent’s treatment condition. In doing so, this method helps to uncover a range of mechanisms linking the treatment with respondents’ policy preferences. This data reveals heterogeneities in how individuals respond to shifting power in much more detail than can usually be gained using more standard survey or experimental tools.

The paper is structured as follows. Section 2 situates the paper within the broader program of understanding the behavioral foundations of responses to shifting power and also reviews some of the workhorse machinery for analyzing open-ended survey data. Sections 3, 4, and 5 introduce new survey experiments that engage with the topic of shifting power in different ways. Section 6 concludes.

2 Theoretical and Empirical Foundations

To unpack the range of ways individuals could react to international bargaining, it is helpful in this section to focus on two key parameters, changes in power and commitments, and how a behavioral perspective helps us to understand them. I also discuss literatures that prima facia predict heterogenous responses across individuals to shifting power. I then engage with questions about the role of public opinion surveys in studying shifting power explanations.
2.1 Power Shifts

Rationalist models of shifting power focus on the commitment problems that shifting power creates. In the future, a rising power will take advantage of other countries, a fact that cannot be resolved with current commitments not to do so. As a result, the declining power is expected to initiate conflict in order to maximize its long term utility. This paper takes a first step at asking whether or not individuals respond to shifting power in any way that comports with the commitment problem logic by looking at decisions from the perspective of both a declining and rising power state. Here I briefly discuss several psychological mechanisms that might be important in generating these responses. These mechanisms, while quite different in content, all predict that individuals in declining powers will be more inclined to pursue aggressive foreign policies than those in a rising power.

First, a long literature examines individual perceptions of power (Jervis, 1976). Scholars have been interested in understanding how power relationships are perceived and constructed (Mercer, 1995) and how such perceptions influence the way individuals construct the intentions of others. One theme in this literature is that individuals perceive the power of other countries in terms of the threat this power poses to their own country. Hence another country’s rising power is implicitly seen as a threat, which could reinforce or run parallel to concerns about commitment problems. But interestingly, individuals do not see their own country in these terms (Jervis, 1968; Winter, 2003; Winter and Sweet, 2009): individuals rarely perceive their own country’s power, or positive changes in power, as threatening to others, even if their country is indeed powerful or becoming more powerful. This suggests that individuals in a declining power will support an adjustment to the distribution of resources to a greater degree than those in a rising power. Prospect theory makes a similar prediction about the asymmetry between being in a declining or rising power state: individuals will be more concerned about the implications of their country’s decline in power. Declining power may lead to future losses, which are especially concerning because individuals are loss averse. When an individual’s country gains in relative power, the utility from future acquisition is smaller in absolute magnitude. Both
the asymmetry in how individuals view the threat posed by their country versus other
countries as a threat as well as loss aversion suggest a larger impact of relative power
shifts when one is a declining versus rising power.

Second, analogical reasoning may reinforce concerns about shifting power by drawing
on past instances in which revisionist states violated past commitments as they continued
to grow in power (Neustadt, 2011; Reiter, 1996). For example, a common trope to this
day harkens back to the perils of appeasing Hitler. Hence we should expect that core
concerns about trust and being “taken advantage of” would be reinforced by historical
legacies.\(^2\) Broadly speaking, this is important because excessive reliance on analogical
reasoning may lead to bad foreign policy outcomes (Khong, 1992; Goldgeier and Tetlock,
2001).\(^3\)

### 2.2 Credible Commitments?

Given that shifting power can lead to commitment problems, it is helpful then to review
what we understand about the effects of commitments in conflictual settings. The stan-
dard view is that unless commitments are credible, which is established, for example, by
making a commitment costly to make, the commitments will be seen as cheap talk and
thus ineffective. Some behavioral work challenges this claim (Tingley and Walter, 2011a).
In the present context, the crucial question is whether non-costly commitments to not
take advantage of future or recent gains in power have any influence on state behavior,
or citizen support for particular state policies.

Non-costly commitments might impact behavior through individuals’ preference for
consistency. Studies in both American politics and international relations find that in-
dividuals strongly oppose leaders who behave inconsistently with previous commitments.
For example, while only briefly discussed, Tomz’s well known study of audience costs finds

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\(^2\) Of course, the exact line between behavioral and rationalist accounts becomes somewhat blurry here,
as a range of rationalist based modelling strategies incorporate historical dependencies. A point consistent
with the analogical reasoning literature is that individuals may broadly extrapolate from past, unrelated,
events. Rationalist models do not tend to explain how or why that happens.

\(^3\) Interestingly, I am unaware of historical examples in the literature of analogical reasoning that speak
to the perspective of a risen power.
that a major reason individuals punished a leader who backed down was because the leader did not “keep their word” and acted inconsistently (Tomz, 2007). This is important to highlight because audience cost models assume that publics will punish politicians for not abiding by commitments but do not say why this happens. Other scholarship shows a similar preference for consistency by citizens both in international conflict contexts (Levy, McKoy, Poast et al., 2015) as well as in other domains, such as voter decision-making involving domestic policy commitments (Tomz and Van Houweling, 2008). Put colloquially, nobody likes a flip-flopper. Just as Tomz helped to provide a clear behavioral mechanism for the audience cost literature, the present study also investigates whether a preference for consistency animates how individuals confront situations with shifting power.

Consistency, however, is not part of the story when it comes to explanations of commitment problems. Rather, it is precisely the inability of a rising power to credibly commit to keeping a current arrangement in the future that leads to declining states having an incentive to launch a preventive war. Yet the belief that consistency and keeping to an agreement are important in principle could mitigate commitment problems. For example, a public commitment from a rapidly rising power could reduce the public support in a declining power for a preventive strike. This could hold if, for example, it is broadly understood that consistency valued in the rising power or through other mechanisms like understanding the reputational costs of not being consistent. Indeed, a contribution of this paper is to begin exploring the nexus between commitments and commitment problems in situations with shifting power.

The preceding discussion in sections 2.1 and 2.2 highlights how individuals may confront and process information about a particular international bargaining situation in a variety of ways. This heterogeneity in ideas may reflect individual differences in perception and information processing (Witkin, 1949; Kane and Engle, 2002; Stanovich, 1999). Standard decision or game-theoretic models may or may not capture the way actual individuals process an international bargaining situation. In this sense the present paper tries to expand behavioral work in international relations to incorporate more directly the role

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4Other work focuses on different dimensions, such as the perception of benefits and costs of war (Gelpi, Feaver, and Reifler, 2009; Berinsky, 2007).
of ideas and beliefs\textsuperscript{5}, not only behavioral outcomes. This move towards understanding differences in how individuals respond to and think about a situation is important, just as it is important to try and understand more the role of affect and the intersection of both cognitive and affective processes (e.g., Hafner-Burton, Hughes, and Victor, 2013; McDermott, 2004a; Rathburn, Kertzer, and Paradis, 2015; Renshon, Lee, and Tingley, 2015; Tingley, 2014).

2.3 Empirical Target

Most models of international bargaining posit either unitary actors or leaders constrained by their nation’s institutional structure (e.g., Powell, 2006a; Fearon, 1995; Putnam, 1988; Bueno de Mesquita and Smith, 2012). Because this paper uses experiments embedded in public opinion surveys to study the micro-foundations of responses to shifting power, it is helpful to explain how this connects to actors of interest in international relations.

One perspective is to treat the non-elite adult subjects in this study as a convenience sample of elites. This perspective reflects the literature that emphasizes the role of individual leaders, often focusing on their psychological and even physiological characteristics (McDermott, 2004b).\textsuperscript{6} Leaders are drawn from the adult population in a country, and like non-elites, leaders have psychological characteristics that can vary across individuals.\textsuperscript{7} For example, different leaders might well respond to the same objective situation in very different ways (Jervis, 1976; McDermott, 2007; Kertzer, 2015). This paper explores this possibility with respect to responses to shifting power, but uses a convenience sample of adults.

\textsuperscript{5}Examples include Goldstein and Keohane (1993); Peffley and Hurwitz (1992); Tingley and Wang (2010).

\textsuperscript{6}Additionally, a range of work in psychology highlights heterogeneities in responses to threat, some of which appear to vary along political dimensions (Oxley, Smith, Alford et al., 2008).

\textsuperscript{7}A related literature on personal characteristics of leaders in American politics (e.g., Carnes and Lauderdale, 2011) and international relations (Horowitz and Stam, 2014) makes a similar point, but highlights variation in ‘background experiences or circumstances’ rather than psychological characteristics. Horowitz and Stam (2014) explicitly posit the role of psychological variables of interest to the current volume (e.g., risk attitudes/beliefs) to help explain how these differential experiences generate differential policy choices (see figure 1). See also Saunders (2016) on the role of experience.
Of course, not all work in international relations is elite focused. Citizens may also respond politically to shifting power. But how do public responses to changing power bear on how elites behave or the strategies that states ultimately use? I briefly consider three answers to this crucial question.

Consider first an important connection between the shifting power and audience cost literatures (Fearon, 1994; Tomz, 2007). In the audience cost literature, leaders first choose whether or not to make a threat. What motivates leaders to make this threat is left black-boxed, but presumably it is reducible to some sort of commitment problem based on a rapid shift in power (Powell, 2006b). In the first generation of work on audience costs, leaders could send a threat, or not, and if they sent a threat they could follow through on the threat. There was no linkage between what generated the threat and the subsequent decision whether to follow up on the threat. More recent work on audience costs changes this setup and shows, perhaps not surprisingly, that information about the conflict itself can change the size of audience costs (Levendusky and Horowitz, 2012). This information could be about a variety of things. But if threats are generated by shifting power (Powell, 2006b), then information about shifting power would be pertinent to the generation of audience costs. If subsequent information revealed that the opponent was unlikely to obtain a short-term favorable gain in power in the future, then it is unlikely that citizens would punish a leader for backing down. But if the impending threat is confirmed and yet the leader still backs down, then the leader would face a punishment consistent with the standard audience cost story. The crucial point here is that if we admit a role for the public in audience cost accounts of conflict, then we should absolutely be interested in how publics respond to shifting power. The failure of previous work to make this connection is only because the decision to make a threat in the first place in audience cost models is black-boxed.

Second, in intrastate conflict contexts, individuals and small groups play a key role in commitment problem–based explanations of both conflict and peace-making.\(^8\) For

\(^8\)“Conflict is rooted in endemic competition for resources across groups, with bargained solutions occasionally breaking down because of commitment (or information) problems” (Blattman and Miguel, 2010, pg. 17).
example, different ethnic groups—each with individuals who can cause violence against outgroups—face commitment problems driven by sudden shifts in power (Fearon, 1998). The literature on resolving commitment problems also focuses on how to design political institutions that enable small groups of political actors to overcome commitment problems (Walter, 1999). Furthermore, individuals driven by commitment problems can engage in misconduct, which is especially hard to monitor and control in weak states (Walter, 1999). More broadly, deals to establish peace might actually incite further violence due to the shifts in power that the agreement creates (Walter, 2002). The crucial point here is that while the shifting power and commitment problem literature is perhaps best known in international relations in terms of country-level relations, it also plays a crucial role in more micro-level interactions that animate intrastate disputes as well. Indeed, some argue that breaking down the unitary actor assumption in prevailing commitment problem–based explanations of conflict represents crucial future work (Blattman and Miguel, 2010, pg. 45). While the experimental vignettes in this paper are not framed in the context of intrastate disputes, the theoretical arguments and experimental tests could easily extend to this domain, which to date has more centrally featured the role of individual citizens.

Third, public opinion on agreements that relate to shifts in power might influence elite decisions. As shown by others, politicians take into account public opinion when it comes to foreign policy considerations (Aldrich, Sullivan, and Borgida, 1989). Thus it is important to show that publics are aware of and are mobilized by shifts in power. For example, historian Walter McDougall, writing about the Soviet Union’s leap beyond the US with the Sputnik program, noted, “No event since Pearl Harbor set off such repercussions in public life” (Dickson, 2001, pg. 4). The Israeli public was cited by Prime Minister Netanyahu in opposing the Iranian nuclear deal, with individuals linking the deal to Iranian acquisition of nuclear weapons and the need for preventive strikes (Maltz, 2015).

More broadly, the perspective that citizens are pertinent to international conflict bar-

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9 Scholars have also identified the important role for symbolic political efforts, often operating at the individual level, to help members of the public overcome root motivations to sustain conflict (Kaufman, 2006).
gaining is consistent with a range of previous work that has connected citizen preferences to international decision making in a variety of ways, including the dynamics surrounding rally-around-the-flag phenomena (Groeling and Baum, 2008), elite-citizen signaling (Berinsky, 2007), the role of media (Baum and Potter, 2008), and broader accounts of the constraints public opinion puts on the types of foreign policy objectives that are pursued (Eichenberg, 2005). Of course there also exists a long literature examining public preferences for particular foreign policies (e.g., Rho and Tomz, 2014). Relatively less attention has been placed on the role of the public in international bargaining, though some work does try to bridge this gap (e.g., Evans, Jacobson, and Putnam, 1993; Trumbore, 1998), including rich efforts to evaluate the desirability of public awareness about international bargaining (Stasavage, 2004). This paper thus examines how individuals actually react to information about bargaining in the shadow of shifting power. This is helpful whether we think leaders are comparable to individual citizens or whether we care only about the reactions of individual citizens.

3 Research Designs

Given the preceding discussion, there are important substantive and methodological considerations that guided the design of the survey experiments presented in this paper.

3.1 Substantive Decisions

Shifts in power between countries vary among two dimensions that are of interest. The first is direction: a country may increase or decrease in relative power. The second is size: a power shift may be small or large. To explore the impact of the direction of a power shift, I examine situations in which the United States recently increased its relative power and in which the United States was predicted to suffer a decline in relative power in the near future. If behavioral work discussed above is correct in arguing that individuals perceive the power of other countries in terms of the threat others pose but do not see their own country in these terms (Jervis, 1968; Winter, 2003; Winter and Sweet, 2009), then I expect respondents to take a more aggressive position when their country is declining in
power than when their country is becoming more powerful.10 The size of a power shift should also impact individual responses to situations of shifting power. Rationalist theory predicts that if a shift is small, then as discussed elsewhere, there is little concern about commitment problems: bargaining would be incremental (so-called salami-tactics). But as the size of the power shift increases, credibility concerns should become more apparent. To test this hypothesis, I utilize experimental conditions that involve small and large shifts in power.

A second crucial focus of my experimental design is on the effect of public commitments between countries on citizen preferences. As discussed in the previous section, public commitments might have an impact on behavior. In this paper, I intentionally abstract from a commitment by a particular actor (e.g., a leader, as in Tomz, 2007) and instead focus on commitments made by governments.11 To analyze the role of public commitments, I cross our four experimental conditions with whether there had been a previous public agreement.

3.2 Methodological Decisions

Studying responses to shifting power and public commitments can take many different forms. One approach is to take a microscopic view of behavior by focusing on laboratory experiments in highly stylized situations. Previous research has examined shifts in bargaining power and costly conflict by comparing comparative static predictions of theoretical models of bargaining with decision making by human subjects in controlled laboratory conditions using abstract (e.g., “you are player A”) vignettes completely dis-

10In the experimental condition featuring a newly advantaged US, the status quo division is portrayed as being undesirable to “many people” in the US. A separate experiment, not reported here, shows that without this additional manipulation to prime revisionism, our US respondents are unwilling to support policies that are aggressive at all. In vernacular terms, the experimental condition in which the United States recently gained relative power required a bit of “juice” to inspire any consideration of status quo revision. This reinforces the findings, discussed below, that behaviorally individuals view a situation of being a declining versus a rising power very differently.

11I recognize this could have consequences, though a priori it is not clear how these consequences cut against the results presented in this paper.
connected from international relations (e.g., Quek, 2012; Rathburn, Kertzer, and Paradis, 2015; Tingley, 2011; Renshon, Lee, and Tingley, 2015). This paper moves away from decision-making in abstract situations and instead embeds the experiments in hypothetical but realistic international situations and real situations involving the rise of China’s power (presented in the online appendix).

The research design in this paper tries to speak to an additional conceptual move. Individuals might base their responses to an external event on many, many different possible rationales or feelings. What reasons do individuals give when considering how the United States should react to an international event? They might rely on their understanding of history (“the United States always wins its wars”); on strategy (“if we attack now, we’ll deter other countries from attacking in the future”); on religion (“sacred texts teach that violence is always wrong”); on emotion (“I hate China”). Indeed, one theoretical tradition in international relations, constructivism, entertains how individuals have heterogenous beliefs as well as different norms or “logics of appropriateness” (Hopf, 2010). For example, in the context of shifting power with public commitments, we can ask whether the norm of “we should honor our agreements” come into play for many individuals.

Existing research designs are ill-equipped to unpack this heterogeneity. For example, asking many closed-ended “why did you select this option” questions that provide a set of possibilities can prime individuals to think in ways that they did not otherwise (Iyengar, 1996). In order to highlight the full breadth of ways individuals respond to shifting power, I follow previous behavioral work in international relations by analyzing open-ended responses that explain a respondent’s rationale for choosing their strategy (e.g., Tomz, 2007; Tingley and Walter, 2011b). The statistical methods described later in the paper allow us to systematically analyze open-ended responses, which opens up new classes of research for international relations scholars.

For example, Tomz (2007) hand-coded 105 observations that disapproved of the president stepping down into four researcher defined categories. This paper uses thousands of open ended responses and does not ex ante (or ex post) delineate the topics.
4 Bargaining as a Declining or Rising Power

4.1 Design 1: Declining Power

Previous laboratory-based research suggests that individuals are more likely to reject proposals to divide a resource when they come from an actor who is known to be growing in bargaining power in the future. These rejections occur despite the fact that rejection is costly for both parties. This effect disappears when shifts in power are small, which is consistent with the game theoretic predictions these experiments are designed to explore. The following experiments seek to examine whether the results from the previous research hold when the experimental set-up presents respondents with a concrete real-world or hypothetical international scenario that involves familiar countries.

In the late fall and early winter of 2013–2014, I fielded an experiment via Amazon’s Mechanical Turk (Berinsky, Huber, and Lenz, 2010) that recruited US subjects to take a short survey for payment.\(^{13}\) Respondents were given a scenario describing a fictional island controlled by the US and another country. The scenario states that the other country is expected to grow in power over time. The other country is now proposing to take over a small amount of US territory on the island, and respondents were asked whether to reject or accept the offer. The first manipulation varied whether the other country was predicted to grow “slightly” or “much more” powerful in the future. I predicted that when the other country was growing much more powerful in the future, there would be more support for rejecting the proposal and starting a conflict. The second manipulation included a statement indicating that both countries would agree publicly to the proposal. Subjects either received this statement or received no additional information regarding the agreement. If public commitments are perceived to have a binding effect on future behavior, then support for rejecting the proposal will be weaker compared to the condition in which there is a large shift in power but no public commitment.\(^{14}\)

After reading the vignette, respondents stated whether they would reject or accept

\(^{13}\)Other international relations research also leverage Mechanical Turk (Chaudoin, 2014; Tingley and Tomz, 2014).

\(^{14}\)The exact prompt for this vignette and all others is given in the online appendix.
the offer. Immediately after giving their response, subjects were asked, “Please write a couple sentences to explain your opinion. Your opinion is very important to us and we want to understand it.” We also collected several other covariates, including gender, political ideology, and support for the use of military force.\footnote{These questions were asked after a number of questions about an unrelated topic to prevent contamination.}

4.2 Design 2: Rising Power

In design 1 respondents confronted a situation in which another country was the rising power and had to decide how the US should respond. The second design changes the scenario in order to test a different component of commitment problem explanations. At the core of bargaining models with shifting power is an assumption that the rising power, when it becomes more powerful in the future, will take advantage of this newfound power. Previous experiments do not focus on this aspect of the model. For this experiment, also fielded in late fall and early winter 2013–2014 but to a separate subject pool, I designed vignettes that depicted the US as the rising power. The setting was largely similar to the one described previously: at some point in the past, a strategic territory was divided between the US and another country. The US was weaker when this division was made. Respondents were asked to consider what the US should do given a recent increase in US military strength. US military strength was described as either slightly greater than the other country (“Small Shift”) or much more powerful (“Large Shift”), depending on the treatment condition. As in design 1, respondents were randomly assigned to a condition stating that in the past, the two countries had agreed to the division (“Commit”) or to no mention of an agreement (“No Commit”). I recorded whether or not the respondent supported changing the status quo and acquiring additional territory. As before, subjects explained their decision in an open-ended follow-up question.

4.3 Results

What is the effect of the experimental manipulations on the decision to accept or reject the other country’s proposal (in design 1) or the decision to acquire more territory or
retain the status quo (in design 2)? I scaled the outcome variable from 0 to 1, with a 1 indicating the hostile response and a 0 the non-hostile. Figure 1 plots the proportion of respondents adopting the aggressive position (i.e., reject the other country’s proposal in design 1 or acquire more territory in design 2) along with 95% confidence intervals for each experimental condition for each design. Prior to comparing results within each design, it is immediately apparent that the level of support for the aggressive position is lower when the US is the rising power than when it is the declining power. This is consistent with the behavioral predictions discussed above.16

Next I focus on design 1, in which the respondent’s country faced an imminent decline in power. When the other country was predicted to become much more powerful than the US but there was to be no public commitment about the new proposal, respondents were significantly more likely to oppose the proposal compared to all of the other experimental conditions. This is clear from the contrast between the “Large Shift and No Commit” condition and the “Small Shift and No Commit” condition. In the former, respondents are significantly more likely to reject the offer, a finding that is consistent with previous laboratory-based research.

Importantly, note that the public commitment treatment eliminated the effect of shifting power. In this case, average opposition to the other country’s proposal was statistically indistinguishable from the conditions with a small shift in power. However, it is not the case that the public commitment reduced the willingness to reject the offer in the condition with a small shift in power. Public commitments only had an impact in the large shift condition. Unsurprisingly, a test of the difference in differences reveals a significantly different effect of commitments in the large shift condition compared to the small shift condition.

Next consider design 2, in which the US was depicted as a rising power. The bottom half of Figure 1 plots the results. We see that the greatest support for revising the status quo occurs in the condition in which the US experienced a large positive shift in power.

16Recall also that in design 2, the vignette had a further manipulation stating that many in the US were unhappy with the status quo. In a separate experiment not reported here, removing that prime eliminated all support for revising the status quo.
but had not publicly committed to the earlier division of territory. This level of support
was significantly greater than all of the other conditions at a $p$ value of less than 0.1.
Furthermore, irrespective of public commitments, there is more support for revising the
status quo when the US has become much more powerful compared to becoming slightly
more powerful. Unlike in design 1, we do not see a significant differential effect of the
public commitment in the large shift versus small shift conditions. While the direction of
this difference is in the same direction as before, with a greater effect in the large shift
condition than the small shift condition, this difference in difference was not statistically
significant.

5 Text Analysis

In these experiments, subjects were asked to explain their decisions in their own words.
In this section, I analyze that data in detail. This paper uses an unsupervised ma-
chine learning technique that incorporates important information about a text, such as characteristics of the author (e.g., political ideology) and the treatment condition in an experiment. In particular this paper makes extensive use of the Structural Topic Model (STM) (Roberts, Stewart, Tingley et al., 2014). This method helps to uncover common “topics,” which can be thought of colloquially as sets of words that often co-occur across multiple documents. The applicability and usefulness of the STM for survey and survey experiments are established elsewhere (Roberts, Stewart, Tingley et al., 2014), though the model extends to many social science applications.

The STM provides a number of interesting quantities of interest. The core quantities that I focus on deal with the prevalence of different topics. For example, is it common for people to focus on the costs of conflict when forming their decisions? Furthermore, are individuals in different treatment conditions likely to talk about different topics, such that treatment conditions can be statistically related to topic prevalence? This means, for example, we can statistically inspect whether subjects in the “Large Shift and No Commitment” condition justify their position in ways different from subjects in other conditions. The STM model provides a unified way for estimating these quantities of interest.17

5.1 Results for Design 1: Declining Power

When the US is a declining power, what reasons do individuals give for their positions? To answer this question I estimated a seven-topic model. Figure 2 presents several outputs from the model. The top left presents the words that are highly exclusive to each topic.18

17The appendix provides a brief introduction to the method. Beyond the specification of covariates, users also need to set the number of topics. With this method there is no canned way to do this. However, the results reported below are robust to using somewhat different numbers of topics. I analyze the open-ended data using the open source R package STM (Roberts, Stewart, and Tingley, 2014). In each of the analyses, topic prevalence is modeled as a function of the respondent’s treatment condition, their gender, left/right political ideology, and willingness to use force. Modeling topic prevalence as a function of only the treatment assignment produces similar results.

18This is calculated from the combined weighting of geometric mean of the probability of appearance under a topic and the exclusivity to that topic. Here a highly exclusive word would belong to one topic.
Using these words and individual responses highly associated with each topic, I developed semantic labels for each. I present six topics, as the seventh had little interpretable semantic meaning. However, the rest were quite clear. The “Security Benefits” topic focused on how it is important to keep the island because of its security benefits. “Costs of Conflict” focused on how war destroys resources and lives. “Use Alternatives to Force” argued that the US should avoid using force and instead find other means to solve the conflict, such as diplomacy or selling the island. “Take Advantage Now” argued that the US should immediately use its current position of power to expel the other country before it became more powerful. “Future Exploitation” focused on how the other country would be likely to take advantage of the US in the future. “Signals Weakness” argued that if the US did not take advantage of its power now, it would be seen as weak by other countries.¹⁹

The importance of shifting power arises in several of the topics. The “Take Advantage Now” and “Avoid Future Exploitation” topics use language that suggests an awareness of commitment problems. The contrast between these two topics is that the former is focused much more on the current time period whereas the latter is more focused on what might happen in the future.²⁰ Obviously “Take Advantage Now” and “Avoid Future Exploitation” are closely related to each other, and the topic model separates them because of their slightly different semantic focus. Also related is the topic “Signals Weakness,” which differed from the other two topics in that it invoked reputational consequences vis-a-vis additional countries, like those studied in related international relations literatures (Walter, 2009).

¹⁹Estimating the model with larger numbers of topics produced similar topics, but as expected some of these such as “Use Alternatives to Force” split apart into particular ways to use force alternatives.

²⁰An example survey response of the “Take Advantage Now” topic is “The other country is not currently stronger than the US so to cede control at this point would be pointless. The US should take control of the island while we are stronger, before the opposing military becomes too strong.” An example of “Avoid Future Exploitation” is “As long as the possibility exists that the other country could demand additional U.S. territory then the U.S. should reject the offer.”
The top right plot presents the estimated proportion of all responses that were generated by each topic. The most prevalent topic dealt with taking advantage of current U.S. power. However, commitment problem logics were not the only concerns voiced by respondents. For example, the second highest estimated proportion was the “Costs of Conflict” topic. Justifications that referred to costs mentioned both financial costs and the cost in terms of human lives. This has nothing to do with commitment problems. Not surprisingly, individuals who explained their decisions in terms of costs were unlikely to support conflict.\textsuperscript{21} A third group of respondents focused on alternative strategies that might be available, rather than taking the current bargaining situation as given, and perhaps transforming it into a non-zero-sum situation. Finally, a small group of respondents focused on the benefits of owning the island, but this was a less prevalent concern. In conclusion, the STM results suggest that a plurality of respondents were indeed focused on the dynamics implied by shifting power and the resulting commitment problem. However, a significant number of individuals in the sample were focused on the cost-benefit dimensions of the situation instead.

The bottom left panel plots the estimated mean difference in proportions of a document dedicated to a particular topic between the “Large Shift and No Commitment” and “Small Shift and No Commitment” conditions. We see that when faced with an opponent who is gaining significant power versus one who is gaining only an incremental amount of power, respondents are focused less on the costs of war or a desire to negotiate and instead are more concerned with taking advantage of their country’s current power before the shift. The largest effect here is for the “Take Advantage Now” topic. The effect on the “Avoid Future Exploitation” topic was positive but smaller and the confidence interval overlaps with zero. These results are largely consistent with the implications of commitment problem explanations: when faced with a steep decline in power, negotiation will only forestall the inevitable and current costs are less relevant than future losses, thus the optimal choice is to fight a preventative war now. Here we see a parallel between these results from an experiment that used a substantive vignette related to international con-

\textsuperscript{21}That individuals do not completely ignore the costs of conflict contrasts with some other public opinion scholarship (Gelpi, Feaver, and Reifler, 2009; Berinsky, 2007).
flict and the results from other studies that used more abstract depictions of bargaining situations in a laboratory setting.

The bottom left panel plots the estimated mean difference in proportions of a document dedicated to a particular topic between the “Large Shift and Commitment” and “Large Shift and No Commitment” conditions. This lets us inspect whether prior commitments change how individuals perceive a large shift in power that will create a future commitment problem. The largest, and only statistically significant, difference is a decline in concern about future exploitation. This suggests that individuals create expectations about future behavior that are tied to prior commitments. When countries make an explicit public commitment, individuals appear to expect their country to follow a policy consistent with that commitment, and they seem less concerned that the other country will fail to honor its side of the deal.\footnote{These topics can be thought of as beliefs that transmit the effect of the treatment on the outcome policy choice. In most experiments this is done via asking subjects a set of closed-ended questions (e.g., Tomz and Weeks, 2010). An alternative approach is to calculate the estimated proportion of a response within particular topics of interest, which then becomes our mediating variable. The mediation effect for the “Take Advantage Now” generated by the “Large Shift and No Commit” versus “Small Shift and No Commit” contrast was positive and significant. Similar results were obtained by looking at the role of the “Future Exploitation” variable in the “Large Shift and Commit” versus “Large Shift and No Commit” contrast. Estimates were calculated using the R package mediation [Blinded] , using bias corrected and accelerated confidence intervals.}

5.2 Results for Design 2: Rising Power

Next we turn to our second design, which depicted a scenario in which the United States had increased its relative power compared to a previous period in which it was weaker than its negotiating partner. Figure 3 plots the result from a seven-topic STM using the same topical prevalence parameters as before. I present the same types of data as were presented in Figure 2.

As the top right panel shows, the distribution of topics in the corpus was more even in the design 2 experimental conditions than it was in design 1. No one topic played a decidedly more prominent role in the rationales given by the respondents. Notably, none
Figure 2: Exclusive words, corpus/topic proportions, and effects of experimental contrasts on topic proportions for design 1.
of the topics clearly sought to “take advantage” of newfound power. This parallels earlier results that found that individuals do not believe that their own country will exploit gains in power, but they do believe that other countries will exploit their country’s loss in power (Jervis, 1968; Winter, 2003; Winter and Sweet, 2009). The only topics that come close to this consideration dealt with particular features of the scenario that respondents were told. “Reference to Past Unhappiness” focused on how the status quo division was something the US was not especially happy with, and “Consequences of Control” focused mostly on the security advantages of having control over the island.

One topic that came up, “Keep Commitments,” focused on how its wrong to break previous agreements even if you have an advantage. Here individuals noted that the US should be consistent and keep its commitments, that honoring previous agreements is important, and that just because circumstances have changed doesn’t mean that the US should shift away from a previous commitment. These logics parallel the role of consistency in the work on audience costs discussed earlier (Tomz, 2007; Levy, McKoy, Poast et al., 2015). Below we discuss the relationship between this topic and the strategy choice supported by respondents.

The other topics that the STM found in the design 2 responses also do not connect directly to commitment problem logics. The “Costs of Conflict” topic focuses on how conflict destroys resources and lives and was quite similar to the results presented in Figure 2. The “Balance of Power too Close” topic focused on whether there was a sufficiently large power difference to justify taking a gamble that could lead to war. Other topics considered the given scenario within the broader context of US international relations. For example, “Peace Brings Security” focused on how keeping the peace in a present dispute can generate broader peace dividends later. Rather than fixating on zero-sum-type logics, positive-sum opportunities could be generated. Finally, the “Avoid Use of Force” contained somewhat generic comments arguing against the use of force in general. This perspective sought to restrict the set of acceptable strategies in this setting.

The relationship between the treatment conditions and topics helps us to better understand the results in Figure 2. In the large power shift with no commit condition, we
see less concern than in the small shift condition with whether or not the probability of victory is now sufficiently large. Furthermore, the large power shift condition responses focus more on the benefits of action and being able to take control than do the small power shift condition responses. More interesting is the contrast between the “Large Shift and Commit” and the “Large Shift and No Commit” conditions. We see that a number of respondents saw their country’s past commitments as binding. This suggests that prior commitments can decrease the attractiveness of a shift in power. Indeed, a mediation analysis estimates that there is a $-0.05$ change in probability of demanding territory that is due to the effect of the past commitment framing through the “Keep Commitments” estimate. In this sense, public commitments mitigated the propensity to take advantage of a shift in power.\footnote{The online appendix discusses the separate effects of pre-treatment covariates.}

5.3 Discussion

The preceding results are highly interesting. First, in both experimental designs 1 and 2, we see that individuals respond to shifting power in different ways. Some people focus on rationales consistent with commitment problem explanations. However, others focus on the costs and benefits of the situation or want to transform the situation perhaps into a non-zero-sum type game. In their explanations of their responses to scenarios of rising and declining power, we find that individuals make use of a variety of approaches that represent distinct evaluative psychological models. Importantly, these models do not always conform to the standard credible commitment model.

Second, we see that public commitments have an effect on respondents, in part because they reduce expectations that the rising power will, or should, take advantage of the power shift. This result is consistent with previous work on the role of public commitments. However, this paper is unable to differentiate among several different mechanisms related to this effect. For example, do some individuals have strong inherent preferences for consistency, or do they value keeping their country’s commitments for more instrumental reasons, as reneging could lead other countries to break their commitments in the future?
Figure 3: Exclusive words, corpus/topic proportions, and effects of experimental contrasts on topic proportions for design 2.
Third, there is an interesting contrast between the experiment with the US as a future declining power and the US as a recently rising power. Consistent with previous work (Jervis, 1968; Winter, 2003; Winter and Sweet, 2009), individuals see the implications of power held by another country differently from the way they see their own country’s power. For some, increases in the power of other countries should be feared; they worry that the other country will use its new power to revise the status quo. But most people do not think that their own country should exercise its new power to act in a revisionist manner, preferring a policy of restraint instead. Furthermore, prospect theory suggests that individuals might want to protect against future losses but are less concerned about prospective gains. If individuals care less about extracting gains, then commitment problems might be less vexing than standard models assume. This paper provides evidence for how these behavioral perspectives play out vis-a-vis a standard rational choice account of shifting power.

6 Conclusion

A prevailing puzzle for scholars of international relations is why costly conflict occurs. One common explanation in the literature is that preventive strikes are a rational response to an imminent increase in the power of another country. The rising power faces a commitment problem: it cannot guarantee to not take advantage of others once it becomes more powerful, thus the rational response for the declining power is to be aggressive now. This explanation is well known.

Less understood are the micro-foundations of this explanation. Recent experimental work in the laboratory has tested some of the comparative static predictions that fall out of these models, finding in general that even in abstract decision-making contexts, humans respond to incentives in ways consistent with the theoretical models. This paper takes a further step by investigating implications of these models at a more micro level and in a less abstract context that directly engages with international relations. To the extent that the public is relevant for bargaining, this move helps to unpack what domestic

\[34\] Future research could investigate this distinction at the within-subject level.
political pressures might look like when the unitary actor assumption is dropped.

The results from the survey experiments described here reveal the heterogeneous ways that individuals respond to shifting power. Interestingly, many individuals dismiss the threat posed by another country that is increasing in power, instead preferring cooperative strategies or isolationism. Others articulate logics close to those spelled out in standard game-theoretic models. Future research could, and should, try to understand the exact sources of this heterogeneity. Another important finding is that individuals respond to being a declining power differently from how they respond to their country’s rising power. Identifying the conditions when this difference is strong or weak would be an important next step, as it points to where commitment problems might be more or less severe.

The paper also presents evidence that mass political behavior is sensitive to the presence of a commitment or agreement in a situation that otherwise might evoke a commitment problem. Some individuals emphasize that commitments constrain state behavior, even though some accounts of international affairs consider those commitments to be non-credible. The behavioral foundations of this effect appear to be based on a general tendency to favor consistency and “keeping one’s word.” This finding is similar to other work in American politics (Tomz and Van Houweling, 2008) and international relations (Tomz, 2007). By showcasing how individuals 1) respond to shifting power differently by whether in a rising or falling power context, 2) have highly heterogeneous beliefs about what drives a response to shifting power, and 3) respond to commitments due to a preference for consistency, this paper begins to highlight how power transition arguments could be developed in light of behavioral foundations.
References


Roberts, Margaret E, Brandon M Stewart, and Dustin Tingley. 2014. stm: R Package for Structural Topic Models.


A Vignette Details

The exact language for each experimental vignette presented in the paper was as follows, with line formatting omitted for presentational purposes:

Declining Power

“We would like for you to consider the following scenario. Alta Island is strategically valuable to the US and another country. The US controls part of the island, and the other country controls the rest. The current division of the island arose more than a decade ago, when the country was militarily weaker than the US in this area. The other country is still militarily weaker today. In the next couple of years the other country is predicted to become militarily [slightly more/much more] powerful than the US. Right now, the other country is contemplating demanding a larger share of the territory, which would decrease US national security. If the US rejects the proposal, there will be a costly conflict. Whoever ends up owning the island will depend on each country’s military strength. A larger military advantage for a country means a greater chance they will remove the other country from the island. If the US accepts the other country’s demand there would be no conflict this year. [no text/Both sides would agree publicly to the division of the territory.] Neither country would be removed. If there is conflict, one country will be removed and unable to return. As long as the other country remains on the island, in the future, when the other country is [slightly more/much more] powerful than the US, the country could demand additional US territory. What should the US response be to a proposal that takes over a small portion of the US territory?” Accept Proposal/Reject Proposal.
Rising Power

“We would like for you to consider the following scenario. An area of land is strategically valuable to your country and another country. Your country controls part of the land, and the other country controls the rest. The current division of the island arose more than a decade ago, when your country was militarily weaker than the other country in this area. Many people in your country were not happy with how the territory was divided. Recently, your country has become militarily [slightly/much more] powerful than the other country. Your country could demand a larger share of the territory, which would substantially improve your country’s security. But if the other country rejects the proposal, there will be a costly conflict and the division of the island will depend on each country’s military strength. In light of the fact that your country has become [slightly/much] more powerful than the other country, do you think your country should propose taking a larger share of the island, or not?” Respondents chose from taking over all of the other country’s territory, 75% of 50% of 25% or none.

B  Risen Power Auxiliary Experiment

In addition to the experimental vignette where the US had recently risen in power, I also ran an additional experiment where respondents were not told anything about how satisfied people in the US were with the previous division of the territory in the past. This experiment was run as part of the 2013 Cooperative Congressional Election Study administered by YouGov/Polimetrix with 1,500 subjects. 80% of subjects chose not to demand any territory, which shows the high level of conflict aversion mentioned in the main text.

Exact language

“We would like for you to consider the following scenario. Alta Island is strategically valuable to the US and another country. The US controls part of the island, and the other country controls the rest. The current division of the island arose more than a
decade ago, when the US was militarily weaker than the other country in this area. [At that time, the two countries agreed to the division of the territory.] Recently, the US has become militarily [slightly/much] more powerful than the other country. The US could demand a larger share of the territory, which would substantially improve US national security. But if the other country rejects the proposal, there will be a costly conflict and the division of the island will depend on each country’s military strength. In light of the fact that the US has become [slightly/much] more powerful than the other country, do you think the US should propose taking a larger share of the island, or not?"

C  Real World Experiment: Rising China

In recent years China has adopted a set of policies aimed at expanding its control over areas of the East China and South China seas. Many accounts see these moves as increasingly assertive and linked with China’s rising power-projection capabilities. In October 2011, the Chinese paper *Global Daily* wrote, “If these countries don’t want to change their ways with China, they will need to prepare for the sounds of cannons. We need to be ready for that, as it may be the only way for the disputes in the sea to be resolved.” Responses by the US of course have not been mute. For example, we collected every “tweet” made by the Federal government containing the term “China” in 2012 and 2013 and used this data to estimate a STM where the topic prevalence covariate is a smooth function of time. Results for two topics are presented. One covering the general dispute in the South China Sea and the second the November 2013 Chinese announcement of an enlarged “air defense zone” covering the East China Sea. This move was seen by many to be overtly connected to ongoing territorial disputes in the South China sea. Both issues are clearly on the mind of the US federal government, and the issue has been well covered by the US press. Results are presented in Figure 4. The next experiment looks at public responses to a rising China.

C.1  Design

In this experiment, fielded on Mechanical Turk with 1,346 respondents in the period following China’s announcement, I asked respondents about how the US should deal with
the rise of China’s power. In particular, using a question from previous surveys on the topic, I asked, “In dealing with the rise of China’s power, do you think the U.S. should: 1) undertake friendly cooperation and engagement or 2) actively work to limit growth of China’s power.” I also asked a subset of respondents the same question but prefaced it with the phrase, “As you may have heard in the news, China recently announced a new claim to a large portion of airspace over the East China Sea. Many see this as a major move to expand China’s power in Asia.” The experimental manipulation thus primed some respondents to think about China’s expansionary moves, whereas other respondents received no such prime.

C.2 Results

Figure 5 plots the proportion of respondents supporting the limitation of China’s power as a function of whether or not respondents had been primed. The effect of the treatment was approximately a 5% increase in support for limiting China’s growth. A test of the difference in proportions between the two groups yields a significant test statistic.
Figure 5: Average treatment effects for China rising experiment.

(abs(z)=1.96, \(p < .05\)). The effect size is clearly modest, which of course could be due to some heightened level of antagonism amongst those in the control group aware of China’s recent moves. Nevertheless, we once again observe, this time using a real world example, rather than a vignette or laboratory experiment, increases in aggressive policy stances when subjects are primed with information about the rising power of an opponent.

Just like in the previous section, we can analyze open-ended responses that asked respondents to explain the beliefs and rationales underlying their decisions. In this example, the topical space is larger than in the previous experiments, which is not surprising given its more substantive foundation. Figure 6 plots the results from a ten-topic model where we focus on four topics. The left plots the most exclusive words for each of these topics. The “Power Grab Consequences” topic focused on the consequences, and to a less extent motivations, of China’s assertiveness. Most of the responses associated with this topic were concerned about a rising China.\(^{25}\) The “Avoid Action/Aggression” topic focused on the negative consequences of starting a conflict with China, including the costs that

\(^{25}\)For example, “I feel this is the correct move. China is a big country with a lot of money and power. If they are allowed to just claim land, and that claim is recognized as valid, then they may try to claim other land that is not a valid claim yet the people who live there are unable to defend themselves and are overtaken. The US has a reputation for defending the underdog in the right, but we may not be able to defend the next nation in trouble or have less clout to do so if we close our eyes to a claim of land just because it is not heavily populated. If China claims someone elses island now, what is to prevent them from claiming US property next or the land of an ally?”
would come with this response, and proposed political negotiation as an alternative. The “Globalization Good” topic focused on the positive consequences of a global relationship with China, both economically but also culturally and in areas like science. Finally the “Economic Partner” topic focused on the bilateral economic relationships with China, including our dependence on Chinese imports but also Chinese export markets.

The right side of Figure 6 plots the influence of the experimental prime on each of the topics. We see that the prime increases the prevalence of the “Power Grab Consequences” and “Avoid Action/Aggression” topics, and decreases the prevalence of the “Globalization Good” topic. While the increase in the “Power Grab Consequences” and decrease in “Globalization Good” topics helps to explain the treatment effect in Figure 5, the relatively weak treatment effect is partially explained by the “Avoid Action/Agression” response. While a rising China might raise concerns about future expansion and dampen expectations about the positive aspects of globalization, concern over the political and military costs of intervention, and a broader preference for dis-engagement, dampened this effect.
Figure 6: Effects on topic prevalence between “Prime” condition and “No Prime” condition. Positive values indicate a greater relationship with “Prime” condition.
D Pre-treatment covariate effects

While we know the commitment treatment had an impact on the propensity to emphasize the importance of being consistent and keeping commitments, do any pre-treatment covariates have an influence in our sample? This type of question deserves its own research design and paper. We did not ask extensive batteries of psychological scales in our survey that might explain some of this variation. We briefly speak to this issue using data in this sample. We take two approaches. The first is to use the estimated topic proportion for the “Keep Commitment” topic as a dependent variable. We regress this on the treatment condition, gender, general willingness to use force, and liberal-conservative ideology. As discussed above, the effect of the “Large Shift and Commit” treatment on this topic was strong, significant, and positive. Individuals generally supporting the use of force were less likely to rationalize by referencing the importance of commitments. Gender had no impact and conservatives were slightly more likely to reference commitments in their explanations but this relationship was insignificant in the post-experiment survey question. An identical pattern emerges for responses using a second dependent variable that measured the importance of keeping commitments. We measured perceptions of the importance of keeping commitments by asking respondents “In general, should your country always honor its past commitments to other countries, or should your country always take advantage of its current situation and capabilities.” Responses ranged along a 1 to 7 scale, with 7 indicating that one’s country should “Always honor past commitments” and 1 indicating “Always take advantage of current situation and capabilities.” We did not ask this question beforehand so as not to prime respondents. Instead we asked this question afterwards, which is not ideal but we did have other questions on other issues between our main experiment and this one. We find similar sets of results, and in particular that a general willingness to use force led to less interest in keeping commitments.

26 The willingness to use force question asked: “Some people think that military force should never be used under any circumstances. They are at “1” on the scale below. Other people think there are many situations in which military force should be used to deal with problems. They are at “7” on the scale below. And, of course, other people have opinions in between.”
E  Extended Description of the Structural Topic Model

The STM is in the family of unsupervised topic models. A more commonly known example of this type of model is the Latent Dirchelet Allocation (LDA) model. Topic models leverage the co-occurrence of words across many documents so as to group together sets of words that co-occur together. An output of these models is a set of “topics” that can be inspected by looking at words that relate to the topics and at particular documents that are highly related to a specific topic.

The STM breaks off from LDA model (Blei, Ng, and Jordan, 2003; Blei, 2012)—and the related correlated topic model (Blei and Lafferty, 2007)—in an important way. The STM relaxes the highly restrictive assumption in most previous models that the documents are exchangeable, meaning that all “authors” are equally likely to have written every document. Instead, the STM allows for the incorporation of different types of document metadata, and hence information known by the analyst. The STM uses a generative model of text (like previous approaches such as LDA) but incorporates document-level metadata through the use of regularized priors.27 As a result, not only is the estimated topical content improved by the extra information provided by the metadata, but a range of interesting quantities of interest are available.

For example, as shown in Roberts, Stewart, Tingley et al. (2014), the STM allows the prevalence of topics within a specific document (e.g., an open-ended survey response) to vary by experimental condition or other covariates. In the experiments reported in this paper, respondents reported a variety of beliefs about why a particular policy choice should be chosen. These beliefs can be directly related to covariates like treatment assignments. Because these quantities of interest come in the form of posterior distributions, uncertainty calculations are available.28

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27 The use of regularized priors ensures that by allowing topics to be estimated as a function of covariates, the covariates themselves do not force, or “bake in,” particular relationships. The extensive Monte Carlo simulations and permutation tests in Roberts, Stewart, Tingley et al. (2014) demonstrate this point.

28 Though as discussed in Roberts, Stewart, Tingley et al. (2014), it is necessary to use the method of composition (e.g., Treier and Jackman, 2008) to fully propagate uncertainty through the model estimates.