

# Looking for Audience Costs

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The methodological issues that arise in testing Fearon's argument about domestic political audience costs and signaling in international crises are examined, in particular the difficulty of finding direct evidence (1) that escalating a crisis and then backing down jeopardizes a leader's tenure in office, and (2) that democratic leaders are more vulnerable to removal in this event than are nondemocratic leaders. Tests that seek to measure the existence and magnitude of audience costs encounter severe problems of partial observability and strategic selection: the effect of audience costs on a leader's political survival can only be detected by looking at cases in which the costs are actually incurred, but strategic choice implies that the probability of incurring audience costs is a function of their value. A formal model, brief case studies, and Monte Carlo simulations are used to show that these problems bias direct tests against supporting either of the audience cost propositions. Tests based on observed audience costs understate both the mean level of audience costs in the full population and the difference in means across regime types.

Recent years have witnessed an explosion of interest in the question of how foreign policy choices affect the domestic political standing of state leaders and vice versa. If outcomes at the international level influence leaders' ability to maintain their hold on office, then domestic political conditions and institutions can affect choices along the entire continuum of war and peace:

- the decision to provoke crises (e.g., Smith 1996a; Leeds and Davis 1997; Miller 1999),
- the credibility of signals sent during crises (Fearon 1994; Schultz 1998, 1999; Smith 1998; Guisinger and Smith 1999; Partell and Palmer 1999; Gelpi and Griesdorf 1997),
- the incentives to wage war (e.g., Morgan and Campbell 1991; Bueno de Mesquita and Siverson 1995; Gaubatz 1999),
- the duration of war (Goemans 2000; Bennett and Stam 1996), and
- war outcomes (Stam 1996; Reiter and Stam 1998a, 1998b; Bueno de Mesquita et al. 1999).

Most of the studies in this literature either assume or take as a working hypothesis that international outcomes influence the survival of political leaders. They then work out and test the implications of this assumption by looking for systematic domestic influences on dependent variables like those listed above. Does regime type affect decisions to start crises, fight wars, and/or end wars? Do states react differently when threatened

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by a democracy than by other states? Do domestic conditions, such as social unrest or economic hardship, lead to more belligerent policies?

A smaller number of studies take the opposite approach and look for evidence that outcomes at the international level influence the fate of political leaders (Cotton 1986; Bueno de Mesquita, Siverson, and Woller 1992; Bueno de Mesquita and Siverson 1995; Goemans 2000; Gelpi and Grieco 2000).[1] Such tests take regime change, government turnover, or duration in office as their dependent variable and try to determine whether winning and losing in wars and crises has a measurable influence. The desirability of this line of inquiry is obvious. Whereas tests of the first kind can produce indirect evidence that state leaders make foreign policy choices with an eye to their political survival, tests of the second kind might produce direct evidence that this incentive exists. Such tests hold out the promise that we can directly confirm, falsify, or refine the assumptions we make about leaders' domestic political constraints.

I argue, however, that severe difficulties can arise in conducting and interpreting such direct tests of political survival. The problem, in a nutshell, is that state leaders have incentives to confound our inferences. International outcomes are a product of strategic choice, and, to the extent that leaders value holding office, they are unlikely to make choices that lead to outcomes with high domestic political costs. If we can observe only the domestic costs that that leaders choose to pay, then we will generally miss the cases in which these costs are large. In addition, there are some strategic setting in which foreign states may wish to avoid actions that force a leader to choose between high domestic costs or some costly foreign policy.[2] Put another way, *domestic political costs can affect equilibrium behavior even if these costs are only incurred off the equilibrium path.* This creates a problem for statistical inference because the outcomes that we observe should be associated with lower domestic costs, on average, than the outcomes that we do not observe. The process of strategic selection can thus attenuate the relationship between international outcomes and political survival. Unless efforts are made to adjust for this consideration, our tests will understate the underlying relationship—thus understating the true domestic costs of some foreign policy choices and outcomes.

In this study, I explore this problem in the context of one prominent argument in this literature: Fearon's (1994) argument about domestic political audience costs and signaling in international crises. Fearon argues that threats and escalatory actions can serve as credible signals of resolve if they expose state leaders to audience costs—costs that are imposed by domestic audiences if the leader makes a public threat and then fails to carry through on it. Fearon suggests that these costs arise because voters value the national honor and will wish to punish leaders who sully that honor by

1. This list of citations excludes a large literature that looks at the effect of international outcomes on public opinion polls, particularly in the United States. See, for example, Russett (1990).

2. The model considered in this study has this feature. Consider also this example: Goemans (2000) argues that leaders of "mixed regimes" are very likely to face severe punishment (death, prison, or exile) in the event they lose a war. As a result, these leaders are willing to fight longer wars in the hopes of pulling out a victory. If a rival can anticipate that losing a war would be very costly for the mixed regime, and that the leader is thus likely to fight very long and hard to win, then the rival will be less likely to start a war in the first place. If so, we may not observe the high domestic costs for losing that the leader and the rival anticipate in this case (see Goemans 2000, 576, for similar speculation on this point).

making empty threats. Along similar lines, Guisinger and Smith (1999) suggest that, if foreign states discount threats by leaders who have been caught bluffing, then voters have incentives to remove those leaders and thereby restore the state's credibility (cf. Sartori 1998). Smith (1998) provides additional microfoundations by showing that voters might assume that leaders who back down after making a threat have low foreign policy competence. Together these arguments suggest the following:

*Hypothesis 1:* Leaders jeopardize their political survival when they escalate a crisis and then back down.

All three arguments also suggest that democratic institutions increase the political costs of backing down by making it easier for domestic audiences to remove leaders from office. This suggests a second hypothesis:

*Hypothesis 2:* Democratic leaders incur higher audience costs from backing down than do nondemocratic leaders.

To date, most tests of the audience costs proposition have focused on the second hypothesis and have been indirect: that is, rather than looking for direct evidence that there are political costs to backing down, they have looked for evidence that democracy correlates with the kind of outcomes that high audience costs are supposed to bring about. Fearon's (1994, 586) model predicts that once a crisis is underway the state that can generate audience costs at a faster rate is more likely to prevail. Similarly, Schultz (1999) presents a model suggesting the probability that a target state will resist a challenge is decreasing in the level of audience costs that the challenging state can generate. These theoretical results imply that, if democratic leaders can generate higher audience costs, then their targets should be less likely to resist and they should be more likely to prevail in the event of resistance. Schultz (1999), Partell and Palmer (1999), and Gelpi and Griesdorf (1997) present evidence consistent with these claims. Along similar lines, Eyerman and Hart (1996) and Partell and Palmer (1999) show that crises involving democratic dyads go through fewer stages of escalation than do crises involving mixed or autocratic dyads—a result that is consistent with the claim that democracies generate audience costs at a faster rate and hence need fewer rounds of escalation to communicate their resolve (Fearon 1994, 585).

These tests are important, but they are also purely correlational. That is, they show that the correlations between democracy and crisis outcomes implied by the second hypothesis do indeed hold but do not directly show the existence of domestic political audience costs. As a result, they leave open the possibility that other causal mechanisms account for the observed correlations. For example, Eyerman and Hart (1996, 602) themselves concede that their result is consistent with normative theories of the democratic peace (e.g., Russett 1993; Dixon 1994). Moreover, it is not clear that these kinds of tests can find evidence of the main hypothesis that escalatory actions generate domestic political audience costs in the first place.

This weakness suggests the need for a more direct test of the audience cost claim by looking for evidence that leaders suffer political costs for escalating a crisis and then

backing down. If such actions are indeed costly, then we might be able to observe audience costs in a direct manner by observing whether backing down in a crisis jeopardizes a leader's tenure in office. In addition, a direct test would be able to get at the second hypothesis by determining whether democratic leaders face a greater risk of removal in this event than do nondemocratic leaders. To this end, Gelpi and Grieco (2000) use survival analysis to determine whether leaders who lose crises have shorter postcrisis tenure, whether the costs of failure increase with the level of escalation, and whether democratic leaders suffer higher costs for failed escalation. They find no evidence to support the hypotheses.

As suggested above, however, such direct tests of the audience cost proposition, although obviously appealing, are fraught with methodological difficulties. The problem arises from a combination of partial observability and strategic selection. The only cases in which we can observe the effect of audience costs on political survival are those in which the audience costs are actually incurred—that is, when a leader escalates a crisis and then backs down. When a crisis (or potential crisis) has a different outcome—for example, no challenge made, no resistance by the other side, or war—we cannot know what the effect on the leader's survival would have been had he backed down instead. The problem is that all of the decisions that culminate in a leader's incurring audience costs are themselves influenced by those costs. Whether a leader escalates a crisis, whether the other side resists, whether the leader backs down rather than fighting a war—all of these decisions depend on the level of audience costs the leader can generate. Hence, the probability of observing the audience costs depends on their value. As a result, it is problematic to make inferences about the distribution of audience costs in the population by looking at the distribution of audience costs that are actually incurred.

As I will show, tests that fail to take these problems into account are biased against supporting the audience cost propositions. First, they understate the level of audience costs that threats generate. The reason is that the highest audience costs are only rarely observed. When a leader's threat generates large audience costs, the other side is unlikely to resist the threat, and, if it does, the leader is unlikely to back down in the face of resistance. As a result, the distribution of observed audience costs has a lower mean than the distribution of audience costs in the population of states.[3] Second, tests using observed audience costs may understate the difference (if any) across regime types. If democracies generate higher audience costs on average than nondemocracies, then the distribution of audience costs among democracies will be more heavily affected by the selection process. This leads to a convergence in the mean level of observed audience costs across regime types.

In the first section of this study, I set up and solve a formal model of crisis bargaining. The model is not new, but the solution shows how strategic choice influences the conditions under which audience costs are incurred. In particular, I show that high audience costs are unlikely to be incurred in equilibrium. In the next section, I present

3. Smith (1996b) makes a similar argument in the context of alliance reliability. He shows that states are less likely to provoke wars with rivals whose allies are likely to be reliable. Hence, the alliances whose reliability is tested have lower reliability than the full population of alliances.

two case studies that show how this selection process plays out in real crises. The 1898 Fashoda crisis demonstrates that high audience costs might never be observed because they cause the government to stand firm and the rival state to back down. The 1951 crisis over Persia's decision to nationalize the Anglo-Iranian Oil Company shows that a government is more likely to back down when it expects the political risks from doing so to be manageable. I then turn to the issue of statistical inference. Using the formal model and some distributional assumptions about the audience costs, I generate simulated data sets to explore whether one can make accurate inferences about the distribution of audience costs by looking at the cases in which the audience costs are actually incurred. These simulations show that estimates using observed audience costs understate both the mean level of audience costs in the population and the difference in means across regime types. I conclude with some thoughts on how scholars interested in testing the audience costs proposition should proceed.

## A MODEL OF CRISIS BARGAINING WITH AUDIENCE COSTS

We begin with a simplified version of Fearon's (1994) model. Two states are contesting possession of some good. We label one state the challenger and the other the target and assume that at the outset of the interaction the target possesses the good.

*Sequence of moves.* The extensive form of the game is depicted in Figure 1. The interaction begins with the challenger's decision to challenge the target for possession of the good (CH) or to keep the status quo (SQ). In the event of a challenge, the target must decide to concede the good peacefully (CD), at which point the game ends, or resist the challenge (RS). In the event of resistance, the challenger must decide to back down (BD) or stand firm (SF). If the challenger stands firm, the target faces the same choice between backing down and standing firm. If both states stand firm, the result is a war.

*Payoffs.* Without loss of generality, normalize the value of the good to 1. Thus, in the event of a peaceful outcome—that is, status quo, target concedes or backs down, challenger backs down—the state that possesses the good at the end receives a payoff of 1, and the state that does not possess the good gets a payoff of 0. In addition, we assume that making a challenge or escalating the crisis exposes the leader to domestic political audience costs, which are incurred in the event that the leader later backs down. Thus, the challenger receives a payoff of $-a_c$ if it backs down after having made the challenge, and the target receives a payoff $-a_t$ if it backs down after resisting, with $a_c, a_t > 0$. Finally, in the event of a war, the challenger and target receive payoffs of $-w_c$ and $-w_t$, respectively, with $w_c, w_t > 0$.[4] These terms reflect the states' expected values for war, although we will hereinafter refer to them as war costs.

4. The assumption that neither state can have positive value for war simplifies the solution to the game but does not alter the results fundamentally.

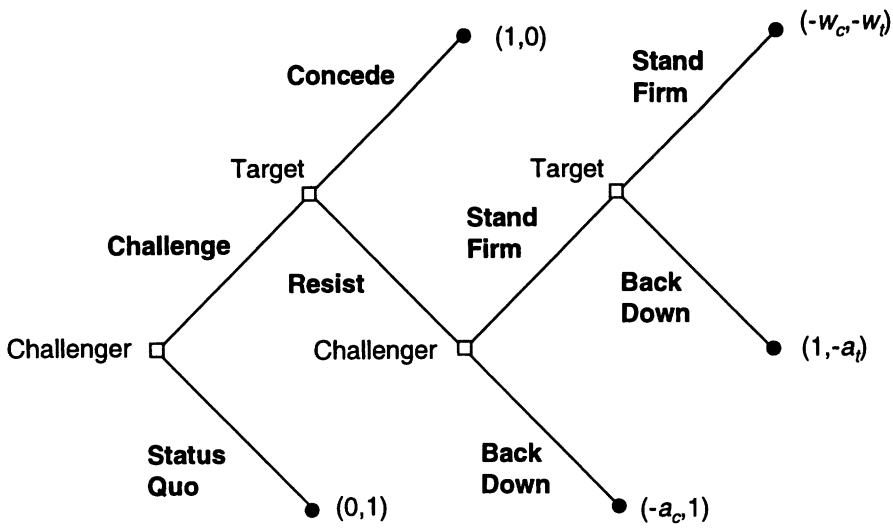



**Figure 1: A Crisis Bargaining Game with Audience Costs**

*Information and beliefs.* We assume that states are incompletely informed about each other's expected war costs. Assume that $w_c$ and $w_t$ are independently drawn from probability distributions over the positive real numbers with cumulative probability functions $F_c$ and $F_t$, respectively. Each state observes its own costs of war. The probability distributions are common knowledge.

*Equilibrium strategies.* The appendix solves for the perfect Bayesian equilibria to this game. These equilibria take slightly different forms depending on the actual values of $a_c$ and $a_t$ and the distributions describing the war costs, $F_c$ and $F_t$. For each set of conditions, however, the equilibrium is effectively unique.[5] In general, each state's strategy is described by a pair of cutpoints along the continuum of types. For the challenger, let $b_c$ and $k_c$ denote cutpoints such that the challenger makes the challenge if and only if $w_c < b_c$ and stands firm if and only if $w_c < k_c$. In equilibrium, it is always the case that $b_c >$

5. I say "effectively" because there are, in fact, infinitely many equilibria that differ in a way that is inconsequential for this analysis. In the equilibrium described in propositions 1 and 2, all challengers for which $w_c > k_c$ are indifferent between making the challenge and choosing the status quo; because these types back down at their final node, their payoff is not a function of their war costs. As a result, nothing requires that the types that fall between $b_c$ and $k_c$ are the ones that bluff. All that is required in equilibrium is that types for which $w_c > k_c$ bluff with sufficient frequency that the target's posterior belief is as given in equation (A7a) in the appendix. There are infinitely many combinations of pure and mixed strategies by these types that will satisfy this condition. None of the results depends on the exact formulation of the bluffing strategies, and the one employed here—which assumes that those with the lowest war costs among this group are most likely to bluff—seem intuitively plausible. The same holds for the target's bluffing strategies in propositions 1 and 4.

$k_c$, so that the cut points divide the continuum of types into three ranges corresponding to the following pairs of equilibrium strategies:

{CH, SF} if $w_c < k_c$,
{CH, BD} if $b_c > w_c \geq k_c$, and
{SQ, BD} if $w_c \geq b_c$.

Thus, those challengers with the lowest costs of war make the challenge and stand firm in the event of resistance, those with moderate costs of war bluff—that is, make the challenge but back down if resisted—and those with the highest costs of war select the status quo.

Similarly, let $b_t$ and $k_t$ denote cutpoints such that the target resists whenever $w_t < b_t$ and stands firm whenever $w_t < k_t$. Because the target has the final move, its decision at the final node is straightforward: it backs down if the war costs are greater than the audiences costs (i.e., $w_t > a_t$) and stands firm otherwise. Given this, it is clear that $k_t = a_t$. The cutpoint $b_t$ separating targets that resist from those that concede can be greater than or less than $a_t$, depending on the relative values of the challenger's and target's audience costs. If $b_t \geq a_t$, then some targets bluff in equilibrium—that is, they resist the challenge but then back down if the challenger stands firm. In this case, the cut points divide the continuum of targets into three ranges, corresponding to the following strategy pairs:[6]

{RS, SF} if $w_t < a_t$,
{RS, BD} if $b_t > w_t \geq a_t$, and
{CD, BD} if $w_t \geq b_t$.

If $b_t < a_t$, then all targets that resist also stand firm, but not all targets that would stand firm choose to resist. In this case, the following strategy pairs are possible:[7]

{RS, SF} if $w_t < b_t$,
{CD, SF} if $a_t > w_t \geq b_t$, and
{CD, BD} if $w_t \geq a_t$.

Thus, those targets with the lowest costs of war resist the challenge and stand firm, those with the highest costs of war concede the good peacefully, whereas those in the middle might bluff or concede depending on their expectations about the resolve of the challenger. Notice that, whereas the challenger bluffs with positive probability under all conditions, the target does not. In particular, if the probability is quite high that the challenger is committed to standing firm, then the target has little to gain by bluffing and refrains from doing so to avoid incurring either audience or war costs.

The two pairs of cutpoints generate nine different regions in the two-dimensional space describing all possible combinations of $w_c$ and $w_t$. Figure 2 illustrates these

6. This case corresponds to propositions 1 and 4 in the appendix.
7. This case corresponds to propositions 2 and 3 in the appendix.

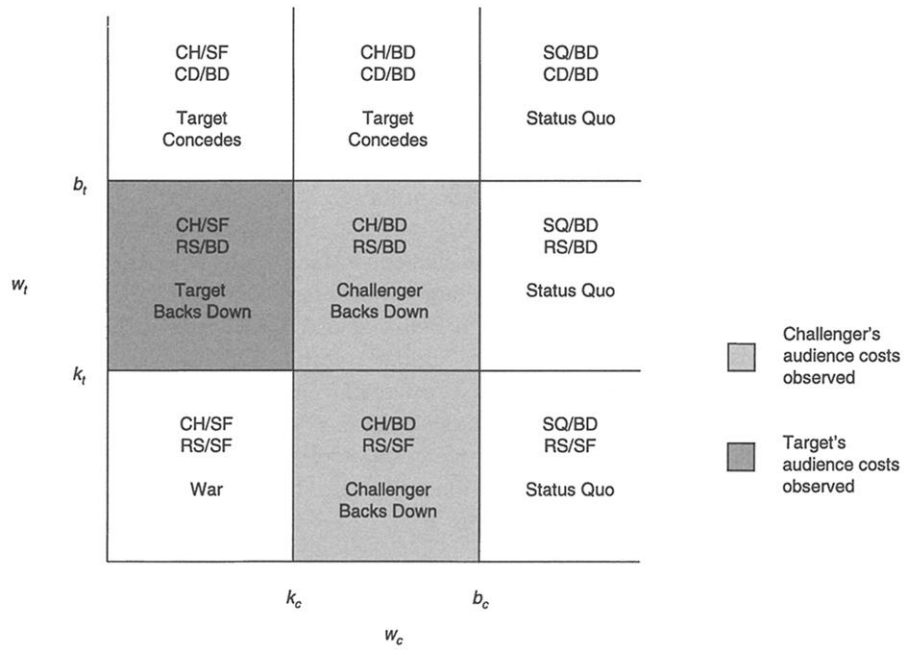



**Figure 2: Equilibrium Cut Points, Strategies, and Outcomes**

regions under the assumption that $b_t \geq a_t$, meaning that some targets bluff in equilibrium. The figure shows how any pair $(w_c, w_t)$ maps into a set of strategies by each state and one of the five possible outcomes. The areas shaded in gray depict the configurations of types that must hold for one state or the other to incur audience costs. Hence, these are the regions in which we as analysts might directly observe the impact of backing down on a state leader's tenure in office. If $b_t < a_t$, then the middle horizontal row consists of cases in which the target concedes and hence includes no cases in which either state incurs audience costs.

The appendix provides the exact functional forms for each of the four cutpoints. The key point to emphasize here is that all of the cutpoints depend on one or both audience cost terms.[8] Thus, the size of each region in Figure 2—and hence the ex ante probability associated with each outcome—is a functions of $a_c$ and $a_t$. Moreover, the functional forms are generally quite complicated, often nonlinear, and sometimes nonmonotonic. Still, we can make a few generalizations that are important in what follows:

8. Because of the strategic nature of the interaction, each state's cutpoints also take into account the equilibrium cutpoints of the other as well as its beliefs about the other's type. In the appendix, I show how the cutpoints and beliefs are interrelated, although ultimately every cutpoint is reduced to a function of the parameters, $a_c$ and $a_t$, and the probability distribution functions, $F_c$ and $F_t$.

1. $b_t$ is always decreasing in $a_c$, meaning that the probability of resistance decreases with the audience costs generated by the challenge.
2. $k_c$ tends to increase with $a_c$, meaning that the probability that the challenger stands firm is increasing in the audience costs it generated.
3. $k_c$ tends to decrease with $a_t$, meaning that the probability that the challenger stands firm is decreasing in the audience costs generated by the target.
4. $k_t$ increases with (indeed, is equal to) $a_t$, meaning that the probability that the target stands firm is increasing in the audience costs it generated.

Results 1 and 2 mitigate against observing challengers incur high audience costs. For a challenger to incur audience costs, the target must resist and the challenger must choose to back down rather than stand firm; both of these choices become less likely as the challenger's audience costs increase. Similarly, results 3 and 4 mitigate against observing targets that incur high audience costs. For a target to incur audience costs, the challenger must stand firm, and the target must back down; both of these choices become less likely as the target's audience costs increase. Thus, the probability of observing audience costs depends on their actual value. The higher the costs, the less likely they are to be observed.

## SELECTION EFFECTS IN THE REAL WORLD: TWO ILLUSTRATIVE CASES

Before discussing the statistical issues that arise from this observation, it is useful to see how this selection effect plays out in actual cases. I present two brief case studies to illustrate the claim that high audience costs can go unobserved while those costs that a government chooses to incur tend to be small.

### THE FASHODA CRISIS, 1898

The Fashoda crisis between Britain and France illustrates the proposition that high audience costs may not be observed due to the strategic behavior of the government and rival state.[9] The crisis began on September 19, 1898, when a Anglo-Egyptian army arrived at the village of Fashoda in the upper Nile valley and found it occupied by a small French force. The meeting touched off a diplomatic row over the division of colonial rights in the upper Nile. Although the French force at Fashoda was too weak to hold the outpost militarily, France hoped to extract some concessions in exchange for its withdrawal. The British government, for its part, adopted the uncompromising position that there would be no concessions—or even negotiations—until the French withdrew from Fashoda.

Consistent with Fearon's (1994) argument, the British position was backed with speeches and actions designed to generate domestic political audience costs by arousing public opinion. The most prominent example of such signaling came on October 10,

9. For a more in-depth analysis of the role of incomplete information and signaling in the Fashoda crisis, see Schultz (forthcoming, chap. 6).

when Salisbury took the unusual step of publishing a "blue book" on the crisis, a collection of key dispatches between the two countries. Until this point, the negotiations had taken place in private. With the publication of the blue book, the positions taken and arguments made by both sides were out in the open. The British public could see with its own eyes the uncompromising negotiating position that the government had staked out. This action was accompanied by a number of public statements reaffirming the government's unwillingness to compromise (see, for example, Langer 1951, 553).

The perception was widespread that such actions generated substantial audience costs, making it difficult for the government to back down. The most direct statement to this effect came from the leader of the opposition Liberal party, Lord Rosebery. In a speech on October 12, Rosebery declared his party's wholehearted support for the government's intransigent stance and added the following warning: "No Government that attempted to recede from or palter with that policy would last a week" (quoted in Wright 1951, 41). Although Rosebery might be guilty of exaggeration, his words make it clear that his party would try to exploit any softening of the government's position. Moreover, Rosebery was not alone in his evaluation. The day the blue book was published, an editorial in *The Times* [London] noted,

> We cannot conceal from ourselves that Lord Salisbury and his colleagues have taken a position from which retreat is impossible. One side or the other will have to give way. That side cannot, after the publication of these papers, be Great Britain. (quoted in Riker 1929, 67)

Nor was this view held only by the British. On October 13, the German ambassador in London reported that "there can be no doubt that Lord Salisbury has the entire British public opinion on his side in the Fashoda matter. For this reason alone it would be difficult for him to retreat even by one step" (Auswärtiges Amt 1924, 375).[10]

Most important, decision makers in France ultimately came to the same conclusion. On the day the blue book appeared, the French ambassador in London, Baron de Courcel warned his superiors: "It seems that, with this haughty language, the English government will cut itself off from all retreat, and that it will be impossible for it to back down from demands made in such a manner" (Ministry of Foreign Affairs 1957, 651). At the time, Courcel was hopeful that the patriotic passions that had been stirred up would eventually subside and cooler heads would prevail. Partly for this reason, the French tried to drag the affair out. Foreign Minister Théophile Delcassé insisted that he would not recall the French force until he had a chance to get the latter's report about conditions at Fashoda. Given the difficulties of communicating with an isolated outpost in northern Sudan, this request led to several weeks' delay: the report did not arrive in Paris until October 22. Unfortunately for the French, however, the belligerent mood among British politicians and public did not subside, and, by the end of October, Courcel concluded that the British position would not—indeed, could not—soften. In a letter of October 28, he told Delcassé that "Lord Salisbury has entrenched himself in

10. See also Auswärtiges Amt (1924, 378-79). I am grateful to Marianne Donath for assistance in translating these documents.

English public opinion thereby preventing his government from negotiating as long as French forces occupied Fashoda" (Ministry of Foreign Affairs 1957, 720). The British government's strategy of tying its hands by generating audience costs was plainly evident to French decision makers. Faced with a choice between war and unconditional surrender, Delcassé chose the latter, ordering a withdrawal on November 3.

Would the British government really have fallen had Salisbury offered concessions in exchange for Fashoda? Obviously, there is no way to answer this question with any certainty. Everyone involved in the crisis came to believe that the government had painted itself into a corner through its public speeches and actions. As a result, the British stood firm, and the French caved in to their demands. Because all the key actors believed that the government would incur high audience costs for backing down, we do not actually observe this outcome.

## THE ABADAN CRISIS, 1951

The 1951 crisis between Great Britain and Persia, sparked by the latter's decision to nationalize the Anglo-Iranian Oil Company (AIOC), illustrates how the audience costs we are most likely to observe are small in magnitude. In this case, the British government backed down from its threat to preserve control of the world's largest oil refinery on the island of Abadan. Moreover, it did so in the midst of an election campaign and only 3 weeks before election day. Nevertheless, the British government clearly expected that the risks of backing down would be small and could be minimized through a shrewd political strategy. Although the government lost the election, it actually managed to increase its support after the withdrawal decision, and there is no evidence it suffered audience costs.

The crisis started in April 1951 when the Persian government, led by Prime Minister Mohammed Mossadeq, passed a bill nationalizing the AIOC. Although the British government was not opposed to the principle of nationalization, it sought to have the matter arbitrated by the International Court of Justice (ICJ) and expressed strong concern for the safety of British nationals. Planning began for a small military operation designed to protect company personnel, most of who were stationed on Abadan. In addition, the government starting preparing for a much larger operation designed to seize and protect the island and its refinery. The British military presence in the area was reinforced, and a cruiser was ordered to take up moorings only 200 yards off the island. Although the government generally avoided belligerent rhetoric, the military maneuvers were public knowledge. Moreover, Prime Minister Clement Attlee declared in the House of Commons on July 30, that "our intention is not to evacuate [Abadan] entirely" (Cable 1991, 87). The following day in a speech to the House of Lords, the Lord Chancellor repeated this commitment and added that "the Government accepted all the implications that followed from that decision" (Cable 1991, 87).

Several months of negotiations failed to break the impasse. Although the ICJ ruled in Britain's favor and issued an injunction against interference with AIOC operations, Mossadeq ignored the ruling and pressed ahead with his efforts to take control of the company. Britain's appeals to the United States were met with clear warnings that the latter would not support unilateral action designed to protect British oil interests. The

United States would only back the use of force if British lives were in danger, a Communist government took over in Tehran, or the Soviet Union intervened (Cable 1991, 43). After Mossadeq ordered British personnel to leave Abadan on September 26, the cabinet ruled out using force to hold the island. Minutes from the decisive September 27 cabinet meeting suggest that this decision was based primarily on the opposition of the United States. Given the shaky legal grounds for seizing the refinery by force, Attlee was unwilling to move without U.S. support (Cabinet Office 1951). Instead, the cabinet referred the matter to the United Nations Security Council. Finding little sympathy there, the Foreign Office announced on October 2 that the British staff would be evacuated, something that happened the following day.

In making the determination that a withdrawal might be necessary, the government also considered the likely public reaction: would there be domestic political costs to pay? Although the minutes of the cabinet meeting are characteristically brief on this matter, the ministers apparently agreed that the fallout would be minimal: "the public expected some effective action to be taken, though not necessarily by the use of force." It was decided that, in the event the decision came under criticism, blame could be shifted across the Atlantic: "it would be of advantage if . . . public reference could be made to the attitude of the United States Government to the use of force" (Cabinet Office 1951). The Labour party also developed a shrewd political strategy for minimizing the electoral repercussions of backing down. If the Conservatives tried to exploit the affair, Labour officials would respond by arguing that, if the Conservatives opposed the withdrawal, then they must favor war. This response dovetailed nicely with a general campaign strategy of painting the Conservatives as the party of warmongers. The 1951 party manifesto, released the same day that the evacuation was announced, charged that "the Tory still thinks in terms of Victorian imperialism and colonial exploitation. His reaction in a crisis is to threaten force" (Craig 1975, 173). Thus, Labour's strategy would be to argue that the choice at Abadan was between peace and war, that the latter would have had disastrous consequences, especially given U.S. opposition, and that the Conservatives, if they objected to peace, must have wanted war (Cable 1991, 102).

This strategy seems to have worked. As expected, the Conservatives wasted little time in trying to exploit the government's retreat. The day the decision was announced, Winston Churchill reminded a Liverpool audience of the prime minister's comments in July, adding "I do not remember any case where public men have broken their word so abruptly and without even an attempt at explanation." He continued, "With all their cruisers, frigates, destroyers, tank-landing craft, troops and paratroops sent at such great expense, and all their bold confident statements, they were only bluffing" (*Times* [London] 1951, 4). Churchill's words leave no doubt that he hoped to use this issue for electoral gain: "The nation at this moment has the remedy in its own hands—October 25" (*Times* [London] 1951, 4). For the next few weeks, Conservative politicians kept up this line of attack. In his study of the 1951 general election, Butler (1952, 55) reports that 31% of Conservative candidates made some mention of the affair in their preelection addresses.

The Labour party then acted to neutralize this attack. Although Churchill did not say that he would have used force to settle the affair, government officials managed to

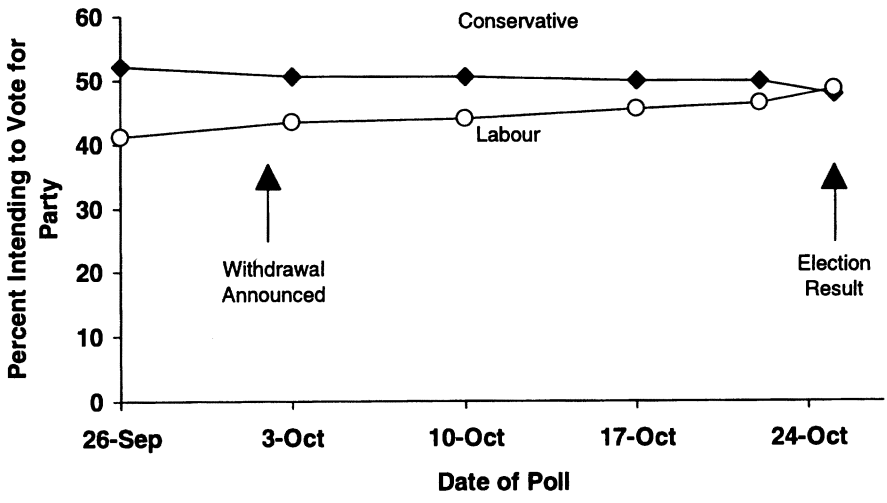



**Figure 3: Abadan and the 1951 Election: The Trend in Voting Intentions**
SOURCE: Butler (1952, 238-39).
NOTE: Poll results exclude those answering "don't know."

cast his criticism as a call for war. Thus, Defense Minister Herbert Morrison responded to Churchill's charges by asking, "The answer I want from Mr. Churchill . . . is whether in his judgment we should have gone to war with Persia or not" (Butler 1952, 113-14). By responding this way, Labour was able to shift the terms of the debate from whether the government handled the affair competently to whether the implied alternative—war without the backing of the United States—was preferable. The Conservatives found themselves on the defensive, arguing that they did not want war either (Butler 1952, 115-17). Hence, the government was able to blunt the opposition's criticism by playing on voter fears that the Conservatives had too quick a trigger finger.

Given that the Labour government lost its majority in the election, it might be tempting to conclude that it paid an electoral cost for backing down. A closer examination of the data, however, suggests that the crisis had no measurable effect on the outcome. Figure 3 shows the trend in voting intention polls in the lead-up to the election, as well as the eventual vote. The polls show a consistent trend in Labour's favor, with the withdrawal decision having no visible impact. Although the government lost its majority in parliament, it actually won the popular vote—a remarkable feat given that the party had trailed by double-digit figures in August and September (Butler and Butler 1986, 256). Perhaps one might argue that Labour's upward trend line would have been even steeper had it not backed down in the crisis, but this is pure speculation. Moreover, Butler's (1952) qualitative examination of the campaign reinforces the conclusion that the crisis had negligible influence and may have even worked in Labour's favor. As predicted, the audience costs a government chooses to incur are small and potentially insignificant.

## CAN WE TEST THE AUDIENCE COST CLAIM DIRECTLY?

It is quite plausible then that the selection effects identified by the model occur in the real world. How does this affect our ability to test our two hypotheses about the existence and magnitude of audience costs? To answer this question, I use Monte Carlo simulations. The idea is to generate data sets using a known process—in this case, the formal model and some distributional assumptions about the audience costs and war costs—and then explore whether it is possible to recover the parameters of interest using available econometric techniques.

### CREATING DATA

The first step is to make some assumptions about the distribution of audience costs and war costs in the population. Assume that audience costs are generated by the following models:

$$\ln a_c = \alpha_c + \beta_c DEM_c + \varepsilon_c, \text{ and} \tag{1a}$$

$$\ln a_t = \alpha_t + \beta_t DEM_t + \varepsilon_t, \tag{1b}$$

where *DEM* indicates whether the state in question is democratic, and the disturbance terms, $\varepsilon_c$ and $\varepsilon_t$, are assumed to be independent and normally distributed with mean 0 and variance $\sigma^2$. These assumptions imply that the audience costs have a lognormal distribution, a convenient assumption for variables that are constrained to be positive. The hypothesis that democratic states tend to generate higher audience costs than nondemocratic states is captured by the hypothesis that $\beta_c, \beta_t > 0$. In what follows, we will reduce notation by assuming that the model that generates the audience costs does not depend on whether the state is the challenger or target, so that $\alpha_c = \alpha_t \equiv \alpha$, and $\beta_c = \beta_t \equiv \beta$. The $\varepsilon$ terms in these equations capture the observation—evident even in our brief case studies—that audience costs have an idiosyncratic component that depends on the particular context of each dispute. Thus, although democratic states might generate higher audience costs on average, they need not do so in every case.

The audience cost terms are latent variables in the sense that we cannot observe their value in all cases. We can only gather systematic data about audience costs from the cases in which they are incurred. In practice, we can never really observe audience costs perfectly; at best, we can get a noisy estimate of them through their impact on a political leader's tenure in office. In what follows, however, we will assume that the audience costs are perfectly measurable whenever they are incurred. As we will see, the central problem in testing the audience costs proposition is not that audience costs are imperfectly (i.e., noisily) measurable, but rather that they are only partially observable: we observe them in only certain, strategically selected cases—that is, when a state escalates a crisis and then backs down.

We will assume that the states' expected values for war are generated by the following models:

$$\ln w_c = \gamma_c + \theta_c DEM_c + \mu_c, \text{ and} \tag{2a}$$

$$\ln w_t = \gamma_t + \theta_t DEM_t + \mu_t, \tag{2b}$$

where the disturbance terms, $\mu_c$ and $\mu_t$, are assumed to be independent and normally distributed with mean 0 and variance $\nu^2$. Note that it probably makes sense to assume that the error terms in the two equations are correlated, in which case they would be drawn from a bivariate normal distribution with some correlation. However, for the sake of argument—and because the theoretical model assumes that the $w_i$ are independent—we will not make this assumption here. As before, we will reduce notation by assuming that the two sides' war costs are generated by the same model, so that $\gamma_c = \gamma_t \equiv \gamma$, and $\theta_c = \theta_t \equiv \theta$. Like the audience costs terms, the costs from war are also latent: we can only observe them when they are incurred.

Using these empirical models in conjunction with the formal model developed above, we can now create simulated data sets. We begin by generating a large number of dyads, randomly assigning regime types to each state. We then assume some values for the parameters—$\alpha$, $\beta$, $\gamma$, $\theta$, $\sigma$, and $\nu$—and use equations (1) and (2) to generate audience costs and war costs for each state in each dyad. We then use the theoretical model to figure out what strategies the two states will play and hence what the outcome of the interaction will be.

In doing so, we assume that the audience costs are made common knowledge but that the draw of the disturbance terms on the war costs, $\mu_c$ and $\mu_t$, are private information of the relevant state. Thus, each state knows its own costs for war and the distribution from which its rival's costs were drawn—exactly as in the game above. Notice that in assuming that the audience cost terms are common knowledge to the states but latent variables to researchers, we are assuming that the actors in the game have access to information that we as researchers do not—a premise that is probably not unreasonable.[11] A more troubling question is whether it makes sense that states know each other's audience costs but not each other's costs for war. Although it might be possible to construct a model with incomplete information about both terms, there is no reason to believe that doing so would alter the basic insights. Moreover, the treatment here is consistent with the existing literature (e.g., Fearon 1994; Smith 1998; Schultz 1999).[12]

## MAIN RESULTS

The main results can be illustrated using a simple set of assumptions about the true parameter values in equations (1) and (2). Assume first that democratic states do generate higher audience costs on average than do nondemocratic states—in particular that $\beta = 1$. For simplicity, assume that $\alpha = 0$ and $\sigma = 1$. This implies that the log of the audience costs are distributed $N(1, 1)$ for democratic states and $N(0, 1)$ for nondemo-

11. Although it is true that participants must have some estimate of audience costs in all cases, I am skeptical that we could collect data on these expectations in any manner that would be useful for statistical analysis. Audience costs reflect a decrease in the probability of holding office or an expected shortening of tenure in office. It is unlikely that we could collect participants' expectations about such figures from the available historical record for more than a handful of cases at best and in a manner that was comparable across cases.

12. This is not just foolish consistency. Given that my purpose is to discuss issues that arise in testing Fearon's (1994) and related models, it makes sense to start with the same assumptions.

TABLE 1
Actual and Observed Distributions of Logged Audience Costs

| *Population* | *Mean* | *Standard Deviation* |
|---|---|---|
| Full population | | |
| All | 0.30 | 1.10 |
| Democracies | 1.00 | 1.00 |
| Nondemocracies | 0.00 | 1.00 |
| Challengers that backed down | | |
| All | −0.33 | 0.89 |
| Democracies | 0.21 | 0.78 |
| Nondemocracies | −0.46 | 0.86 |
| Targets that backed down | | |
| All | −0.52 | 0.85 |
| Democracies | −0.018 | 0.71 |
| Nondemocracies | −0.62 | 0.84 |

cratic states. In what follows, we will allow the parameters describing the distribution of war costs to vary across a reasonable range. In particular, the mean of logged war costs, $\gamma$, will vary from 0 to 5, and the standard deviation of logged war costs, $\nu$, will vary from 1 to 5. The results in this section are based on the assumption war costs do not vary with regime type, or $\theta = 0$; the following section considers what happens when we relax this assumption. For each set of conditions, I created 100 data sets each containing 50,000 dyads. All results reported below represent averages across the 100 iterations.[13] Regime types were assigned at random, with each state having a 30% chance of being democratic.

With the data sets in hand, we now consider whether it is possible to make accurate inferences regarding the distribution of audience costs in the population by analyzing cases in which audience costs are incurred. In other words, can we reclaim the true values of $\alpha$ and $\beta$ using observable audience costs? There are two kinds of states that incur audience costs: challengers that made a challenge and then backed down, and targets that resisted a challenge and then backed down. We will consider each of these samples separately, although all of the conclusions would hold if we pooled the two groups. Let $\hat{\alpha}_c$ and $\hat{\beta}_c$ represent the estimates of $\alpha$ and $\beta$ that are obtained by estimating equation (1a) using the sample of challengers that backed down; similarly, let $\hat{\alpha}_t$ and $\hat{\beta}_t$ represent the estimates of $\alpha$ and $\beta$ that are obtained by estimating equation (1b) using the sample of targets that backed down.

Consider first some descriptive statistics based on the simulation in which the war costs were generated setting $\gamma = 2$ and $\nu = 3$. Table 1 presents the mean and standard deviation of logged audience costs for several groups of states. The first three entries, corresponding to the distribution of audience costs in the full population, simply reiter-

13. One hundred iterations is small compared with most Monte Carlo simulations. In this study, however, the variance in the reported values across iterations is quite small, meaning that additional iterations would serve no purpose.

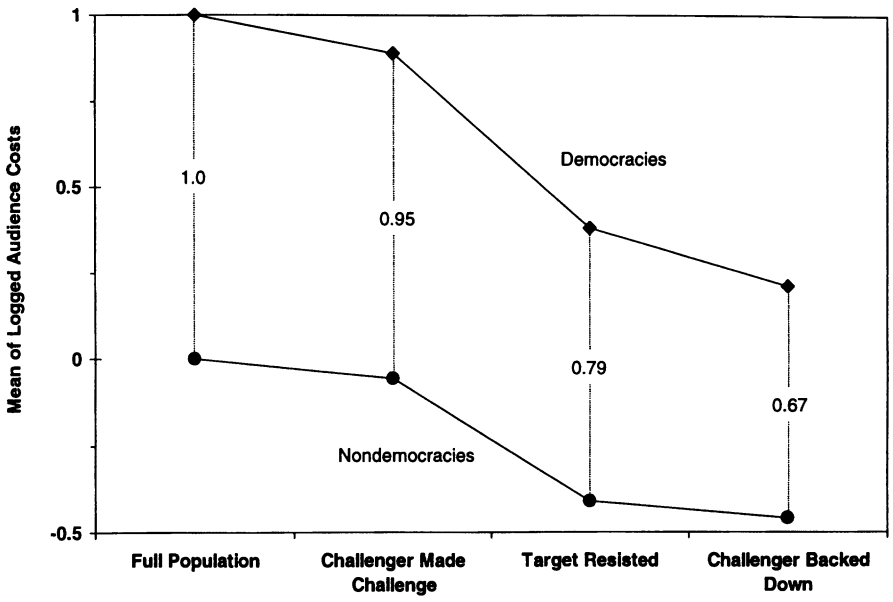
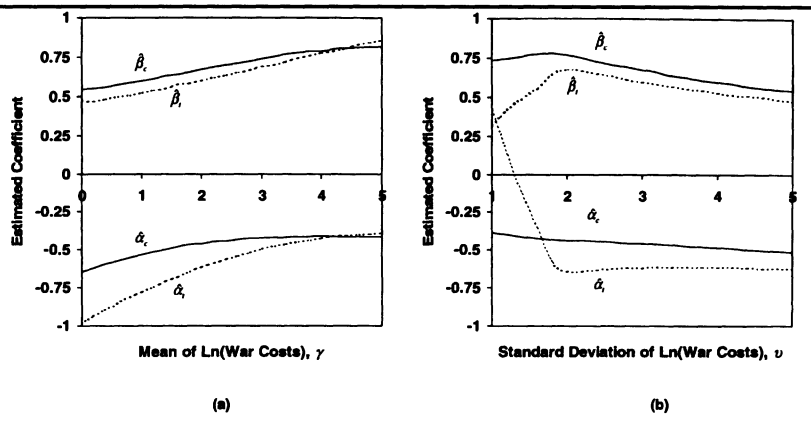



**Figure 4: The Distribution of Challengers' Audience Costs along the Game Tree**

ate the distributional assumptions outlined above. The next three entries consider the population of states that made a challenge and then backed down, and the final three consider the population of target states that resisted a challenge and then backed down. These last two sets of entries thus correspond to cases in which we can actually observe audience costs being incurred. Two things stand out from these entries. First, the mean level of audience costs in the populations of states that actually incur them is lower than the mean level of audience costs in the full population. This reflects the intuition, mentioned above, that we rarely observe states with high audience costs backing down. When the challenger generates high audience costs, it is quite likely that either the target will concede or the challenger will stand firm. When resistance by the target generates high audience costs, it is quite likely that that challenger will back down or the target will stand firm. Thus, *only states with relatively low audience costs ever incur them.* The second key result is that the average difference between democracies and nondemocracies is attenuated in the populations that backed down. Whereas the difference in means across regime types is exactly 1.00 in the full population, the difference is 0.67 in the population of challengers that backed down and 0.60 in the population of targets that backed down.

Consider what would happen if we tried to estimate the models in equation (1) using cases in which audience costs are incurred (and hence observable). Ordinary least squares (OLS) estimation of equation (1a) using only the observations in which the challenger backed down would yield $\hat{\alpha}_c = -0.46$, and $\hat{\beta}_c = 0.67$—when in fact, the true parameters are 0 and 1, respectively. Both estimates are biased downward by the selec-




Note: $\hat{\beta}_c$ and $\hat{\beta}_t$ are the estimates of $\beta$ obtained using the sample of challengers and targets that backed down, respectively. The true value is 1. Similarly, $\hat{\alpha}_c$ and $\hat{\alpha}_t$ are the estimates of $\alpha$ obtained using the sample of challengers and targets that backed down, respectively. The true value is 0.

**Figure 5: Estimated Audience Costs as a Function of the Distribution of War Costs**

NOTE: $\hat{\beta}_c$ and $\hat{\beta}_t$ are the estimates of $\beta$ obtained using the sample of challengers and targets that backed down, respectively. The true value is 1. Similarly, $\hat{\alpha}_c$ and $\hat{\alpha}_t$ are the estimates of $\alpha$ obtained using the sample of challengers and targets that backed down, respectively. The true value is 0.

tion process.[14] An estimate of equation (1b) using the sample of targets that backed down would yield $\hat{\alpha}_t = -0.62$ and $\hat{\beta}_t = 0.60$. Thus, we cannot reclaim the true parameters in equation (1) using observed audience costs. The problem from the standpoint of regression analysis is that, in the sample of states that backed down, the error terms do not have mean 0, nor are they uncorrelated with $DEM_i$. For example, the distribution of $\varepsilon_c$ given that the challenger backed down has a mean of –0.52 and a correlation with $DEM_c$ of –.15. Given this, it is not surprising that OLS estimates are biased.

To see how the selection process influences the distribution of audience costs, Figure 4 shows how that distribution changes as the states move down the game tree. In the full population, the mean of logged audience costs is 1 for democracies and 0 for nondemocracies. If we then look at the sample of challengers that made the challenge, we find that the means in both categories have dropped and converged slightly. The relationship between the challenger's audience costs and the probability of a challenge is quite complicated, decreasing in some cases and increasing in others. On average, it appears that the first effect slightly outweighs the second, so that the mean level of audience costs among those who make the challenge is less than the mean level of audience costs in the full population. If we now turn to the distribution of audience costs among challengers whose challenge was resisted, we again find that the means have dropped and converged. This is because there is a clear negative relationship

14. Selection bias typically attenuates coefficient estimates, biasing them toward 0, as is clearly happening with the estimate of $\beta$ (e.g., Achen 1986). It might therefore seem strange that the estimate of $\alpha$ is negatively biased away from 0. This arises from the fact the we are estimating the model using logged audience costs: because the mean level of audience costs among nondemocratic challengers is biased toward 0, the mean level of logged audience costs is biased toward negative infinity.

between the probability of resistance and the audience costs generated by the threat. Because targets are unlikely to resist challenges that are associated with high audience costs, the mean of the audience costs conditional on resistance must be lower than the mean of the audience costs conditional on a challenge. The final point on the graph refers to the mean level of audience costs among challengers that backed down. Once more, the means in the two groups have dropped and converged. As before, the reason is that the probability that a challenger backs down is decreasing in the audience costs. Those with high audience costs are more likely to stand firm; those with low audience costs are more likely to incur them. Thus, every step along the path toward a challenger's incurring audience costs is associated with a decrease in the mean level of those costs and a convergence in the means associated with democracies and nondemocracies.

We can show that this result is robust to different parameter configurations by determining how our estimates of $\alpha$ and $\beta$ vary with different values of $\gamma$ and $\nu$, the parameters that determine the distribution of war costs. Figure 5a graphs $\hat{\alpha}_c$, $\hat{\beta}_c$, $\hat{\alpha}_t$, and $\hat{\beta}_t$ against $\gamma$, the mean war costs, holding $\nu = 3$. Figure 5b graphs $\hat{\alpha}_c$, $\hat{\beta}_c$, $\hat{\alpha}_t$, and $\hat{\beta}_t$ against $\nu$, the standard deviation of war costs, holding $\gamma = 2$. In all cases, the estimate of the difference between democracies and nondemocracies, $\beta$, is lower than the true difference. In most cases, the estimate of average audience costs among nondemocracies, $\alpha$, is lower than its true value. The exception to this characterization comes when $\nu$ is small (i.e., close to 1). The reason is that, under these conditions, the equilibrium in which the target sometimes bluffs (i.e., $b_t > k_t$) only exists when the target's audience costs are relatively high. Hence, the average level of audience costs among those targets that resist and then back down is actually higher than the average level in the population; however, the average level of audience costs incurred by those targets is still lower than the average among targets for which this equilibrium exists.

## WHAT IF WAR COSTS VARY BY REGIME TYPE?

In the above results, it was assumed that the costs of war do not vary with the state's regime type, or $\theta = 0$. In fact, a number of authors have suggested that democracy does affect the expected costs of war, although there is no consensus on the direction of this effect. The classic Kantian argument, popular in the democratic peace literature, is that democratic leaders suffer higher costs of war than do nondemocratic leaders (e.g., Bueno de Mesquita and Lalman 1992; Morgan and Campbell 1991). There is also a literature suggesting that democracies are more effective at fighting wars because of greater extractive capacity (Lake 1992) or greater legitimacy and morale (Stam 1996; Reiter and Stam 1998b).[15] Given these considerations, I reran the simulation varying $\theta$ from –5 (democracy decreases the average costs of war) to 5 (democracy increases the average costs of war).[16]

15. Note that all of these arguments are potentially correct, because democracies might be better at achieving favorable material outcomes (e.g., winning and keeping material losses low) but still suffer greater political costs for a given outcome. Note also that these arguments should be distinguished from those suggesting that differences in the costs of war or probability of victory across regime types are due to the selection of wars (Bueno de Mesquita and Siverson 1995; Reed and Clark 2000).

16. As before, $\nu$ was set to 3, and $\gamma$ was set to 2.

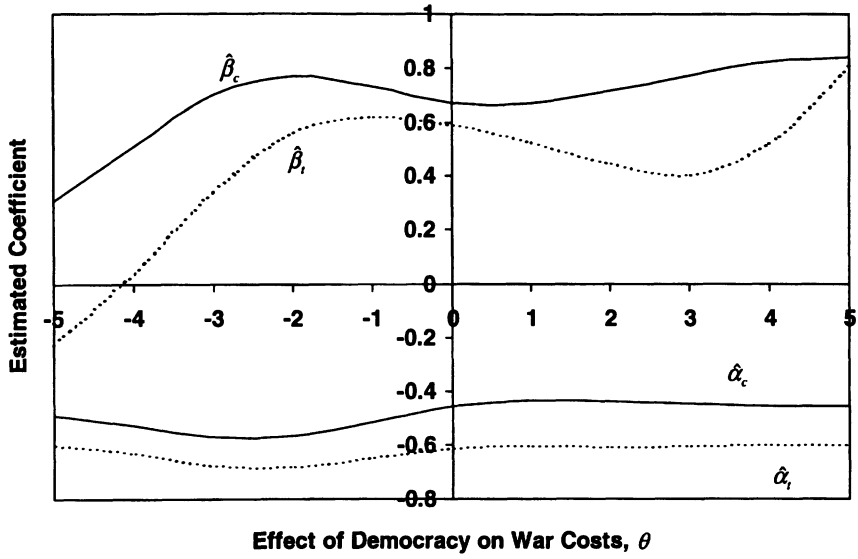



**Figure 6: Estimating Audience Costs When War Costs Depend on Regime Type**
NOTE: $\hat{\beta}_c$ and $\hat{\beta}_t$ are the estimates of $\beta$ obtained using the sample of challengers and targets that backed down, respectively. The true value is 1. Similarly, $\hat{\alpha}_c$ and $\hat{\alpha}_t$ are the estimates of $\alpha$ obtained using the sample of challengers and targets that backed down, respectively. The true value is 0.

The results are reported in Figure 6, which graphs $\hat{\alpha}_c$, $\hat{\beta}_c$, $\hat{\alpha}_t$, and $\hat{\beta}_t$ against $\theta$. As before, the estimates of $\alpha$ and $\beta$ are both biased downward. The amount of the bias in estimates of the latter, however, is quite sensitive to the value of $\theta$. The relationship is clearly not monotonic, but the general tendency is for high positive values of $\theta$ to increase the estimate of $\beta$ and for negative values of $\theta$ to decrease the estimate of $\beta$. The intuition behind this result is straightforward. In general, the higher the costs of war a leader faces, the higher the audience costs he is willing to incur to avoid war. Thus, an increase in the average war costs among democracies ($\theta > 0$) also increases the average level of audience costs that democratic leaders will be willing to pay to avoid war. The estimate of $\beta$ is pushed upward as a result. Although this might have the fortuitous effect of counteracting the negative bias identified earlier, there is certainly no methodological justification to count on this. By the same logic, a decrease in the average war costs among democracies ($\theta < 0$) decreases the average level of audience costs that democratic leaders will be willing to incur. This has the effect of decreasing the estimate of $\beta$. In the extreme case in which democracies have much lower war costs, it is even possible to obtain a negative estimate of $\beta$—suggesting that democracies have lower audience costs than nondemocracies, when in fact the opposite is true.

These observations have an additional, unfortunate implication. The analysis to this point has emphasized that tests based on observed audience costs tend to understate differences in mean audience costs across regime types. From this, it might be tempting to conclude that direct tests can serve to prove Hypothesis 2, even if they cannot

disprove it. That is, if there were evidence that democrats suffer higher costs for backing down in spite of the bias against such a finding, one might conclude that the hypothesis was right. The problem is that, if war costs are systematically higher among democracies, it is possible to conclude that democracies have higher audience costs even if they do not. If $\beta = 0$ and $\theta > 0$, there are some conditions under which $\hat{\beta}_c$ and/or $\hat{\beta}_t$ are positive. Again, this is because an increase in the average war costs also increases the average level of audience costs that are consistent with backing down; consequently, if democracies' average war costs rise relative to those of nondemocracies, the average level of audience costs incurred by democracies will also rise relative to that of nondemocracies. Thus, estimates of $\beta$ based on observed audience costs are inherently unreliable to prove or disprove Fearon's conjecture about democracy.

Note, however, that this caveat does not apply to the tests of Hypothesis 1, the general claim that domestic audience costs exist. Strategic selection always decreases the mean level of audience costs that are actually observed. Hence, if we can find evidence that backing down in a crisis imposes political costs, this would support the existence of domestic audience costs—even though the lack of such evidence would not lead to the opposite conclusion.

## CONCLUSION

What is to be done? There has been increasing interest in recent years in using sophisticated econometric techniques to correct for problems of strategic selection and partial observability in international crises (Smith 1996b, 1999; Signorino 1999; Sartori 1998; Reed 2000; Reed and Clark 2000). It is possible that some such techniques could be employed to mitigate the concerns raised here. Given the complexity of the strategic interaction in this context, however, I am pessimistic that a perfect econometric solution exists or is practical. Nevertheless, some more modest recommendations can be made. In doing so, it should be pointed out that the two hypotheses pose somewhat different challenges and thus call for different solutions. In general, finding evidence for the existence of audience costs is easier than determining whether they are higher or lower for some kinds of states.

Nothing here is meant to imply that tests based on observed audience costs are incapable of finding them. Although such tests cannot recover the true distribution of audience costs in the population, they can further the more modest goal of finding evidence that these costs exist. Indeed, the fact that such tests tend to understate the true level of audience costs in the population has a bright side: It means that they are "hard" because they are biased against finding evidence consistent with the claim. There is some virtue in conducting hard tests, because they impose a large burden of proof on any theory. Moreover, such tests provide compelling evidence when they generate positive results in a context where such results are unlikely. Thus, a finding that failed escalation does indeed jeopardize the leader's political survival would convincingly support Hypothesis 1.

On the other hand, it is less clear how to interpret negative results, because these may only mean that the test was too hard. Although a hard test is likely to avoid so-called

Type I errors—rejecting a null hypothesis that it is in fact true—they are prone to Type II errors—accepting a null hypothesis that is false. Because tests of observed audience costs select on the lowest end of the distribution, it would be hasty to rule out the existence of such costs if no statistically significant effect could be found. To reinforce this point, I ran one more simulation in which the audience costs were determined by the following distribution: with probability .8, $a_i = 10000$ and with probability .2, $a_i = .00001$. Out of 50,000 dyads, roughly 20% of states incurred audience costs, but not a single one of them incurred the larger value. Hence, the audience costs that are actually incurred might be imperceptibly small, even though the vast majority of states generate substantial costs.

Whether we can find statistically significant evidence of audience costs depends on how well we can actually measure these costs when they are incurred. Above, we assumed that these costs are perfectly measurable whenever they are incurred; in actual practice, we cannot measure audience costs perfectly, but only through their impact on political survival. Because the latter depends on a number of other factors—some measurable, some not—any measurement of audience costs is bound to be noisy. Thus, the fact that observed audience costs are smaller than those in the full population does not rule out finding them, but it does reduce the tolerance for error from other sources. The smaller the audience costs that survive the selection process, the smaller the noise must be to detect them.

This leads to the first suggestion: reduce noise. Improving the specification of political survival models can reduce the noise, making it more likely that small effects are nonetheless discernable. Although this technique does not permit us to recover the true distribution of audience costs in the population, it improves the chances of finding statistically significant evidence of their existence. The problem, of course, is that it is hard to know at what point the model is sufficiently well specified that there is a reasonable expectation of finding small audience costs.

Where large sample statistical tests come up short, historical case studies of the kind presented above may be the most effective way of deciding whether the search for audience costs is a fruitful enterprise. Because they lack adequate controls, case studies are ill suited to testing the comparative claims that underlie Hypothesis 2; however, they are useful for examining whether audience costs exist and, perhaps just as important, whether politicians believe they exist (cf. Aldrich, Sullivan, and Borgida 1989). Unlike statistical tests, case studies can gauge the effects of audience costs in cases in which they were not incurred—as we saw in the brief discussion of Fashoda. Although we could not quantify the magnitude of the audience costs the British government generated, we could show that the widespread expectation that these costs were substantial had the signaling effects Fearon (1994) hypothesized. Similarly, although the Abadan case shows no evidence that the government incurred audience costs, both the Conservatives' efforts to exploit the affair and Labour's counter strategy suggest that politicians are sensitive to the risks of backing down and seek to manage those risks.[17]

17. The Abadan case also demonstrates the value of case studies in another way. Because Labour was removed from office 3 weeks after backing down, a simple correlation between crisis outcome and postcrisis tenure might erroneously suggest that Labour incurred dramatic audience costs. A more careful examination of the case, however, shows that the electoral costs from backing down were negligible.

Efforts to determine whether democratic states generate systematically higher audience costs than nondemocratic states are more vexing because these require an accurate estimate of the distribution of those costs. Moreover, as we saw at the end of the previous section, there may be an additional source of bias in these tests if democracies also differ systematically in their war costs. If democracies tend to have higher (lower) expected costs of war than nondemocracies, this will place an upward (downward) bias on the estimated effect of democracy on the audience costs. Thus, unlike tests of Hypothesis 1, tests of Hypothesis 2 can generate false positives—leading us to conclude that democracies have higher audience costs when in fact they do not. This means that ongoing efforts to understand the relationship between democracy, war outcomes, and political survival must go hand in hand with efforts to test Hypothesis 2 (Bueno de Mesquita and Siverson 1995; Goemans 2000; Lake 1992; Reiter and Stam 1998a, 1998b; Reed and Clark 2000). We need to have a better sense of the magnitude and direction of the bias introduced by the fact that the choice of whether to incur audience costs depends on the expected war costs. Of course, this determination is itself quite difficult. As Reed and Clark (2000) show, understanding whether democracy influences the outcomes of wars is also plagued by selection effects because democratic leaders might have greater incentives to select wars that they expect to win at low cost (Bueno de Mesquita and Siverson 1995).

The challenge in assessing Hypothesis 2 using direct tests is thus quite daunting. That said, nothing in this analysis casts doubt on the usefulness of indirect tests—that is, tests that look for audience costs through their impact on crisis outcomes. If there is reason to believe that some variable (such as, but not limited to, democracy) correlates with high audience costs, then it should also correlate with the outcomes that high audience costs are hypothesized to produce, such as a lower rate of resistance, a lower rate of backing down, and so forth. These tests are not plagued by the same problems of partial observability because they do not require the researcher to observe the audience costs directly. Instead, they can be used to make inferences about the latent distribution of audience costs through the relative frequency of observable outcomes. To date, indirect tests have generally been consistent with the hypothesis that democracies generate higher audience costs (Eyerman and Hart 1996; Schultz 1999; Gelpi and Griesdorf 1997; Partell and Palmer 1999).[18] It would be useful for researchers to come up with other variables that might plausibly correlate with audience costs to see if they have the anticipated effects. For example, if we assume that the costs of backing down are higher in the lead up to an election, then there might be a relationship between crises outcomes and the electoral cycle (e.g., Gaubatz 1999).

In closing, it is worth pointing out that this study is part of a growing chorus that emphasizes the challenges associated with testing models of strategic choice in international relations (Smith 1996b, 1999; Signorino 1999; Sartori 1998). Problems of strategic selection and partial observability are endemic to such efforts, and we are only starting to find practical solutions to them. This should be taken into account when considering Walt's (1999) recent criticism that many of the claims made by for-

18. For a dissenting view, see Gowa (2000).

mal theorists in international relations remain untested. The difficulties involved do not exempt such claims from rigorous testing, but they do suggest that we proceed cautiously. Moreover, as this study and the others show, formal methods are useful in understanding what can and cannot be learned from a given empirical test.

## APPENDIX
## Solution to the Bargaining Game with Audience Costs

A perfect Bayesian equilibrium to this game consists of a set of strategies and beliefs such that the strategies are sequentially rational given the beliefs, and the beliefs are derived from the strategies using Bayes's rule. We consider a cutpoint equilibrium as described in the text and depicted in Figure 2. Given these definitions of the cutpoints, we can make a few definitions regarding beliefs:

1. Let $s_c$ denote the challenger's prior belief that the target will resist if challenged, or $s_c = F_t(b_t)$.
2. Let $q_c$ denote the challenger's posterior belief that the target will stand firm given that it resisted, or $q_c = \dfrac{F_t(k_t)}{F_t(b_t)}$.
3. Let $q_t$ denote the target's posterior belief that the challenger will stand firm given that it made a challenge, or $q_t = \dfrac{F_c(k_c)}{F_c(b_c)}$.

Several conditions must hold in all equilibria. At its final node, the target stands firm if

$$w_t < a_t, \tag{A1}$$

and backs down otherwise. It must therefore be the case that $k_t = a_t$. At its final node, the challenger can either back down for a payoff of $-a_c$ or stand firm with an expected payoff of

$$EU_c(SF) = -q_c w_c + (1 - q_c). \tag{A2}$$

Setting equation (A2) greater than $-a_c$, we find that the challenger stands firm if

$$w_c < \frac{1+a_c}{q_c} - 1 \equiv k_c. \tag{A3}$$

A challenger of type $b_c$ must be indifferent between making the challenge and choosing the status quo. Its payoff from the latter is 0. Its expected payoff from the former is given by

$$EU_c(CH|w_c = b_c) = s_c(-a_c) + (1 - s_c) \tag{A4}$$

because this type backs down if resisted. Thus, it must be the case that

$$s_c = \frac{1}{1+a_c}, \text{ or} \tag{A5a}$$

$$b_t = F_t^{-1}\left(\frac{1}{1+a_c}\right). \tag{A5b}$$

Notice that, given beliefs $s_c$, all challengers for which $w_c < k_c$ strictly prefer to make the challenge because their expected payoff in the event of resistance is greater than $-a_c$. Similarly, a target of type $b_t$ must be indifferent between resisting and conceding. Its expected payoff from the latter is

$$EU_t(RS|w_t = b_t) = q_t(-a_t) + (1 - q_t) \text{ if } b_t \geq a_t, \text{ and} \tag{A6a}$$

$$EU_t(RS|w_t = b_t) = q_t(-b_t) + (1 - q_t) \text{ if } b_t < a_t. \tag{A6b}$$

Thus, in equilibrium,

$$q_t = \frac{1}{1+\min(a_t, b_t)}, \text{ or} \tag{A7a}$$

$$b_c = F_c^{-1}\left\{\left[1+\min(a_t, b_t)\right]F_c(k_c)\right\}. \tag{A7b}$$

We can now state four propositions that describe the equilibrium under four mutually exclusive configurations of the parameters. The following definitions will be useful:

$$x_c = \frac{1}{1+a_c} \text{ and } x_t = \frac{1}{1+a_t}.$$

PROPOSITION 1. The following cutpoints describe a perfect Bayesian equilibrium to this game when $x_c \geq F_t(a_t) > \dfrac{1}{1+F_c^{-1}(x_t)}$:

$$k_c = \frac{1}{F_t(a_t)} - 1, \tag{P1.1}$$

$$b_c = F_c^{-1}\left[(1+a_t)F_c(k_c)\right], \tag{P1.2}$$

$$k_t = a_t, \tag{P1.3}$$

$$b_t = F_t^{-1}(x_c). \tag{P1.4}$$

PROOF. The expression in proposition (P1.4) comes from equation (A5b). The condition in the statement of the proposition implies that $b_t \geq a_t$, so that equation (A7b) reduces to proposition (P1.2). The condition also ensures that $F_c(b_c) < 1$, as required. Proposition (P1.3) follows from equation (A1). Together, propositions (P1.3) and (P1.4) imply that

$$q_c = F_t(a_t)(1 + a_c). \tag{A8}$$

Substituting equation (A8) into equation (A3) yields proposition (P1.1).

PROPOSITION 2. The following cutpoints describe a perfect Bayesian equilibrium to this game when $F_t(a_t) > x_c$ and $F_c(a_c) < \frac{1}{1+F_t^{-1}(x_c)}$:

$$k_c = a_c, \tag{P2.1}$$

$$b_c = F_c^{-1}\left[(1+b_t)F_c(a_c)\right], \tag{P2.2}$$

$$k_t = a_t \tag{P2.3}$$

$$b_t = F_t^{-1}(x_c). \tag{P2.4}$$

PROOF. Again, the expression in proposition (P2.4) comes from equation (A5b). The first condition in the statement of the proposition implies that $b_t < a_t$, so that equation (A7b) reduces to proposition (P2.2). Because $b_t < a_t$, all targets that resist also want to stand firm at their final node, by equation (A1). Because $q_c = 1$, equation (A3) reduces to proposition (P2.1). The second condition in the statement of the proposition ensures that $F_c(b_c) < 1$.

PROPOSITION 3. The following cut points describe a perfect Bayesian equilibrium to this game when $F_c(a_c) > x_t$ and $F_c(a_c) \geq \frac{1}{1+F_t^{-1}(x_c)}$:

$$k_c = a_c, \tag{P3.1}$$

$$b_c = \infty, \tag{P3.2}$$

$$k_t = a_t, \tag{P3.3}$$

$$b_t = \frac{1}{F_c(a_c)} - 1. \tag{P3.4}$$

PROOF. Proposition (P3.2) implies that all challengers make the challenge so that $q_t = F_c(k_c) = F_c(a_c)$. Substituting this into equation (A7a) yields proposition (P3.4). The first condition in the statement of the proposition ensures that $b_t < a_t$, meaning that all targets that resist also want to stand firm. As in proposition 2, this implies propositions (P3.3) and (P3.1). What remains is to check that all types of challengers want to make the challenge. Proposition (P3.4) implies that

$$s_c = F_t\left[\frac{1}{F_c(a_c)} - 1\right]. \tag{A9}$$

The second condition in the statement of the proposition ensures that

$$s_c \leq \frac{1}{1+a_c}. \tag{A10}$$

Substituting equation (A10) into equation (A4) then shows that the expected utility from a challenge is greater than or equal to 0 for all types.

PROPOSITION 4. The following cut points describe a perfect Bayesian equilibrium to this game when and $F_c(a_c) \leq x_t$ and $F_t(a_t) \leq \dfrac{1}{1+F_c^{-1}(x_t)}$:

$$k_c = F_c^{-1}(x_t), \tag{P4.1}$$

$$b_c = \infty, \tag{P4.2}$$

$$k_t = a_t, \tag{P4.3}$$

$$b_t = F_t^{-1}\left\{x_c F_t(a_t)\left[1+F_c^{-1}(x_t)\right]\right\}. \tag{P4.4}$$

PROOF. Substituting proposition (P4.1) into equation (A3) and solving for $b_t$ yields proposition (P4.4). The first condition in the statement of the proposition ensures that $b_t \geq a_t$. As in proposition 1, this implies proposition (P4.3). Proposition (P4.2) implies that all challengers make the challenge so that $q_t = F_c(k_c)$. Substituting this into equation (A7a) yields proposition (P4.1). What remains is to show that all types of challengers prefer to make the challenge. Proposition (P4.4) implies that

$$s_c = x_c F_t(a_t)\left[1+F_c^{-1}(x_t)\right]. \tag{A11}$$

As in proposition 3, the second condition in the statement of the proposition ensures that equation (A10) holds, meaning that the expected utility of a challenge is greater than or equal to 0 for all types.

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