## Appendix I

## MODEL I: The Unilateral Use of Force

For presentational simplicity, the game tree in the main text combines the utility and probability of victory and defeat into a single utility function for each player. Presented below is how the game tree appears if the payoffs for victory and defeat are shown separately:



Figure A1: Bargaining Model with Loss Responsibility Costs (Utilities of Victory and Defeat Separated)

#### Payoffs

As described and shown in Figure 3 in the main text, the war payoffs for the actors are as follows (note that Congress has been omitted because it is a passive actor):

$$U^{P}(war) = p - sf - \frac{fk}{\beta}(1-p)$$
(1)

$$U^{S_2}(war) = (1-p) - c \tag{2}$$

Where  $p = \frac{f}{f+t}$ .

#### **Complete Information Equilibrium**

Having perfect and complete information, this game is solved using the subgame perfect equilibrium solution concept. Backward induction is used to determine players' best responses in equilibrium. Starting from the bottom of the game tree, the president selects the optimal amount of force to employ. Taking the derivative of this utility function, setting this equal to zero, and solving for f yields the amount of force that maximizes the president's war utility:

$$f^* = t \cdot \left(\sqrt{\frac{1}{st} \cdot \left(1 - \frac{k}{\beta}t\right)} - 1\right) \tag{3}$$

Letting  $\rho = (1 - \frac{k}{\beta}t)$ , this can be rewritten as:<sup>1</sup>

$$f^* = t \cdot \left(\sqrt{\frac{1}{st} \cdot (\rho)} - 1\right) \tag{4}$$

Note that an interior solution requires that  $t < \frac{\beta}{k}$  and that  $t \leq \frac{\rho}{s}$ . This is because we need  $t < \frac{\beta}{k}$  to ensure that  $\rho > 0$  (and, hence, that  $f^*$  is well-defined). Additionally, because the amount of force utilized by definition cannot be lower than zero, it must be the case that  $t \leq \frac{\rho}{s}$  for an

<sup>&</sup>lt;sup>1</sup>As will be discussed in the next section, the term  $\rho = (1 - \frac{k}{\beta}t)$  will be the primary difference between the amount of force utilized in equilibrium when comparing unilateral action to that undertaken pursuant to formal congressional authorization.

interior solution to hold.<sup>2</sup>

From this, the probability of victory,  $p^*$ , when  $f^*$  force is employed, can be calculated. Given the contest function  $p = \frac{f}{f+t}$ , the probability of American victory at the optimal force level,  $f^*$ , is:

$$p^* = 1 - \frac{1}{\sqrt{\rho}}\sqrt{st} \tag{5}$$

Next, in order to determine the  $S_2$ 's choice at the prior decision node—i.e., whether to accept the deal offered, d, or to reject it and go to war—we set  $S_2$ 's payoff from accepting the deal equal to the payoff of going to war:

$$1 - d = 1 - p^* - c \tag{6}$$

Which can be rewritten as:

$$d = p^* + c \tag{7}$$

Thus, if the deal offered, d, is greater than or equal to  $p^* + c$ , the deal will be accepted by  $S_2$ . Otherwise, the deal will be rejected and war will occur. Knowing this, P will offer a deal that maximizes their own share while still avoiding war. P will thus offer d, such that:

$$d = p^* + c \tag{8}$$

<sup>&</sup>lt;sup>2</sup>While abstract, these conditions make intuitive sense. As can be seen from Figure 6 in the main text, the amount of force utilized unilaterally first increases but then decreases with t. The point  $f^* = 0$  is precisely when  $t = \frac{\rho}{s}$ . In other words, for relatively stronger adversaries (i.e., relatively higher t), force is simply not going to be used (i.e. there is no interior solution) when the president is relatively sensitive to casualties or the LRC (i.e., s or k is relatively high), and congressional sentiment is relatively unsupportive (i.e.,  $\beta$  is relatively low). Under these conditions, the political risk of the unilateral use of force is simply too high and force goes unused. Similarly, the requirement that  $t < \frac{\beta}{k}$  is driven by the president's exposure to the LRC. The president's sensitivity to the LRC increases with k and decreases with  $\beta$  (increasing informal support in Congress blunts their exposure). If k is relatively high and  $\beta$ is relatively low, they are not going to be taking on larger adversaries (higher t) unilaterally. In intuitive terms, as adversary power increases, the political risk faced by the president increases, and at a certain point using force simply becomes unviable.

Substituting in Expression 5, this simplifies to:

$$d = 1 - \frac{1}{\sqrt{\rho}}\sqrt{st} + c \tag{9}$$

Because the deal offered must be between 0 and 1, this means:

$$d^* = \min\{d, 1\}$$
(10)

P will offer  $d^\ast,$  and  $S_2$  will accept the offer.

## MODEL II: Allowing for Formal Congressional Authorization

#### **Complete Information Version**

Having complete and perfect information, this game is solved using the subgame perfect equilibrium solution concept.



Figure A2: Bargaining Model with Loss Responsibility Costs and Possibility of Formal Authorization from Congress, Subgames Highlighted

#### Subgame 1

The subgame on the left—that in which the president has secured formal authorization for the use of military force—is first considered. Starting from the last decision node, the president must decide how much force to employ (f). Because the president's utility function at this node is p - sf - a, and p is given by the contest function p = f/(f + t), we can rewrite the president's war payoff in the first subgame as:

$$U_1^P(war) = \frac{f}{f+t} - sf - a \tag{11}$$

In order to find the amount of force that maximizes the president's utility in this subgame, we take the partial derivative of Expression 11 with respect to f and set this equal to 0. Solving for f we find:

$$f_1^* = t \cdot \left(\frac{1}{\sqrt{st}} - 1\right) \tag{12}$$

Where  $f_1^*$  represents the optimal amount of force for the president to employ in subgame 1. Note that for an interior equilibrium to hold, it must be the case that  $t \leq \frac{1}{s}$  (otherwise, the amount of force utilized would be negative, which by definition cannot be the case).<sup>3</sup>

Given that this is a game of complete and perfect information,  $S_2$  will take this into account when making its own decision about whether to accept or reject the offer made by the president, as  $f_1^*$  directly affects  $S_2$ 's war payoff by way of affecting the probability of victory. Specifically, given  $f_1^*$  and the contest function  $(p = \frac{f}{f+t})$ , we know the probability of victory for the United States in the first subgame is:

$$p_1^* = 1 - \sqrt{st}$$
 (13)

Given this, and its own war payoff,  $S_2$  will be able to decide whether to accept the deal proposed by the president or reject the offer. Specifically, if:

$$1 - d_1 \ge 1 - (1 - \sqrt{st}) - c \tag{14}$$

 $S_2$  will accept the offer. Otherwise, the offer will be rejected. Knowing this, the president then knows precisely the deal to offer  $S_2$  in order to get the best deal possible for the United States

<sup>&</sup>lt;sup>3</sup>This means that even with formal authorization from Congress, presidents do not use force against extremely strong adversaries (i.e., relatively high t) when they are relatively sensitive to casualties (s). However, as we will see below (and demonstrated above), this constraint will not be particularly relevant for our analysis here because the analogous constraint over the unilateral use of force—i.e.,  $t \leq \frac{\rho}{s}$ —is even stricter. In other words, when  $t \leq \frac{\rho}{s}$  (i.e., there is an interior solution for the unilateral use of force), it will always be the case that  $t \leq \frac{1}{s}$ . Put another way,  $\frac{\rho}{s} < \frac{1}{s}$ , because  $\rho$  is always less than one (given that it is defined as  $1 - \frac{k}{\beta}t$  and each of the parameters is positive by definition). Figure 6, as an illustration, shows that the amount of force employed unilaterally decreases to 0 before that undertaken with formal authorization does. Moreover, on a more practical note, because the United States is the most powerful state in the international system—and has been so since at least World War II—situations in which the U.S. faces a massively powerful adversary (in relative terms) are not particularly realistic.

while still avoiding war:

$$d_1 = c - \sqrt{st} + 1 \tag{15}$$

Because the deal offered must be between 0 and 1, this means:

$$d_1^* = \min\{d_1, 1\} \tag{16}$$

P will offer  $d_1^*$  and  $S_2$  will accept the deal.

#### Subgame 2

Subgame 2 consists of the middle subgame—that in which Congress rejected a president's request for authorization. As we will see, this analysis is redundant as it will be precisely the same as that yielded in the analysis of Model I (unilateral use of force only), above.

Starting from the bottom, the president must decide how much force to employ. Notably, the decision here is slightly different from subgame 1—where an AUMF was in hand—because now the president has to take into account the blowback they are going to get from Congress if they lose unilaterally: Loss Responsibility Costs  $(\frac{kf}{\beta})$ . Because the president's utility function at this node is  $p - sf - \frac{kf}{\beta}(1-p) - a$ , and p is given by the contest function p = f/(f+t), we can rewrite the president's utility function as:

$$U_2^P(war) = \frac{f}{f+t} - \frac{fk}{\beta} \left(1 - \frac{f}{f+t}\right) - fs - a \tag{17}$$

In order to find the amount of force that maximizes the president's utility in this subgame, we take the partial derivative of Expression 17 with respect to f and set this equal to 0. Solving for f we find:

$$f_2^* = t \cdot \left(\sqrt{\frac{1}{st} \cdot (\rho)} - 1\right) \tag{18}$$

Where  $f_2^*$  represents the optimal amount of force for the president to employ in subgame 2.<sup>4</sup>

<sup>&</sup>lt;sup>4</sup>Comparing  $f_1^*$  (Expression 12) and  $f_2^*$  (Expression 18), the term  $\rho = (1 - \frac{k}{\beta}t)$  will be the primary difference between the amount of force utilized in equilibrium when comparing unilateral action to that undertaken pursuant to

As discussed above when solving the unilateral only game (Model I), an interior solution requires that  $t < \frac{\beta}{k}$  and that  $t \le \frac{\rho}{s}$ .

Given that this is a game of complete and perfect information,  $S_2$  will take  $f_2^*$  into account when making its own decision about whether to accept or reject the offer made by the president, as  $f_2^*$  directly affects  $S_2$ 's war payoff by affecting the probability of victory. Specifically, given  $f_2^*$ and the contest function, we know the probability of victory for the United States in the second subgame:

$$p_2^* = 1 - \frac{1}{\sqrt{\rho}}\sqrt{st} \tag{19}$$

Given this, and its own war payoff,  $S_2$  will be able to decide whether to accept the deal proposed by the president or reject the offer. Specifically, if

$$1 - d_2 \ge 1 - (1 - \frac{1}{\sqrt{\rho}}\sqrt{st}) - c \tag{20}$$

 $S_2$  will accept the offer. Otherwise, the offer will be rejected. Knowing this, the president then knows precisely the deal to offer  $S_2$  in order to get the best deal possible for the United States while still avoiding war. Specifically, the deal the president will offer will be:

$$d_2 = 1 - \frac{1}{\sqrt{\rho}}\sqrt{st} + c \tag{21}$$

Because the deal offered must be between 0 and 1, this means:

$$d_2^* = \min\{d_2, 1\} \tag{22}$$

P will offer  $d_2^*$  and  $S_2$  will accept the deal.

formal congressional authorization. One can think of this as the equilibrium effect of the president internalizing the LRC when acting unilaterally. As the president's sensitivity to these costs (k) goes to zero, there will be a convergence between  $f_1^*$  and  $f_2^*$ . Similarly, as informal congressional support  $(\beta)$  goes to infinity  $f_1^*$  and  $f_2^*$  will converge. Thanks are due to Sebastian Hernandez for suggesting this.

#### Subgame 3

The only relevant difference between subgames 2 and 3 is that by fully bypassing the Congress, the president avoids paying the cost of asking (a)—a sunk cost by the time the subgames are reached. Thus, the same equilibrium behavior will be observed in subgame 3 as in subgame 2. Therefore:

$$f_3^* = t \cdot \left(\sqrt{\frac{1}{st} \cdot (\rho)} - 1\right) \tag{23}$$

$$p_3^* = 1 - \frac{1}{\sqrt{\rho}}\sqrt{st} \tag{24}$$

$$d_3^* = \min\{d_3, 1\}, \text{ where } d_3 = 1 - \frac{1}{\sqrt{\rho}}\sqrt{st} + c$$
 (25)

P will offer  $d_3^*$  and  $S_2$  will accept the deal.

#### **Congress's Decision**

Notably, because Congress only has a decision if authorization is actually requested by the president, we only have to compare Congress's expected payoffs from subgames 1 and 2. If  $U_1^C \ge U_2^C$ , Congress will grant the authorization requested, and otherwise will deny the authorization. Substituting  $d_1^*$ and  $d_2^*$  into Congress's payoffs, we see that if:<sup>5</sup>

$$\beta(c - \sqrt{st} + 1) \ge \beta(1 - \frac{1}{\sqrt{\rho}}\sqrt{st} + c) \tag{26}$$

Congress will grant the authorization requested, and otherwise will deny the authorization. Solving for  $\beta$ , we see that if  $\beta \ge 0$  Congress will grant the authorization requested. Given that this is true by definition here (as noted in the main text,  $\beta > 0$  by assumption), it means that under perfect and complete information Congress *always* grants authorization.<sup>6</sup>

<sup>&</sup>lt;sup>5</sup>Note that this is assuming an interior solution to  $d_1^*$  and  $d_2^*$ . The overall finding—that Congress always grants authorization—still holds even if  $d_1^*$  or  $d_2^*$  reaches it maximum value of 1, because  $d_1^*$  is always greater than or equal to  $d_2^*$  even after accounting for this ceiling.

<sup>&</sup>lt;sup>6</sup>This is true regardless of whether the deal is a corner or interior solution, as the deal from the first subgame is always greater than or equal to that from the second subgame.

Congress's Decision = 
$$\begin{cases} Grant Authorization, Always \end{cases}$$

#### The President's Decision

Lastly, knowing the deals that will occur in each subgame and knowing that Congress will always authorize the use of force if requested, the president has to decide whether to request authorization. In effect, the choice boils down to whether the extra bargaining leverage gained by having a congressional authorization in hand will compensate for the cost incurred by seeking authorization (a). In general, this means that if the president's expected utility from the first subgame is greater than that from the third (i.e.,  $U_1^P > U_3^P$ ), they will seek authorization. Specifically, if:

$$d_1^* - a \ge d_3^* \tag{27}$$

Authorization will be requested; otherwise, it will not be. This can be rewritten and simplified to if:

$$a \le \frac{1}{\sqrt{\rho}}\sqrt{st} - \sqrt{st} \tag{28}$$

Authorization will be requested, otherwise, it will not be.<sup>7</sup>

$$President's Decision = \begin{cases} Seek Authorization, & \text{if } d_1^* - a \ge d_3^* \\ Act Unilaterally, & otherwise \end{cases}$$

As shown in Appendix I(b), below, this will imply that for larger threats the president will seek authorization from Congress but act unilaterally against smaller threats (See section entitled "The President seeks Congress's authorization when the size of the threat t is high relative to a threshold  $\hat{t}$ " in Appendix I(b), below).

 $<sup>^{7}</sup>$ Expression 28 assumes interior solutions only (i.e., that the deal offered is less than 1). Expression 27 is general to include even corner solutions.

### **Incomplete Information**

As noted in the main text, here the specific source of asymmetric information is  $S_2$ 's cost of fighting, c. We assume that the U.S. does not know the adversary state's cost of war, c, with certainty. The distribution of types for  $S_2$  is uniform and continuous over the interval  $c \in [0, \bar{c}]$ , where  $0 < \bar{c}$  and where c is drawn randomly by nature (N), a non-strategic player.  $S_2$ , in contrast, is perfectly and completely informed of Congress and the president's actions and payoffs.

#### Subgame 1

The very last node—where the president selects how much force to employ, f— actually involves the same decision as the complete information game. Thus:

$$f_1^* = t \cdot \left(\frac{1}{\sqrt{st}} - 1\right) \tag{29}$$

$$p_1^* = 1 - \sqrt{st}$$
 (30)

Because  $S_2$  is completely informed of P's actions and payoffs, it actually knows precisely how much force the president will use if  $S_2$  rejects the offer. Thus,  $S_2$ 's decision in subgame 1 will be if:

$$1 - d_1 \ge 1 - (1 - \sqrt{st}) - c \tag{31}$$

 $S_2$  will accept the offer. Otherwise, the offer will be rejected.

The United States, however, is uncertain over  $S_2$ 's cost of fighting, and thus has to make a deal that balances maximizing the deal acquired while minimizing the probability of war—a risk-reward trade-off (Powell 1999). The president knows that there is some  $\hat{c}$  at which  $S_2$  would be indifferent between accepting the deal and risking war. Setting  $S_2$ 's payoff from a deal,  $(1 - d_1)$ , and war,  $(1 - p_1^*) - c$ , equal to each other and solving for c:

$$\hat{c} = d_1 + \sqrt{st} - 1 \tag{32}$$

The president will estimate the probability that  $S_2$  will reject the offer by comparing this  $\hat{c}$  to the range of values of which the U.S. expects  $S_2$ 's true type to be located ( $c \in [0, \bar{c}]$ ). We will describe  $S_2$ 's action set as r = 1 if it rejects the offer of P, and r = 0 if  $S_2$  accepts the offer.<sup>8</sup>

$$Pr_1(r=1) = \frac{\hat{c}}{\bar{c}} \tag{33}$$

Substituting in Expression 32, we get:

$$Pr_1(r=1) = \frac{d_1 + \sqrt{st} - 1}{\bar{c}}$$
(34)

Knowing this probability of rejection, the president will have to make an offer  $d_1$  such that their expected utility is maximized. The president's utility function in this subgame is:

$$U_1^P = Pr_1(r=1) * (p_1^* - sf_1^* - a) + (1 - Pr_1(r=1)) * (d_1 - a)$$
(35)

Substituting in the variables defined above, we solve for the  $d_1$  that maximizes the president's expected utility. We find:

$$d_1 = \frac{1}{2} \left( \bar{c} - 3\sqrt{st} + st + 2 \right)$$
(36)

Rewriting this using  $p_1^*$ , this simplifies to:

$$d_1 = \frac{1}{2} \left( \bar{c} + p_1^* (1 + p_1^*) \right) \tag{37}$$

Because the deal offered must be between 0 and 1, this means:

$$d_1^* = \min\{d_1, 1\} \tag{38}$$

<sup>&</sup>lt;sup>8</sup>The "1" in  $Pr_1$  refers to the fact this is subgame 1—i.e., with formal authorization in hand. Hence,  $Pr_1(r=1)$  refers to the probability  $S_2$  rejects the offer in subgame 1.

#### Subgame 2

As in the first subgame of this version of the game, the president's use of force decision is the same as in the complete information version of the game. Thus:

$$f_2^* = t \cdot \left(\sqrt{\frac{1}{st} \cdot (\rho)} - 1\right) \tag{39}$$

and

$$p_2^* = 1 - \frac{1}{\sqrt{\rho}}\sqrt{st} \tag{40}$$

As in subgame 1, because  $S_2$  is completely informed of P's actions and payoffs, it actually knows precisely how much force the president will use if  $S_2$  rejects the offer. Thus,  $S_2$ 's decision in subgame 2 will be if:

$$1 - d_2 \ge 1 - p_2^* - c \tag{41}$$

 $S_2$  will accept the offer. Otherwise, the offer will be rejected. Similar to subgame 1, the president knows that there is some c,  $\hat{c}$ , such that  $S_2$  will be indifferent between accepting the deal offered,  $d_2$ , and rejecting the deal. Setting  $S_2$ 's expected utilities from accepting and rejecting equal to each other, and solving for  $\hat{c}$ , we see:

$$\hat{c} = \frac{1}{\sqrt{\rho}}\sqrt{st} + d_2 - 1 \tag{42}$$

The president will estimate the probability that  $S_2$  will reject the offer by comparing this  $\hat{c}$  to the range of values of which the U.S. expects  $S_2$ 's true type to be located ( $c \in [0, \bar{c}]$ ). We will describe  $S_2$ 's action set as r = 1 if it rejects the offer of P, and r = 0 if  $S_2$  accepts the offer.

$$Pr_2(r=1) = \frac{\hat{c}}{\bar{c}} \tag{43}$$

Substituting in Expression 42, we get:

$$Pr_2(r=1) = \frac{\frac{1}{\sqrt{\rho}}\sqrt{st} + d_2 - 1}{\bar{c}}$$
(44)

Knowing this probability of rejection, the president will have to make an offer  $d_2$  such that their expected utility is maximized. The president's utility function in this subgame is:

$$U_2^P = Pr_2(r=1) * (p_2^* - sf_2^* - a - \frac{kf_2^*}{\beta}(1-p_2^*)) + (1 - Pr_2(r=1)) * (d_2 - a)$$
(45)

In order to find the optimal deal,  $d_2$ , to offer  $S_2$ , we take the derivative of the president's utility function, set it equal to zero, and solve for  $d_2$ . From this, we find that the optimal deal to offer is:

$$d_2 = \frac{1}{2} \left[ \bar{c} + \left( 1 - \frac{1}{\sqrt{\rho}} \sqrt{st} \right) (1+\rho) - \sqrt{st} \left( \sqrt{\rho} - \sqrt{st} \right) \right]$$
(46)

Rewriting this using  $p_2^*$ , this simplifies to:

$$d_2 = \frac{1}{2} \left( \bar{c} + p_2^* (1 + p_2^* \rho) \right) \tag{47}$$

Because the deal offered must be between 0 and 1, this means:

$$d_2^* = \min\{d_2, 1\} \tag{48}$$

#### Subgame 3

Because the only difference between subgames 2 and 3 is the sunk cost of asking for authorization (a), the equilibrium behavior follows the same calculations.

$$f_3^* = t \cdot \left(\sqrt{\frac{1}{st} \cdot (\rho)} - 1\right) \tag{49}$$

$$p_3^* = 1 - \frac{1}{\sqrt{\rho}}\sqrt{st} \tag{50}$$

$$d_3^* = \min\{d_3, 1\}, \text{where } d_3 = \frac{1}{2} \left( \bar{c} + p_3^* (1 + p_3^* \rho) \right)$$
 (51)

#### The Likelihood of War

Note that because the probability of rejection is a function of the deal offered (Expressions 34 and 44), we need to consider the equilibrium probability of war given  $d_1^*$  and  $d_2^*$ .<sup>9</sup>

$$Pr_1(w) = \frac{d_1^* + \sqrt{st} - 1}{\bar{c}}$$
(52)

$$Pr_2(w) = \frac{\frac{1}{\sqrt{\rho}}\sqrt{st} + d_2^* - 1}{\bar{c}}$$
(53)

Assuming the deal offered in equilibrium is less than 1 (i.e., Expressions 38 and 48 for  $d_1^*$  and  $d_2^*$ , respectively, yield interior solutions), we can use the definitions of  $d_1$  and  $d_2$  given in Expressions 37 and 47, respectively, to rewrite the probability of war as:

$$Pr_1(w) = \frac{1}{2} - \frac{1}{\bar{c}} \frac{p_1^*(1 - p_1^*)}{2}$$
(54)

$$Pr_2(w) = \frac{1}{2} - \frac{1}{\bar{c}} \frac{p_2^*(1 - \rho p_2^*)}{2}$$
(55)

If the relevant deal is a corner solution—i.e.,  $d^* = 1$ —Expressions 52 and 53, respectively, imply that  $Pr_1(w) = \frac{\sqrt{st}}{\overline{c}}$  and  $Pr_2(w) = \frac{\frac{1}{\sqrt{\rho}}\sqrt{st}}{\overline{c}}$ . Hence, altogether, we can write the probability of war as follows:

$$Pr_1(w) = \begin{cases} \frac{1}{2} - \frac{1}{\bar{c}} \frac{p_1^*(1-p_1^*)}{2}, & \text{if } d_1^* < 1\\ \frac{\sqrt{st}}{\bar{c}}, & \text{if } d_1^* = 1 \end{cases}$$
(56)

<sup>&</sup>lt;sup>9</sup>Note that because subgames 2 and 3 yield the same equilibrium behavior (as both are unilateral action), the results for subgame 3 are omitted from the following analysis to save space  $(d_2^* = d_3^*, Pr_2(w) = Pr_3(w), \text{ etc.})$ .

$$Pr_{2}(w) = \begin{cases} \frac{1}{2} - \frac{1}{\bar{c}} \frac{p_{2}^{*}(1-\rho p_{2}^{*})}{2}, & \text{if } d_{2}^{*} < 1\\ \frac{1}{\sqrt{\rho}} \sqrt{st}, & \text{if } d_{2}^{*} = 1 \end{cases}$$
(57)

How Formal Authorization Affects the Likelihood of War

The possibility of war in the model is driven by the U.S.'s uncertainty over the adversary state's cost of fighting (c), which can be thought of as its resolve or, in the context of bargaining, its "reservation price". The United States faces a risk-reward trade-off in making its offer. Offering little to  $S_2$  would secure a better deal for the U.S., but increases the risk of rejection and war. Offering  $S_2$  a lot, on the other hand, makes it more likely  $S_2$  will accept the deal, but risks conceding too much.

The relationship between authorization and the likelihood of conflict is important to consider because it has been argued several times in postwar American crises that voting in favor of the use of force would not only uphold or strengthen the president's hand in dealing with adversaries (i.e., it would yield more bargaining leverage), but that such support would also decrease the likelihood of armed conflict.<sup>10</sup> Indeed, in the debates preceding virtually every AUMF passed after 1945, this argument was made. A thorough analysis of empirical record is left for future work, but it is plausible such an effect was seen in cases such at the First Taiwan Straight crisis (1955), crises in the Middle East after Suez (1957), and in the Cuban Missile Crisis (1962). Indeed, the main argument made both by the Johnson Administration and many legislators in 1964 when Johnson sought formal authorization for the use of force in Southeast Asia was that these past three crises had demonstrated that formal authorization would decrease the probability of deterrence failure. The record makes clear that this reasoning was on the minds of legislators when authorizing the (later infamous) Gulf of Tonkin Resolution. Similarly, the votes preceding the Gulf War (1991) and the 2003 invasion of Iraq (2002) made reference to this logic.

One contribution the model makes here is to provide a new logic of how congressional support

<sup>&</sup>lt;sup>10</sup>Note that these are two separate things, which is not sufficiently highlighted in the existing literature. "Upholding the president's hand" refers to the extra bargaining leverage provided to the president, and a decreased probability of conflict is a *potential* consequence of such leverage. As we will see, such leverage could also be used to demand more from the adversary and actually increase the chance of war. Existing work highlights that support expressed in a legislature can decrease the likelihood of conflict (Schultz 2001), but does not account for the possibility that the additional leverage can lead an executive to demand more from the opponent.

might decrease the risk of conflict. Like, e.g., Schultz (2001) it suggests congressional support can decrease the probability of war, but it highlights a separate mechanism for this effect. Models of opposition party signaling focus on asymmetric information over the democracy's resolve, and show that the presence of an opposition party helps more credibly reveal the democracy's true preferences (Schultz 1998). Here, there is <u>no</u> asymmetric information over American preferences, but rather over the resolve of the adversary. Hence Congress's action does not merely communicate true American preferences (there is no information asymmetry regarding American preferences to overcome, after all, because it is assumed to be common knowledge), but instead rearranges the incentives of the president, making it more likely for the executive to use more force.<sup>11</sup> All else being equal, this then has the effect of decreasing the probability of war by decreasing the adversary state's own expected war payoff—making it more likely it is a type that will accept the deal offered. Hence, domestic support in a democracy can decrease the likelihood of conflict even when there is no information asymmetry over that democracy's resolve or preferences.

Moreover, as a further contribution, we will see below that the overall effect of formal authorization on the likelihood of war depends on whether the president uses the extra bargaining leverage given by the presence of formal authorization to simply *demand more*. Ceteris paribus, the effect of authorization will, indeed, be to decrease the likelihood of conflict, but demanding more (a better deal for the U.S., and hence a worse deal for the adversary state) will, ceteris paribus, increase the likelihood of conflict. Hence, if the president secures authorization but demands more from the adversary, the presence of formal authorization will have an indeterminate net effect. If the president is constrained from asking for more, however, then formal authorization will have the straightforward effect of decreasing the probability of conflict.<sup>12</sup>

We can consider the conditions under which the risk of war is less under formal authorization  $(Pr_1(w) < Pr_2(w))$  or vice versa. There are three possible set of circumstance to consider: i) the case in which the deals offered unilaterally and with congressional authorization are both interior

<sup>&</sup>lt;sup>11</sup>On signals that merely communicate versus those that actually rearrange incentives, see Fearon (1997).

<sup>&</sup>lt;sup>12</sup>The reason formal authorization ceteris paribus lessens the likelihood of conflict is because it lessens  $S_2$ 's expected payoff from rejecting the offer and going to war (as shown above, formal authorization incentivizes the president to use more force, increasing the probability of U.S. victory), making it more likely the adversary state facing the U.S. is a type that will be satisfied by the deal offered. But—as highlighted throughout this section—this assumes the president does not use the extra bargaining leverage to demand a better deal for the U.S.

solutions (i.e.,  $d_2^* < d_1^* < 1$ ), ii) those under which formal authorization yields a corner solution but unilateral action yields a deal less than 1 (i.e.,  $d_2^* < d_1^* = 1$ ), and iii) where both yield corner solutions (i.e.,  $d_2^* = d_1^* = 1$ ).<sup>13</sup> Note that in the first two cases, the president demands more when they have an AUMF in hand ( $d_2^* < d_1^*$ ). In the latter case, the demand is not increased ( $d_2^* = d_1^*$ ).

## $d_2^* < d_1^* < 1$

Assuming  $d_1^*$  and  $d_2^*$  are interior solutions, Expressions 54 and 55 imply that the probability of war under an AUMF is less than when acting unilaterally  $(Pr_1(w) < Pr_2(w))$  whenever:

$$p_1^* (1 - p_1^*) > p_2^* (1 - \rho p_2^*)$$
 (58)

The reason the relationship between authorization status and the likelihood of conflict is not straightforward (it is "indeterminate" without specifying each of the relevant parameters) is because the extra bargaining leverage yielded by the possession of an AUMF incentives the president to demand more. In other words, "upholding the president's hand" may not decrease the probability of conflict because it could just as easily incentivize the president to ask for more than they otherwise would have. It is possible the 2002 AUMF vote regarding Iraq and subsequent 2003 invasion is an illustration of this: the support from Congress had a meaningful effect, but it was reflected in the administration's increased demands on Iraq, thereby increasing the likelihood of war ceteris paribus.

## $d_2^* < d_1^* = 1$

In this case unilateral action yields a deal less than 1, but  $d^* = 1$  under formal authorization. Here,  $Pr_1(w) = \frac{\sqrt{st}}{\bar{c}}$  and  $Pr_2(w) = \frac{1}{2} - \frac{1}{\bar{c}} \frac{p_2^*(1-\rho p_2^*)}{2}$ . Under these circumstances, the probability of war under an AUMF is less than when acting unilaterally  $(Pr_1(w) < Pr_2(w))$  whenever:

$$\bar{c} - 2\sqrt{st} > p_2^*(1 - \rho p_2^*)$$
(59)

Again, we see that the overall effect of authorization is indeterminate (without specifying each

<sup>&</sup>lt;sup>13</sup>Note that because the model implies  $d_2^* \leq d_1^*$ , it is not possible to have a situation under which unilateral action yields a deal which is a corner solution and formal authorization yields a deal less than 1.

of the parameters) because the president uses the extra bargaining leverage to demand more from the adversary (by definition, in this range  $d_1^* > d_2^*$ , meaning the deal offered by the president asks more of the adversary).

 $d_{2}^{\ast}=d_{1}^{\ast}=1$ 

However, if the president is constrained from demanding more, the effect of formal authorization will be to decrease the likelihood of war. This is because the AUMF will increase the probability of victory for the U.S., decreasing the expected outcome for U.S. adversaries, and implying that more types of  $S_2$  will be satisfied by the American offer (and the president cannot demand more once they receive this extra bargaining leverage—as noted above, is assumed throughout that the deal cannot be greater than 1). In this case, Expressions 52 and 53, respectively, imply that  $Pr_1(w) = \frac{\sqrt{st}}{\overline{c}}$  and  $Pr_2(w) = \frac{\frac{1}{\sqrt{\rho}}\sqrt{st}}{\overline{c}}$ . Under these circumstances,  $Pr_1(w) < Pr_2(w)$ , whenever:

$$\rho < 1 \tag{60}$$

This will always be the case, because  $\rho$  is defined as  $1 - \frac{k}{\beta}t$ , and each of these parameters is positive (implying that  $\frac{k}{\beta}t > 0$ , and thus that  $1 - \frac{k}{\beta}t < 1$ ). Hence  $\rho$  will always be less than 1, meaning that under these circumstances, formal authorization for the use of military force from Congress will necessarily decrease the probability of conflict.

Overall, these results imply that congressional authorization will lessen the likelihood of war when the president is constrained from demanding more from the adversary, but have an indeterminate otherwise. This can been seen on a comparative statics plot of the likelihood of war as a function of adversary strength (t), below.<sup>14</sup> The vertical dashed lines show where  $d_2^*$  and  $d_1^*$  move from corner to interior solutions. Hence, in the region on the left,  $d_2^* = d_1^* = 1$ , in the middle region  $d_2^* < d_1^* = 1$ , and in the region on the right  $d_2^* < d_1^* < 1$ .

In the region on the left, the president is constrained from demanding more, and we see that the risk of war under formal authorization is always less than that yielded by unilateral action. In the other two regions (in which the president does demand a better deal under formal authorization), the

<sup>&</sup>lt;sup>14</sup>This uses the same parameters as those presented in the main text:  $s = 0.15, t = 0.6, c = 0.2, \bar{c} = 0.8, a = 0.1, \beta = 1, k = 0.5$ , unless otherwise noted.



Likelihood of War as a Function of Adversary Power (t), Comparing Unilateral Action and with AUMF

relationship between authorization status and risk of war is indeterminate—it is sometimes higher when acting unilaterally, and it is sometimes greater when acting pursuant to formal authorization. The overall takeaway is therefore that formal authorization has the immediate effect of decreasing the likelihood of conflict, but that this can be quickly offset if the president then proceeds to use the new bargaining leverage to demand more from the adversary.<sup>15</sup>

Altogether, a plausible working hypothesis from this might be that formal authorization from Congress will tend to decrease the likelihood of war in a *deterrence* situation (where it is difficult for the president to demand "more" when the goal is simply to maintain the status quo, which by definition tends to be more or less "fixed"), but have an indeterminate effect in a *compellence* situation in which the president very well might demand "more" from the adversary. Future work might evaluate this conjecture.

#### Likelihood of War as a Function of Informal Congressional Support $(\beta)$

The likelihood of war as a function of informal congressional support ( $\beta$ ) can also be considered. We will see that a very similar finding is yielded: informal support has the immediate effect of decreasing the probability of conflict, but when this extra bargaining leverage is used to demand

<sup>&</sup>lt;sup>15</sup>Future work should focus on how formal authorization affects the likelihood of conflict when the possibility of war is driven by factors other than American uncertainty over adversary resolve, as it is here. For example, if the driver of conflict is, instead, the adversary's uncertainty over the president's sensitivity to LRC, then formal authorization could have the effect of consistently both bettering the deal for the U.S. *and* decreasing the likelihood of conflict. See Hulme (2023), Appendix III.

more of the adversary, the overall effect will be indeterminate.

Because formal authorization effectively eliminates the president's exposure to informal congressional sentiment,<sup>16</sup> we only consider the relationship under unilateral action. Plotted below is  $Pr_2(w)$  as congressional support increases.<sup>17</sup> Note that under the parameters presented  $d_2^* < 1$ , meaning that extra bargaining leverage is used to demand more from the adversary.



Likelihood of War as a Function of Congressional Support  $(\beta)$ , Unilateral Action

As informal congressional support increases, we see that the likelihood of armed conflict first decreases but then increases again. Hence, the relationship between informal support and the likelihood of war is not straightforward. This due to a very similar effect of informal congressional support as that explored above regarding formal authorization: more support has the immediate effect of decreasing the probability of conflict, but this support can be utilized by the executive to demand more. These greater demands increase the probability of conflict, meaning that increasing informal congressional support has an indeterminate effect on the likelihood of war overall.

Recalling that  $\rho(\beta) = 1 - \frac{k}{\beta}t$ ,  $\frac{\partial Pr_2(w)}{\partial \beta}$  can be expressed as:

$$\frac{\partial}{\partial\beta} \Pr_2(w) = \begin{cases} \frac{kt}{2\overline{c}\beta^2} - \frac{kt}{2\overline{c}\beta^2}\sqrt{\frac{st}{\rho(\beta)}} - \frac{kt}{4\overline{c}\beta^2}\sqrt{\frac{st}{\rho(\beta)}}, & \text{if } d_2^* < 1, \\ -\frac{kt\sqrt{st}}{2\overline{c}\beta^2(\rho(\beta))^{3/2}}, & \text{if } d_2^* = 1 \end{cases}$$

When  $d_2^* < 1$ , the relationship is highly complex, and show in the figure above. Absent a

<sup>&</sup>lt;sup>16</sup>I.e., the amount of force employed, the probability of war, etc are unrelated to  $\beta$  when congressional authorization is in hand, because the president has political cover against LRC.

<sup>&</sup>lt;sup>17</sup>As above, this plot uses the same parameters as those presented in the main text:  $s = 0.15, t = 0.6, c = 0.2, \bar{c} = 0.8, a = 0.1, \beta = 1, k = 0.5$ , unless otherwise noted. Note that under these parameters,  $d_2^* < 1$ .

constraint on the president's offer to the adversary, increases in congressional support translate into higher demands by the commander-in-chief and an indeterminate effect on the likelihood of conflict.

However, we again see that in the case where the deal cannot be changed (at  $d^* = 1$ , which is the maximum), congressional support does necessarily exhibit a negative relationship with the likelihood of war. This can be seen from  $\frac{\partial}{\partial\beta} \operatorname{Pr}_2(w)$  when  $d_2^* = 1$  (that is,  $-\frac{kt\sqrt{st}}{2\overline{c}\beta^2(\rho(\beta))^{3/2}}$ ). Because each of the parameters is, by definition, positive (and because we know  $0 < \rho < 1$ , i.e., positive), the entire term is negative (given the negative sign in front of the whole term). This implies that, regardless of the parameters, the probability of war will decrease as congressional support increases when the deal is constrained at 1. This, then, means that the overall effect of informal congressional sentiment on the likelihood of war is similar to that of formal authorization: all else being equal, more support decreases the probability of conflict, but if the president uses the extra bargaining strength to demand more from the adversary, the likelihood of conflict increases—leading to an overall indeterminate effect.

Altogether, these implications highlight a very important caveat to the often posited relationship between congressional support and the probability of conflict. While many politicians and some work in political science has suggested a straightforward negative relationship between congressional support (whether through formal authorization for the use of force or through informal support) and the probability of war,<sup>18</sup> this logic seems to make the assumption that the leader does not simply utilize the extra bargaining leverage to demand more from the adversary. While congressional support has the effect of encouraging the president to use (more) force, this can easily be translated into very stiff bargaining stances that have the overall effect of increasing the chance of war.

Consider, for example, the Cuban Missile Crisis. In September and October 1962 there were widespread calls by lawmakers for a blockade or invasion of the island. Congress, additionally, passed a formal resolution approving the use of military force (U.S. Forces Soviet Missiles Out of Cuba 1963). On the one hand, such strong congressional support perhaps clarified American resolve to the Soviets, and plausibly helped avoid actual armed conflict. This interpretation would

 $<sup>^{18}</sup>$ For example, Schultz (2001).

be consistent with models suggesting opposition party support helps avoid conflict by confirming a state's resolve (Schultz 2001).

And yet, on the other hand, even with this overwhelming support, Kennedy undertook actions that he himself believed made the risk of war—with the very real possibility of a nuclear exchange– "somewhere between one out of three and even"!<sup>19</sup> This risk of war was substantially driven by the tough stance the Kennedy administration took toward the deployment of Soviet Missiles, which in turn was necessitated by the strong support for action found in domestic American politics (Hastings 2022, Plokhy 2021, Zelizer 2009, Pressman 2001)—primarily, Congress.

The Kennedy administration could have "merely take[n] note of the existence of these missiles", as National Security Adviser McGeorge Bundy proposed, and not made any demands (May & Zelikow 2002, pg. 108). Indeed, many U.S. allies had long lived under the shadow of Soviet missiles in Europe and thus had a difficult time understanding why the Kennedy administration could not simply tolerate the deployment (Hastings 2022). Similarly, American missiles were already deployed in an analogous fashion in Turkey on the Soviet Union's border.

But the administration opted for a different choice: it demanded the removal of the missiles, which directly led to the substantial war risk in late October. Strong support for action in Congress led to increased demands made by the president—the removal of the missiles—and thus an elevated chance of conflict (Bundy 1990, pg. 411). Hence, congressional support for the use of force can have the overall affect of increasing the probability of warfare if it leads to greater demands  $(d^*)$ by the president.

This highlights a contribution of the model to the existing literature: support in the legislature can decrease the probability of conflict, but this connection really only operates to the extent that the president does not use the extra bargaining leverage to simply demand more from the adversary. Indeed, unless they are constrained from doing so, the executive is incentivized to do precisely this, will has the countervailing effect of increasing the probability of conflict. Hence, work suggesting democratic support might decrease the probability of conflict needs to be weighed against the countervailing pressure such support has on increasing the likelihood of a toughened

 $<sup>^{19}</sup>$  Allison and Zelikow (1999), pg. 1.

bargaining position that can lead to bargaining failures.

#### **Congress's Decision**

Because Congress only has a decision if actually requested by the president, we only have to compare Congress's expected payoffs from subgames 1 and 2. Substituting  $d_1^*$  and  $d_2^*$ —as well as the probabilities of rejected deals (i.e., war) into Congress's payoffs—we see:

$$U_1^C = Pr_1(w)(\beta p_1^* - sf_1^*) + (1 - Pr_1(w))(\beta d_1^*)$$
(61)

$$U_2^C = Pr_2(w)(\beta p_2^*) + (1 - Pr_2(w))(\beta d_2^*)$$
(62)

If  $U_1^C \ge U_2^C$ , Congress will grant the authorization requested, and otherwise will deny the authorization. Note that this implies that Congress does <u>not</u> always grant authorization. Instead, it weighs the expected benefit (the better deal for the U.S.) against the risk of war it is now taking responsibility for should it actually occur. Indeed, it is rather reticent to do so, since now it too will be held responsible for casualties should war actually occur.

Congress's Decision = 
$$\begin{cases} \text{Grant Authorization,} & \text{if } U_1^C \ge U_2^C \\ \text{Deny Request,} & \text{otherwise} \end{cases}$$

#### The President's Decision

Lastly, knowing the deals that will occur in each subgame and knowing whether Congress will authorize the use of force if requested, the president has to decide whether to request authorization. Effectively, the choice comes down to whether the extra bargaining leverage gained by having a congressional authorization in hand will compensate for the cost incurred by seeking authorization assuming Congress *would* grant authorization if asked (which is no longer assured).

First, the president will *never* seek authorization if Congress is not going to grant it. Thus, if  $U_1^C < U_2^C$ , then the president does not seek authorization. The simple intuition here is that because subgames 2 & 3 (i.e., asking and getting rejected vs. simply not asking) are identical other than the sunk cost a the president pays for asking, it is always better to simply avoid asking if the answer will be negative.<sup>20</sup>

If  $U_1^C \ge U_2^C$ —i.e. Congress would grant the request if asked—then the president will seek authorization if their utility from subgame 1 (asking and receiving) is greater than the utility from subgame 3 (not asking), where:

$$U_1^P = Pr_1(w)(p_1^* - sf_1^*) + (1 - Pr_1(w))(d_1^*) - a$$
(63)

$$U_3^P = Pr_3(w)(p_3^* - sf_3^* - \frac{kf_3^*}{\beta}(1 - p_3^*)) + (1 - Pr_3(w))(d_3^*)$$
(64)

Note:  $Pr_3(w)$  is equivalent to  $Pr_2(w)$ , Expression 53 above.

If  $U_1^P \ge U_3^P$  (and, again, assuming,  $U_1^C \ge U_2^C$ ), authorization will be requested; otherwise it will not be. In other words, the president will only seek authorization if Congress will grant it and, additionally, if the added benefit they receive from it (increased coercive leverage and political cover to pursue the foreign policy objective more vigorously—i.e., spending more blood and treasure should war actually occur) outweighs the cost in asking (a). Altogether, this means:

$$President's Decision = \begin{cases} Seek Authorization, & \text{if } U_1^C \ge U_2^C \text{ and } U_1^P \ge U_3^P \\ \text{Act Unilaterally, } & \text{otherwise} \end{cases}$$

<sup>&</sup>lt;sup>20</sup>Unexplored here—but ripe for future research—is the signaling taking place during the ask/ not ask and grant/ not grant decisions. The mere act of asking conceivable signals to adversaries that a president is a "weak" type. Thus, simply not asking might be preferred to asking and being rejected because it does not signal weakness. For tractability purposes, incomplete information over k—or some other parameter representing presidential resolve—is not investigated here.

## Appendix I(b): Additional Proofs of Desired Properties of Figures

Proof that the amount of force utilized unilaterally increases with congressional support  $\left(\frac{\partial f_3^*}{\partial \beta} \ge 0\right)$ 



Figure A3: U.S. Force Threatened (Unilaterally) as a Function of Congressional Sentiment (Figure 4 in main text)

The figure above reproduces Figure 4 from the main text, which was used to illustrate the proposition that the equilibrium amount of force utilized unilaterally by the president monotonically increases as congressional support ( $\beta$ ) increases. Note that this is consistent with Howell and Pevehouse's argument (2007). For example, Howell and Pevehouse summarize their case findings as "presidents heeded warnings and doubts that members of Congress expressed through informal channels of communication. And in these instances, presidents either scaled back a military venture or relinquished it altogether," (2007, pg. 114).

Here, we want to determine the parameters under which  $\frac{\partial f_3^*}{\partial \beta} \ge 0$ . Specifically, we are trying to figure out the conditions under which  $f_3^*$  monotonically increases with  $\beta$ . We start with the equilibrium amount of force that will be utilized:

$$f_3^* = t \cdot \left(\sqrt{\frac{1}{st} \cdot \left(1 - \frac{k}{\beta}t\right)} - 1\right) \tag{65}$$

Taking the derivative of this with respect to  $\beta$ , we find:

$$\frac{\partial f_3^*}{\partial \beta} = \frac{kt^2}{2\sqrt{\beta^3 st(\beta - kt)}} \tag{66}$$

Recall that by definition k, t,  $\beta$ , and s are all greater than zero (i.e., positive numbers). We are essentially concerned with the conditions under which Expression 66 is greater than or equal to zero. Let us consider the numerator and denominator in turn.

#### Numerator

The term in the numerator  $kt^2$  is always positive, because k and t are both greater than zero by definition. Hence, the numerator will be positive.

#### Denominator

The denominator  $2\sqrt{\beta^3 st(\beta - kt)}$  will be well-defined so long as  $\beta - kt \ge 0$ . Rewriting this in terms of t, this means it will be well-defined so long as:

$$t \le \frac{\beta}{k} \tag{67}$$

Moreover, assuming that  $t < \frac{\beta}{k}$  (and, thus, that  $\beta - kt > 0$ ), the denominator will be positive. Together, these mean that the derivative  $\frac{\partial f_3^*}{\partial \beta} \ge 0$  so long as  $t < \frac{\beta}{k}$ . Recall that in discussing the conditions under which the interior solution holds,  $t < \frac{\beta}{k}$  was a condition. Hence, the condition given here will be fulfilled so long as there is an interior solution. In other words, the amount of force utilized  $(f^*)$  monotonically increases with informal congressional support  $(\beta)$ . This implies that the relationship suggested by Figure 4 necessarily holds within the parameter space under which interior equilibrium holds: greater informal support in Congress incentivizes more force utilized by the president. Proof that the amount of force utilized pursuant to formal authorization versus unilaterally increasingly diverges as adversary power increases  $\left(\frac{\partial f_1}{\partial t} > \frac{\partial f_2}{\partial t}\right)$ 



Figure A4: Force Employed as a Function of Adversary Power (t), Comparing Unilateral Action and with AUMF (Figure 6 in main text)

Figure 6 from the main text showed that the amount of forced utilized under formal authorization  $(f_1^*)$  increasingly diverged with the amount of force utilized unilaterally  $(f_2^* = f_3^*)$  as adversary power (t) increased. This is important for a couple of reasons. First, those that bemoan a supposed imperial presidency argue that while presidents do sometimes seek formal authorization from Congress, this is little constraint because the executive could and (it is argued) would undertake the same action unilaterally. The plot is showing that this is not the case: while formal authorization makes little difference for smaller threats and less serious uses of force, it makes an increasingly large difference as the potential adversary (and, hence, the size of intervention) grows. Hence, this suggests it is not true that presidents will simply undertake the same use of force regardless of congressional imprimatur—it depends on the size of the threat and potential use of force being considered.

This, in turn, is important because it is this difference that creates the potential incentive for congressional buy-in. Because all else being equal, lawmakers would just assume let the president act unilaterally, they only are motivated to formally authorize the use of force when there is an offsetting benefit. The difference between the force level utilized (the difference between the curves) is what drives this: by formally authorizing the use of force, they incentive more force to be used by the president—making the accomplishment of the foreign policy objective more likely.

We want to know when  $\frac{\partial f_1}{\partial t} > \frac{\partial f_2}{\partial t}$ , as this tells us the conditions under which this divergence demonstrated in Figure 6 (in the main text) holds. We will see that this is necessarily the case in the entire parameter space under which the interior equilibrium holds.

Consider first  $\frac{\partial f_1}{\partial t}$ . We know from Expression 12, above, that

$$f_1^* = \sqrt{\frac{t}{s}} - t \tag{68}$$

Taking the derivative of  $f_1^*$  with respect to t, we find:

$$\frac{\partial f_1}{\partial t} = \frac{1}{2\sqrt{st}} - 1 \tag{69}$$

Then consider  $\frac{\partial f_2}{\partial t}$ . We know from Expression 18, above, that:

$$f_2^* = t \cdot \left(\sqrt{\frac{1}{st} \cdot \left(1 - \frac{k}{\beta}t\right)} - 1\right)$$

Taking the derivative of  $f_2^*$  with respect to t, we find:

$$\frac{\partial f_2}{\partial t} = \frac{\beta - 2\left(\sqrt{\beta st(\beta - kt)} + kt\right)}{2\sqrt{\beta st(\beta - kt)}}$$
(71)

This can be rewritten as:

$$\frac{\partial f_2}{\partial t} = \frac{1}{2\sqrt{st}} \cdot \left(\frac{\beta - 2kt}{\sqrt{\beta(\beta - kt)}}\right) - 1 \tag{72}$$

We want to show that  $\frac{\partial f_1}{\partial t} > \frac{\partial f_2}{\partial t}$ . Because the only difference between  $\frac{\partial f_1}{\partial t}$  (as displayed in Expression 69) and  $\frac{\partial f_2}{\partial t}$  (as displayed in Expression 72) is the term  $\frac{\beta - 2kt}{\sqrt{\beta(\beta - kt)}}$ , to establish the claim that  $\frac{\partial f_1}{\partial t} > \frac{\partial f_2}{\partial t}$  we only need to show that  $\frac{\beta - 2kt}{\sqrt{\beta(\beta - kt)}} < 1$ .

Given that  $\rho = (1 - \frac{k}{\beta}t)$ , this expression can be rewritten as  $\frac{2\rho - 1}{\sqrt{\rho}}$ . Therefore, we are interested in seeing the conditions under which  $\frac{2\rho - 1}{\sqrt{\rho}} < 1$ . Recall that in discussing the conditions under which the interior solution holds,  $t < \frac{\beta}{k}$  was a condition. Given that  $t < \frac{\beta}{k}$ ,  $\rho \in (0, 1)$ . When  $0 < \rho < 1$ , it will always be these case that  $\frac{2\rho-1}{\sqrt{\rho}} < 1$ .

Hence, this inequality will always be fulfilled so long as there is an interior solution. In other words,  $\frac{\partial f_1}{\partial t} > \frac{\partial f_2}{\partial t}$  throughout the parameter space in which the interior solution holds, implying that the curves in Figure 6 are increasingly divergent throughout this range, as noted in the main text.

# The President seeks Congress's authorization when the size of the threat t is high relative to a threshold $\hat{t}$

Hypothesis 2b suggested that smaller uses of force would be undertaken unilaterally while larger uses of force would be undertaken pursuant to formal authorization from Congress. We want to show that there is some threshold  $\hat{t}$ , such that at  $t > \hat{t}$ , the president seeks authorization and at  $t < \hat{t}$  authorization is not sought.<sup>21</sup>

Expression 28, above, gives us the circumstances under which the president seeks authorization:

$$\sqrt{st} \cdot \left(\frac{1}{\sqrt{\rho}} - 1\right) \ge a \tag{73}$$

We can then rearrange this in order to make the left hand side of the inequality a function of  $t.^{22}$ 

$$\frac{t \cdot \left(\frac{1}{\sqrt{st}} - 1\right) - \left(t \cdot \left(\sqrt{\frac{1}{st} \cdot (\rho)} - 1\right)\right)}{\sqrt{\rho}} \ge \frac{a}{s}$$
(74)

From Expressions 12 and 18 (which give the value of  $f_1$  and  $f_2$ , respectively), we know:

$$f_1 - f_2 = t \cdot \left(\frac{1}{\sqrt{st}} - 1\right) - \left(t \cdot \left(\sqrt{\frac{1}{st} \cdot (\rho)} - 1\right)\right)$$
(75)

Which is precisely the numerator found on the left-hand side of the inequality in Expression 74. Hence, we can replace the numerator on the left-hand side of Expression 74 with  $f_1 - f_2$ . Which means that the inequality now becomes:

$$\frac{f_1 - f_2}{\sqrt{\rho}} \ge \frac{a}{s} \tag{76}$$

Each term on the left hand side of the inequality is a function of t. Hence:

$$\frac{f_1(t) - f_2(t)}{\sqrt{\rho(t)}} \ge \frac{a}{s} \tag{77}$$

<sup>&</sup>lt;sup>21</sup>Thanks are due to Sebastian Hernandez for suggesting the following steps.

 $<sup>^{22}\</sup>mathrm{The}$  intermediate reordering steps here have been omitted.

We know that the numerator on the left-hand side of the equality is increasing in t (because it was demonstrated in the section above that  $\frac{\partial f_1}{\partial t} > \frac{\partial f_2}{\partial t}$ ). Recalling that  $\rho = 1 - \frac{k}{\beta}t$ , the denominator is decreasing in t. Because the numerator is increasing in t and the denominator is decreasing in t, we know that the left-hand side is monotonically increasing.

We can now use the bounds of t as t goes from 0 to  $\frac{\beta}{k}$  and the Intermediate Value Theorem in order to show that there exists a threshold  $\hat{t}$  such that if  $t > \hat{t}$  the president will seek authorization, and if  $t < \hat{t}$  the president will not seek authorization.

At t = 0

At t = 0, the left hand side will be equivalent to:

$$\frac{f_1(0) - f_2(0)}{\sqrt{\rho(0)}} = \frac{0 - 0}{\sqrt{1}} = 0 \tag{78}$$

Because, by definition a and s are greater than zero, the term on the right hand side of the inequality given in Expression 77 is some positive constant. This means that the right hand side is greater than the left, and thus the president does not seek authorization from Congress.

 $\underline{\text{At } t \to \frac{\beta}{k}}$ 

Again, let us focus on the left hand side of the inequality (i.e.,  $\frac{f_1(t)-f_2(t)}{\sqrt{\rho(t)}}$ ). As  $t \to \frac{\beta}{k}$ , we know the numerator is positive (i.e.,  $f_1(\frac{\beta}{k}) - f_2(\frac{\beta}{k}) > 0$ ), because it was proven in the section above that  $\frac{\partial f_1}{\partial t} > \frac{\partial f_2}{\partial t}$ . At the same time, we know that the denominator approaches zero:

$$\sqrt{\rho(\frac{\beta}{k})} \to 0 \tag{79}$$

Hence, with the numerator being a positive number and the denominator becoming arbitrarily small, the left-hand side will begin moving toward infinity. At the same time, the right-hand side  $\left(\frac{a}{s}\right)$  will remain a positive constant. Because the left-hand side will thus be greater than the right-hand side of the the inequality given in Expression 77, this implies that the president will seek authorization from Congress.

The Intermediate Value Theorem implies there exists a threshold  $\hat{t}$  such that at  $t > \hat{t}$ the President will seek authorization, while at  $t < \hat{t}$  they do not seek authorization Consider, again, the inequality given in Expression 77:

$$\frac{f_1(t) - f_2(t)}{\sqrt{\rho(t)}} \ge \frac{a}{s} \tag{80}$$

Above, it was shown that at t = 0 the left-hand side as a whole equaled zero (and thus, less than the right-hand side, which will be a positive constant): the president does not seek authorization from Congress. It was also shown that as  $t \to \frac{\beta}{k}$ , the left-hand side as a whole approaches infinity (and thus, greater than the right-hand side, which will be a positive constant): the president seeks authorization from Congress. We additionally noted above that the left-hand side monotonically increases with t.

By the Intermediate Value Theorem, this implies there must exist a threshold  $\hat{t}$  at which the left-hand side equals the right-hand side. For all  $t < \hat{t}$ , the left-hand side is less than the right-hand side and no authorization is sought, while for all  $t > \hat{t}$ , the left-hand side is greater than the right-hand side and authorization is sought. Hence, at lower levels of t, the president acts unilaterally, while at higher levels they seek authorization.

## Appendix II: Measuring Congressional Support for the Use of Military Force

While legislative support for, or opposition to, the employment of American military force in a crisis is theoretically quite important (Schultz 2001, e.g.), actually measuring it is difficult. One technique commonly utilized in the political science literature is simply to use the proportion of Congress made up of copartisans of the president (Howell & Pevehouse 2007, Kriner 2010) or Republicans (McManus 2017) as a proxy for congressional support. Both of these proxies, however, have significant drawbacks. First, as shown below, both of these measures are very poor predictors of, e.g., the few use of force votes that do exist or public opinion polls regarding the use of force in specific crises. It is not difficult to identify major cases in which non-copartisans gave greater support to the president in using force (e.g., Vietnam under Johnson, or the Afghanistan "Surge" under Obama), or in which otherwise hawkish Republicans opposed the use of force (e.g., Haiti or Bosnia under Clinton). Moreover, the fixed nature of these proxies does not readily allow for a change in congressional support during a crisis $^{23}$  or across crises occurring within the same congressional session.<sup>24</sup> Furthermore, the composition of Congress is easily observable ex ante and thus is less likely to affect the outcome of crises we observe.<sup>25</sup> Moreover, many prominent theories focusing on the effect of opposition party signaling on crisis outcomes (Schultz 1998, Schultz 2001, Ramsay 2004) cannot even be tested with proxies such as these because they give us no information about the stance of the opposition party.

Furthermore, there is no consensus on whether ideology or partian politics drives the foreign policy preferences and behavior of members of Congress. In other words, if one has to choose between utilizing the "% copartisans" and "% Republicans" proxies, it is not immediately clear which is more appropriate. While Howell and Pevehouse argue that partian politics is key (2007), more recent work by McManus (2017) and Bendix and Jeong (2022) suggests that ideological beliefs

 $<sup>^{23}</sup>$ For example, congressional support for U.S. military operations in Somalia in the early 1990s declined rapidly in the fall of 1993.

 $<sup>^{24}</sup>$ For example, in 1973 the same Congress that was highly adverse to re-engagement in Vietnam was quite willing to take a strong stand supporting Israel in the Yom Kippur War (Kissinger 2011*b*).

 $<sup>^{25}</sup>$ I.e., whatever effect the composition of Congress might have should be "priced in" to the decision to start a crisis, but is less likely to affect the outcome of the crisis (Fearon 1994).

are predominant. Others show that *both* are important (Böller 2021). Tama shows in recent work that bipartisanship is more common in foreign policy than domestic, and that such bipartisanship not infrequently involves anti-presidential positions. War powers questions, in particular, often involve significant cross-partisanship (Tama 2023). Hence, the percent of Congress made up of copartisans of the president (or Republicans) is, at best, a quite rough proxy for congressional support for the use of force.<sup>26</sup>

	$\% \ { m Congress} \ { m Copartisan}^{27}$	% Congress Republican <sup>28</sup>	Roll Call Votes	Congressional Support Scores <sup>29</sup>
Coverage:	Universal	Universal	Low	High
Difficulty to Measure:	Low	Low	Medium	High
Easily Observable Ex Ante:	Yes	Yes	Sometimes	Sometimes
Captures Intraparty Heterogeneity:	No	No	Yes	Yes
Can Measure Opposition Party Stance:	No	No	Yes	Yes
Allows for Change over Course of Crisis:	No	No	Only if multiple votes	Yes
Allows for Different Sentiment in Different Concurrent Crises:	No	No	Only if multiple votes	Yes
Correlates Well with Actual Use of Military Force Votes:	Weakly	No	-	Strongly
Correlates Well with Public Opinion Polls in Crises:	No	No	-	Strongly

Table A1: Competing Measures of Congressional Support for the Use of Military Force

Another commonly utilized method of capturing congressional sentiment over a given issue—the analysis of roll call votes—is also of relatively limited utility in this issue area because members of Congress are quite reluctant to vote on use of military force decisions. This means that the vast majority of crises lack any relevant vote from which to deduce congressional sentiment. In

<sup>&</sup>lt;sup>26</sup>Howell and Pevehouse note that it is a "rough indicator" (2007, pg. 36).

 $<sup>^{27}\</sup>mathrm{Howell}$  & Pevehouse (2007); Kriner (2010).

 $<sup>^{28}</sup>$ McManus (2017).

<sup>&</sup>lt;sup>29</sup>Introduced below.

order to measure congressional sentiment over potential uses of force in a much broader set of crises than the select few in which formal votes are taken, we instead focus on what members of Congress *say*. Even when Congress declines to formally vote on the use of military force, members of Congress frequently make their positions publicly known through their rhetoric—be it on cable news, through op-eds, via press releases, or by way of speeches on the floor of the Senate (Howell & Pevehouse 2007).

This appendix describes how "Congressional Support Scores"—i.e. a metric representing congressional support or opposition to the use of military force in specific crises since World War II—were measured. First, it describes how a "universe" of nearly two hundred postwar U.S. relevant crises were identified. Next, it discusses how congressional floor speeches from lawmakers were collected and scored in each of these crises. Two versions are presented: first, a (human) hand-labeled version focusing on roughly thirty-thousand speeches from foreign policy leaders in Congress. Second, a computer-labeled (GPT-3.5) version yielded from roughly one hundred and fifty-thousand speeches from all members of Congress is also presented. It then describes how an aggregate "Congressional Support Score" for each crisis was calculated before introducing descriptive statistics of the dataset. Validation tests comparing the dataset to public opinion polls and actual use of force votes by the legislature are then presented, showing that the Congressional Support Scores far outperform any other proxy.

#### Coverage: Identifying U.S.-relevant crises in the Postwar Period

To begin with, a "universe" of cases in which the use of American military force might have reasonably been considered had to be identified. The aspiration for this dataset was to be as comprehensive as possible—not only to include events included in datasets such as the Militarized Interstate Dispute (MIDs) or the International Crisis Behavior (ICB) datasets, but even beyond to include as many use of military force decisions as possible. Because the focus of this project is on a potential necessary condition, erring on the side of over-inclusion is helpful for robustness purposes as each added case serves as an additional potential falsification of the proposed necessary condition.
The Interstate Crisis Behavior dataset contains around seventy crises in which the U.S. is deemed to have been a crisis actor, but we need to also consider "dogs not barking"—i.e., cases in which military action was considered but decided against. To give one example, the U.S. is not considered by the ICB dataset to have been a crisis actor during the 1975 Fall of Saigon, but this was not due to any lack of serious consideration (Ford 1979).<sup>30</sup> In order to capture cases in which the U.S. might reasonably be considered to have had a substantial security interest, but in which it ultimately decided against intervention, we additionally include all ICB crises in which at least one crisis actor experienced economic—or greater—involvement by the United States in the crisis. Economic involvement in a conflict suggests the U.S. had some interest in the outcome of the crisis, even if its interest was not great enough to justify direct kinetic military intervention. Requiring this minimal level of U.S. involvement in the crisis helps eliminate cases in which the U.S. had negligible interests involved. In the ICB dataset, this includes cases in which UNSINV is rated at "4" or higher at the actor-level, and thus also includes cases of higher U.S. involvement, such as propaganda involvement, covert involvement, U.S. semi-military involvement (military aid or advisors, without participation in actual fighting) and cases in which American military forces were directly involved.<sup>31</sup> This yields 141 ICB-defined crises between 1945 and 2016.

An even more inclusive list of U.S. crises was developed further in order to also include noninterstate crises (e.g., Somalia in the early 1990s or ISIS in the mid-2010's), and crises occurring after 2017. Cases from the ICB dataset in which the U.S. was not coded as being even "economically" involved, but for which we nonetheless have evidence that American intervention was considered, are also added. For example, we know from memoirs and news reporting that the White House closely followed the Russian invasion of Georgia in 2008, but consciously ruled out direct intervention. CRS reports, likewise, show that war powers issue came up in episodes such as the civil war in El Salvador and in the Tanker War in the Persian Gulf in the 1980s. Cases such as these are also added. Lastly, the MIDs dataset was examined for disputes in which the U.S. was an actor, and

<sup>&</sup>lt;sup>30</sup>Indeed, there is good reason to believe the administration's omission to use force was substantially due to congressional opposition to re-engagement in Indochina after the 1973 Paris Peace Accords.

<sup>&</sup>lt;sup>31</sup>For similar approaches in identifying U.S. opportunities to use military force, compare to Assessing Trade-Offs in U.S. Military Intervention Decisions: Whether, When, and with What Size Force to Intervene (Frederick, Kavanagh, Pezard, Stark, Chandler, Hoobler & Kim 2021) and Informing the Leader: Bureaucracies and International Crises (Schub 2022).

each of these (except for fishing disputes or inadvertent airspace boundary violations) was also included. Thus, the dataset here includes not only virtually every potentially U.S.-relevant crisis from the ICB dataset, but also all but the most *de minimis* U.S. MIDs from the Correlates of War dataset. Altogether, this yields a grand total of 191 crises between 1945 and 2022. The list is meant to be as comprehensive as possible, and in future iterations will be expanded further. For the time being, the list should include nearly every crisis encountered by the White House in the time period in which force was even somewhat seriously considered. Because we are primarily concerned with examining a potential necessary condition, each additional observation exhibits a potential to falsify the theory.

#### **Congressional Floor Speeches**

In order to measure congressional sentiment over the possible use of force in these crises, we focus on floor speeches in the congressional record. While other sources—such as press releases, opeds, interviews, and speeches outside Congress—could clearly also be used to convey opinions over possible uses of force, focusing on speeches available in the Congressional Record allows us to consult a single source whose relevance has seemingly remained high over the past eighty years. Howell and Pevehouse, for example, give substantial focus to floor speeches in Congress in their case studies (Indochina, Nicaragua, Lebanon, Panama, Bosnia, and Kosovo) and in examining congressional rhetoric in the lead-up to the Iraq War (Howell & Pevehouse 2007, Ch. 5-6).

Consider the following examples of floor speeches expressing support or opposition to the potential use of military force in Table A2. The first four examples convey sentiment in favor of the use of force.

Sometimes sentiment over the use of military force is conveyed during debate over legislation authorizing (or prohibiting) the use of force—as is the case in the example excerpt from the First Taiwan Strait Crisis. More often, however, such sentiment is conveyed outside the context of the consideration of specific legislation. For each of the other speech excerpts—related to the 2011 Libyan intervention, the counter-ISIS campaign beginning in 2014, and the 2019 Venezuela

Table A2: Speech Examples: Supporting the Use of Military Force

	Supporting Force				
First Taiman	"[T]here can be no question that we should say to the world that we now				
Strait Crisis	propose to make our position clear. We must say that we will not be parties				
(1055)	to the placing of Formosa and the Pescadores in unfriendly hands."				
(1900)	—Senator Walter George (D-GA)				
	"[I] urge the President of the United States to take long overdue action to				
Libya (2011)	prevent the massacres that are taking place in Libya as we speak"				
	—Senator John McCain (R-AZ)				
	"Like it or not the American military is second to none. The special forces				
	capability we have can really be decisive in this fight. To every American,				
ISIS $(2014)$	this is not only about them over there: this is about us here. The better				
	and the sooner that ISIL is defeated, the more decisive ISIL is defeated."				
	—Senator Lindsey Graham (R-SC)				
	"We cannot let evil triumph in Venezuela. It would be a failure of				
Venezuela (2019)	leadership with disastrous consequences It is becoming clear that we will				
	have to consider the use of American military assets Our safety, national				
	security, and the peace of our hemisphere demand that we take action."				
	—Senator Rick Scott (R-FL)				

crisis<sup>32</sup>—a policy preference is conveyed even if a specific congressional resolution is not being considered. Sometimes, the support for the use of force is quite explicit, as illustrated by the McCain excerpt from 2011. Other times, intervention may not be specifically called for, but the implicit sentiment conveyed is clearly quite hawkish. In the Graham excerpt from the ISIS crisis, for example, the Senator never actually directly calls for intervention, but the sentiment in favor of the use of force is clear.

The next four speech excerpts come from the same four crises, but instead convey sentiment in opposition to the use of military force. As is the case for sentiment in favor of the use of force, sentiment opposed to military intervention can occur in the context of debate over congressional legislation—as depicted in the example from the First Taiwan Strait Crisis. Another common focus of opponents to utilizing force is that such action violates the Constitution. Thus—as shown by Dennis Kucinich's opposition to the 2011 Libya Intervention—lawmakers can attack the authority of the executive (Christenson & Kriner 2020). Alternatively, as shown by the excerpts from the 2014 ISIS and 2019 Venezuela crises, legislators can focus on policy criticism instead of constitutional

 $<sup>^{32}</sup>$ Esper (2022).

Table A3: Speech Examples: Opposing the Use of Military Force

	Opposing Force
First Taiwan	"every Senator who votes for this resolution is authorizing the President
Strait Crisis	to send troops anywhere —possibly thousands of miles into the mainland of
(1055)	China[I am] not going to vote at this time to give a blank check to the
(1999)	President"—Senator William Langer (R-ND)
	"Madam Speaker. we are in the midst of a foreign policy and constitutional
Libya (2011)	crisis. The administration has committed our Nation to a war against Libya
LIDya (2011)	in violation of the Constitution of the United States."
	—Rep. Dennis Kucinich (D-OH)
	"I completely agree with the cautionary notes that have been cited about
	just sending in the U.S. military to do it. I think the risks there are
ISIS $(2014)$	enormous, and it would not be successful because it would unite a
	fair number of Sunnis and radicals against us"—Rep. Adam Smith
	(D-WA), Chairman of the House Armed Services Committee
	"The organizing principle of American policy seems to be the need to drive
Venezuela (2019)	Maduro from power. What if Maduro is not really in power right now?
	What if the people who are really calling the shots in Venezuela are a
	group of transnational criminal organizations? And what if their entire
	purpose is to draw the United States into an ill-advised war?certainly, as
	a Congress, we need to be very critical in our thinking to not get our Nation
	in another ill-advised war." —Rep. Matt Gaetz (R-FL)

attacks (Christenson & Kriner 2017).

In addition, note that in each of the above examples, copartisans of the president *opposed* the use of military force. This is especially notable in the first three examples because there were simultaneously opposition party legislators that supported the president in the use of force. Even seemingly close ideologues and allies of the president can have vastly different positions toward the possible use of military force (Tama 2023). Matt Gaetz—whom the *Washington Post* dubbed the "Trumpiest Congressman"—frequently opposed the use of military force by the Trump Administration while otherwise being one of the closest allies to the Administration.<sup>33</sup>

The Stanford Social Science Data Collection provides parsed speeches from the congressional record from 1873 through 2016 (Gentzkow, Shapiro & Taddy 2018).<sup>34</sup> In order to, first, identify potentially relevant congressional speeches, the congressional record was searched for a specific

<sup>&</sup>lt;sup>33</sup>" 'Trumpiest Congressman' Matt Gaetz Says He Voted against President on War Powers on Principle" *The Washington Post.* https://www.washingtonpost.com/nation/2020/01/10/gaetz-war-powers/.

<sup>&</sup>lt;sup>34</sup>Congressional Record data for post-2016 crises was collected by a team of researchers at UC San Diego's Center for Peace and Security Studies (cPASS).

keyword(s) during the time period of the crisis and the three months prior to the beginning of the crisis.<sup>35</sup> The total number of "matches" for all crises by all members of Congress was over one hundred thousand.

Automated text analysis tools—such as supervised machine learning—were not well suited for measuring policy prescriptions (Schub 2022) until very recently, so qualitative hand-coding was employed. This, however, made the manual review of all speeches well beyond the resources available. In order to decrease the number of speeches to a more manageable level, speeches from key foreign policy leaders in Congress were identified for review.<sup>36</sup> Such foreign policy leaders consisted of the following:

## Senate:

- Senate Majority Leader
- Senate Minority Leader
- Chairman and Ranking Member of Foreign Relations Committee
- Chairman and Ranking Member of Armed Services Committee
- Chairman and Ranking Member of Intelligence Committee
- Chairman and Ranking Member of Appropriations Committee
- All Members of Senate Foreign Relations Committee
- All Members of Senate Armed Services Committee

## House of Representatives:

- Speaker of the House
- House Minority Leader
- Chairman and Ranking Member of Foreign Affairs Committee
- Chairman and Ranking Member of Armed Services Committee
- Chairman and Ranking Member of Intelligence Committee
- Chairman and Ranking Member of Appropriations Committee

In total, this amounted to approximately 40 lawmakers in any given Congress, and for a total

of roughly thirty thousand speeches. Notably, despite making up only 7-8% of all members of

Congress, these foreign policy leaders were responsible for roughly one quarter of all speeches

containing the keyword(s) during the relevant crisis time periods.

 $<sup>^{35}</sup>$ McManus (2017) similarly includes presidential speeches not only from the time period of the dispute, but also prior to it.

<sup>&</sup>lt;sup>36</sup>For a handful of crises, speeches from all lawmakers were hand-labeled—for example, due to the fact that the underlying speech dataset (Gentzkow, Shapiro & Taddy 2018) did not have speaker ID information for certain time periods (making the identification of speeches from foreign policy leaders impossible). The data presented thus includes a few crises in which speeches from all members of Congress are considered. Dropping speeches in which the speaker was not confirmed to be a foreign policy leader yields very similar results.

Recent advances in AI, however, have dramatically improved the performance of automated text analysis tools. Thus, in addition to the (human) hand-labeled speeches from foreign policy leaders described above, alternative speech labels from *all* members of Congress generated by GPT-3.5 are also presented. As we will see, while the human-labeled speeches exhibit the highest performance metrics, those labeled by GPT-3.5 also perform well. Both versions, moreover, yield very similar results in terms of showing informal congressional sentiment as a necessary condition for uses of force.

Table A4: Two Versions of Congressional Support Scores

	Human Hand-Labeled	Computer Labeled
Labeler(s):	15 Undergraduate Research Assistants	GPT 3.5
Corpus	$\sim 30,000$ speeches from foreign	$\sim 150,000$ speeches from all
Corpus:	policy leaders in Congress	members of Congress

Because the scores derived from the hand-labeled speeches yielded the best overall performance (below), they are primarily discussed here and throughout the main text.

## **Coding Procedures**

All such "matches"—thus containing both the keyword(s) and being spoken by a foreign policy leader in Congress—were then read by an individual from a team of undergraduate research assistants and hand-scored.<sup>37</sup> Each speech was first determined to be relevant or not to the crisis under consideration. If any of the questions below—focused on the speaker's policy preferences as well as the possible legal authority to use force—were answered in the affirmative, the speech was considered relevant. In contrast, if none of the following questions were answered positively, then the speech was considered irrelevant. Removing irrelevant speeches is important in order to avoid drawing conclusions from random noise. Schub, for example, removes from the corpus all

<sup>&</sup>lt;sup>37</sup>While the vast majority of speeches were labeled by a single coder, 10% of the speeches were labeled by a second coder in order to determine the intercoder reliability of the task. With a Cohen's Kappa of 0.60, there was moderate to substantial agreement. Moreover, because of the way the aggregate "congressional support score" for each crisis is calculated (it excludes speeches marked "irrelevant"), the primary worry is not if one coder judged a speech irrelevant and another did not. Rather, the greatest threat was if one coder marked a speech as in favor of the use of force and another marked it as opposed to the use of force. This was found to be the case in less than 2% of speeches. Lastly, the validation tests illustrated below show that the Congressional Support Scores far better predict use of force votes than any available alternative.

text-portions he deems to be non-pertinent to his theory (Schub 2022, pg. 7). 73% of speeches were determined to the irrelevant, showing that speech coders were thus quite discerning in deciding whether a speech actually contained sentiment regarding the use of military force.

If a speech was determined to be relevant, coders then answered a series of binary questions related to policy preferences. The policy preference questions were presented as follows:

### Support:

- Does the speaker seemingly advocate for, or would support the use of, American military force in general in this crisis? ( $Gen^{Supp}$ : Yes = 1, No = 0)
- Does the speaker seemingly advocate for, or would support the use of, American ground forces in this crisis? ( $Grd^{Supp}$ : Yes = 1, No = 0)
- Does the speaker seemingly advocate for, or would support the use of, American *air assets* in this crisis? ( $Air^{Supp}$ : Yes = 1, No = 0)
- Does the speaker seemingly advocate for, or would support the use of, American *naval assets* in this crisis?  $(Nav^{Supp}: es = 1, No = 0)$
- Does the speaker seemingly advocate for, or would support the use of, American *aid or* sanctions in this crisis? ( $Aid^{Supp}$ : Yes = 1, No = 0)

## **Opposition:**

- Does the speaker seemingly advocate against, or oppose, the use of American military force in general in this crisis? ( $Gen^{Opp}$ : Yes = 1, No = 0)
- Does the speaker seemingly advocate against, or oppose, the use of American ground forces in this crisis?  $(Grd^{Opp}: \text{Yes} = 1, \text{No} = 0)$
- Does the speaker seemingly advocate against, or oppose, the use of American *air assets* in this crisis? ( $Air^{Opp}$ : Yes = 1, No = 0)
- Does the speaker seemingly advocate against, or oppose, the use of American *naval assets* in this crisis?  $(Nav^{Opp}: Yes = 1, No = 0)$
- Does the speaker seemingly advocate against, or oppose, the use of American *aid or sanctions* in this crisis? ( $Aid^{Opp}$ : Yes = 1, No = 0)

## Calculating Congressional Support Scores

Once the speech codings were made, aggregate "Congressional Support Scores" could be calculated for each crisis. There are theoretically many different ways one might desire to create an aggregate score from the individual speech codings, and individual researchers are encouraged to do so from the underlying speech codings. Described here, however, is precisely how the aggregate "Congressional Support Score" data presented here were calculated. In order to avoid overweighing the sentiment of one speaker making repeated speeches, an Individual Support Score was calculated for each individual lawmaker who gave at least one relevant speech during the crisis. A support score for an individual lawmaker (i) in the crisis was calculated simply by creating a fraction with expressed support for the use of force across their speeches in the numerator and all expressed sentiment in favor of, or opposed to, the use of force in the denominator. Thus, the Individual Support Score of lawmaker i,  $ISS_i$ , is calculated by summing their sentiment across the relevant speeches they made during the crisis as follows:

$$ISS_{i} = \frac{\sum Gen_{i}^{Supp} + \sum Grd_{i}^{Supp} + \sum Air_{i}^{Supp} + \sum Air_{i}^{Supp} + \sum Nav_{i}^{Supp}}{(\sum Gen_{i}^{Supp} + \sum Grd_{i}^{Supp} + \sum Air_{i}^{Supp} + \sum Nav_{i}^{Supp})} + (\sum Gen_{i}^{Opp} + \sum Grd_{i}^{Opp} + \sum Air_{i}^{Opp} + \sum Nav_{i}^{Opp})$$

For example, if Lawmaker A made two speeches that seemed to favor the use of force in general, they would have an Individual Support Score of 100%. In contrast, if Lawmaker B made two speeches that seemingly opposed the use of force in general, they would have an Individual Support Score of 0%. And if Lawmaker C made two speeches, one favoring the use of force and one opposing the use of force, they would have an Individual Support Score of 50%. The Individual Support Score can also account for domain-dependent sentiment. For example, if Lawmaker D expressed support for bombing ISIS ( $Air^{Supp} = 1$ ) but opposition to the reintroduction of ground forces in Iraq ( $Ground^{Opp} = 1$ ) in a single speech, this would yield an overall Individual Support Score of 50%. Similarly, if Lawmaker E expressed support for bombing ISIS ( $Air^{Supp} = 1$ ) in one speech, and then opposition to the reintroduction of ground forces in Iraq ( $Ground^{Opp} = 1$ ) in another speech, this would also yield an overall Individual Support Score of 50%.

An overall Congressional Support Score was then created by averaging the Individual Support Scores of the lawmakers who gave relevant speeches during the crisis. For example, together Lawmakers A, B, C, D, and E's Individual Support Scores would yield an overall Congressional Support Score of 50%.

$$CSS = Average(ISS)$$

This simple calculation yields an aggregate Congressional Support Score ranging between 0

(uniform opposition) and 1 (uniform support) for each crisis. This is then re-centered at 0 (and thus ranges from -0.5 to  $\pm 0.5$ ), so that scores with a positive value signify overall support in Congress, while scores below 0 suggest there is more opposition in the legislature.<sup>38</sup> Crises with few speakers also are "penalized" so that they are not given extreme values based on the sentiment of just a couple of legislators. Throughout the results presented below, we will require a minimum of five lawmakers to speak before assigning the raw score calculated as shown above. Crises with less than five speakers have their polarity prorated toward  $0.^{39}$  Moreover, in order to examine the sentiment of lawmakers *before* a use of force decision was concluded by the White House, speeches were limited to those made before combat commenced for crises in which the United States ended up actually utilizing military force.<sup>40</sup>

Table A5, above, gives examples of Congressional Support Scores for a few specific crises. As might be expected given the enormous rally-around-the-flag effect witnessed after the 9/11 terrorist attacks, the invasion of Afghanistan receives a very high Congressional Support Score. Similarly, the initial intervention in the Korean War in 1950 garnered significant bipartisan support—a fact recognized by politicians at the time and historians in later decades, despite the fact the Truman administration chose to not seek formal authorization from Congress (Acheson 1969, Schlesinger 1973, Blomstedt 2016). The invasion of Iraq in 2003 had strong, but far from uniform, support in Congress as nearly all Republicans but only around half of Democrats supported the operation. Nevertheless, George W. Bush actually had substantially greater support for the 2003 action than his father had in 1991 against the same enemy (with CSS's of 0.288 and 0.143, respectively).

 $<sup>^{38}</sup>$ I.e., -0.5 corresponds to uniform opposition, +0.5 corresponds to uniform support, and 0 corresponds to overall neutral (or, perfectly split) sentiment in Congress.

 $<sup>^{39}</sup>$ I.e., neutral sentiment. E.g., if 5 lawmakers in this elite subset gave speeches uniformly opposing a potential intervention, this will meet the threshold to yield the lowest possible sentiment: -0.5. If only one lawmaker spoke, however, it would be more difficult to deduce overall congressional sentiment. In this case, since there is only one out of the five required, we divide the valence by 5—yielding a congressional support score of -0.1.

There are, of course, many different cutoffs one could use. 10, 20, 40, and even 0 were all tried and yielded nearly identical results. Data utilizing this 5-member cutoff is presented here for two reasons: first, it yielded the best model fit statistically. Second, while it seems important to have *some* cutoff—it would be peculiar to have a single member speak out against an operation and then assume all of Congress was in opposition to it—it also seems intuitive that there would be diminishing returns to speaking out when several of your colleagues already have and there is a uniform consensus. Thus, if five members of this group of lawmakers speak out unanimously in favor of an operation (or in opposition to it), and there is no dissent whatsoever from any other member, it seems more reasonable to conclude that this is a well represented view.

<sup>&</sup>lt;sup>40</sup>This is specifically done in order to see where members stood before the use of force commenced. This restriction can be relaxed, and similar statistical results are still yielded.

Afghanistan (2001)	0.455
Cuba Missile Crisis (1962)	0.386
Korea (1950)	0.324
Iraq (2003)	0.288
Panama (1989)	0.262
Vietnam (1964)	0.254
Libya (2011)	0.200
Gulf War (1991)	0.143
Yom Kippur War (1973)	-0.125
Syria Red Line (2013)	-0.131
Haiti (1994)	-0.216
Iran (2007)	-0.220
Bangladesh War (1971)	-0.500
Angola (1975)	-0.500

Table A5: Examples of Crises with Congressional Support Scores (Hand-Labeled Speeches)

In particular, Bush 41 faced much stronger resistance from Senate Democrats, and the formal authorization vote from Congress only passed the upper chamber by a handful of votes (Bush & Scowcroft 1999). More recently, President Obama balked at enforcing a "red line" in Syria in 2013 when congressional support (CSS of -0.131) proved to be lower than expected.

Nixon and Kissinger threatened the Soviets with intervention during the October War in 1973, but Congress was opposed to direct American intervention just as it extricated itself from Vietnam a fact well-recognized by the White House at the time (Nixon 1986).<sup>41</sup> Congressional resistance to using military force in Haiti in 1994 was acknowledged by President Clinton (Clinton 2005), and memoirs from the Second George W. Bush Administration make clear the pressure they felt from Congress (Bush 2011, Gates 2015)—especially a then Chairman of the Senate Foreign Relations Committee, Joe Biden—to not use military force against Iran. On the far-negative end of the spectrum, possible American interventions in South Asia and Southern Africa in the 1970s were virtually uniformly opposed by lawmakers. In the case of the Bangladesh War, Nixon and Kissinger attempted to feign a willingness to use the U.S. Seventh Fleet in the Indian Ocean, but the strong resistance in Congress led Indian observers to call the bluff (Kissinger 2011*a*). In Angola 1975,

<sup>&</sup>lt;sup>41</sup>Lawmakers strongly supported the provision of military aid to Israel, however.

Congress was so opposed to U.S. intervention that legislators even banned military aid to groups in the country (Stevenson 2007).

Partisan differences can also be examined. Plotted below in Figure A5 is a subset of roughly fifty of the most prominent crises in postwar U.S. foreign policy, organized by level of support for the use of force ranging from uniform opposition (CSS = -0.5) to uniform support (CSS = +0.5). The plot on the left shows both the overall Congressional Support Score and scores specific to political parties in Congress. Dark gray points indicate the overall score in Congress, while blue points represent sentiment among Democrats and red among Republicans.

Several crises have seen overwhelming opposition in Congress to the use of force, and hence little difference between parties. For example, while there existed debate in the legislature over U.S. support for the Saudi war effort in Yemen in the late 2010s, there was a consensus that *American* forces should not be utilized in the conflict (Tama 2023). Similarly, while George W. Bush considered striking Syria in 2007 (both due to its nascent nuclear weapons program and the route it served for foreign fighters pouring into Iraq) (Bush 2011), there was little support in Congress for this, as Democrats were firmly opposed and little support existed even among congressional Republicans. In other crises, the parties were similarly strong in their support for the use of force. For example, in the successive Berlin crises under Eisenhower and Kennedy, there was virtually no difference in party support for taking a strong stand in the face of Khrushchev's ultimatums. Similarly, the initial invasion of Afghanistan received enormous support from both Republicans and Democrats. Other actions evince a clear split in sentiment between Democrats and Republicans, however. For example, Bush's decision to "Surge" U.S. forces after the 2006 midterm elections received solid support among Republicans but strong opposition from Democrats.

The plot on the right in Figure A5, in contrast, again separates lawmakers by party but focuses on whether the president was of the same party or not (Howell & Pevehouse 2007). Dark gray points again indicate the overall score in Congress, while light gray points correspond to lawmakers of the same party as the president and purple points represent lawmakers in the opposition party. While copartisans seem to give more support for the use of force than non-copartisans, there are clear counterexamples to this. For example, support for Obama's Surge in Afghanistan announced



Figure A5: Examples of Crises—Overall Congressional Support Score (Hand-Labeled), and Party Breakdown

in late 2009 saw much stronger support among Republicans than among Democrats (Woodward 2010). Non-copartisans can also attack a president for omitting to act. Republicans famously attacked the Truman administration for the Nationalist failure in the Chinese Civil War and waged a campaign asking "Who lost China?" And while Democrats for the most part supported the Obama administration's anti-ISIS campaign launched in the second half of 2014, congressional Republicans pushed the intervention much more forcefully (taking the president to task for calling the group the "J.V. Team", and resisting Democratic efforts to pass a use of force resolution that would have seemingly limited the president's powers in the conflict).

More common, however, is copartisan support for the use of military force and attacks from noncopartisans (Howell & Pevehouse 2007). President Clinton, for example, encountered stiff opposition from congressional Republicans toward interventions after the infamous Battle of Mogadishu a sentiment manifesting in GOP opposition to intervening to stop the Rwandan Genocide in 1994, the occupation of Haiti later that same year, and the deployment of several thousand U.S. peacekeepers to Bosnia at the end of 1995 (Clinton 2005). Only a few years before in the "Tanker War" in the Persian Gulf during the late 1980s, copartisan Republicans had, for the most part, supported the Reagan Administration's re-flagging and escort of Kuwaiti oil tankers while Democrats had shown significant opposition to the move. More recently, Republicans strongly supported President Trump's "maximum pressure" campaign against Iran—including his risky targeted killing of Iranian General Qasem Soleimani in early 2020—while Democrats opposed starting a war with Iran.

## Validation

While the plots and accompanying narrative above provide some face validity to the scores, there are obvious concerns about how accurate a measure of congressional sentiment this method might actually produce. Several drawbacks clearly make this method imperfect: in the hand-labeled version, speeches from less than 10% of congressional members are even considered; speeches from Senators are disproportionately represented in the sample; many members of Congress give no relevant speech at all. Validation is thus key to increasing our confidence in the ability of this

method to sufficiently measure congressional sentiment over the use of military force. Two strategies of validation are presented here: first, a test of face validity is presented by comparing Congressional Support Scores taken during successive "crises" in the Vietnam War with floor votes and public opinion polls during the conflict. Second, a more systematic test of the scores is presented by comparing them to more than sixty roll call votes and public opinion polls related to the use of military force in crises since World War II. The evidence presented suggests that Congressional Support Scores adequately capture congressional sentiment in these crises, and far outperform any available alternative measurement, including proxies commonly utilized in the literature.

#### The Vietnam War

Examining the Congressional Support Score data in the context of the Vietnam War is useful because the well-known experience in Vietnam provides a helpful background context against which to test the validity of the measurement technique. Depicted on the plot below are the calculated Congressional Support Scores over a series of crises ranging from the 1964 Gulf of Tonkin incident to the signing of the Paris Peace Accords in January 1973 and the passage of the Cooper-Church Amendment in the summer of 1973 prohibiting the use of the American military in Southeast Asia. The solid line represents the Congressional Support Scores yielded in these successive crises. The overall trend is familiar: support for the war was high at the beginning of the conflict, and gradually dropped until the end of the war in 1973. As is well-recognized, the drop from aggregate support to opposition occurs around the Tet Offensive in 1968 (Rusk, Rusk & Papp 1991).

As a test of convergent validity, the estimated Congressional Support Scores are plotted in comparison to measures of public support for the war. Specifically, this data comes from a series of Gallup polls taken from 1965 to 1973 (twenty-three in total) asking respondents "In view of the developments since we entered the fighting in Vietnam, do you think the U.S. made a mistake sending troops to fight in Vietnam?"<sup>42</sup> This particular times series data has been utilized widely in the literature examining public support for the Vietnam War (Gelb & Betts 2016, Lunch &

<sup>&</sup>lt;sup>42</sup>Gallup. 2000. "Americans Look Back at Vietnam War." Gallup.com. https://news.gallup.com/poll/2299/Americans-Look-Back-Vietnam-War.aspx.

Sperlich 1979, e.g.).<sup>43</sup>



Figure A6: Congressional Support Scores Compared to Gallup Polls of Public Support

As can be seen from the plot, the two trend lines closely follow each other. While support in the public at the beginning of the Americanization of the conflict in 1965 was relatively higher (around 75%), this gradually faded over time. By the end of American involvement in the conflict in 1973, support had dropped to around 25%. This closely follows the trend illustrated by the Congressional Support Scores, and thus suggests the calculated proxy for sentiment among legislators is performing as expected.

Another test of face validity is to compare the Congressional Support Scores to vote shares in Congress for key votes during the Vietnam War. Plotted below are, again, the Congressional Support Score estimates—with the general trend in dark gray and estimates separated by party in red (Republicans) and blue (Democrats). Key votes are shown as black dots. These votes included the most prominent resolutions passed in the conflict, including the 1964 Gulf of Tonkin Resolution, a 1965 defense supplemental specifically used by the administration as a proxy for congressional support, votes on the Cooper-Church Amendment after the Cambodian Incursion in the spring of 1970, the Mansfield Amendment passed by the Senate in 1971, and votes in both Houses on the 1973 Case-Church Amendment that finally cut off all funding for operations in Southeast Asia by

 $<sup>^{43}</sup>$ Just as the Congressional Support Score metric is calculated by dividing positive sentiment by all sentiment expressed (positive or negative), the public support metric plotted here is calculated by dividing the number of respondents who disagreed that the Vietnam War was a mistake (i.e., those who supported the war) by all respondents who either agreed or disagreed with the statement.

U.S. forces.<sup>44</sup> Like public opinion, we would expect a fair measure of congressional sentiment to vary alongside use-of-force vote shares.



Figure A7: Congressional Support Scores Compared to Key Votes

Similar to the public opinion data, the vote shares supporting the war in Vietnam start quite high but decline sharply over time. The trend shown by the Congressional Support Score data closely follows this. Note that while the point estimates do not perfectly align—for example, vote shares seem consistently higher than the Congressional Support Score yielded in the first three years of the war—it is not necessarily the case that this reflects "error" in the Congressional Support Score estimates. Instead, there is a strong argument that the Congressional Support Score estimates potentially better reflect congressional sentiment than the vote share data. Specifically, it is well-recognized in the historiography of the Vietnam War that many of those lawmakers who voted in favor of the Gulf of Tonkin Resolution in August 1964 had serious reservations about getting involved in a war in Southeast Asia (Gibbons 2014). This lack of uniform support for the war is much better captured by the Congressional Support Score data than by looking at simple vote shares, because the speech data utilized to estimates these scores takes account of reservations expressed by speakers. Thus, while merely looking at vote shares—especially at the beginning of the war—paints a misleadingly high picture of congressional sentiment of the war, the Congressional Support Scores arguably more accurately capture the feelings in Congress at the time.

<sup>&</sup>lt;sup>44</sup>Two other key votes identified by Congressional Quarterly Almanac—rejections of proposals in 1966 and 1967 to repeal the Gulf of Tonkin Resolution and to ban the use of force in North Vietnam, respectively—are also included.

The Congressional Support Score estimates, moreover, closely follow the vote shares exhibited in key votes later in the war, including votes on the 1970 Cooper-Church amendment to ban the use of American ground forces in Cambodia and the 1971 Mansfield Amendment passed by the Senate—a nonbinding but high-profile vote declaring it to be the policy of the United States to "terminate at the earliest practicable date all U.S. military operations" in Southeast Asia. The 1973 Case-Church Amendment formally barred all funding of U.S. military operations in Vietnam, and its overwhelming passage corresponds closely to the highly negative sentiment expressed in Congress toward the use of force at the time.

The party trend lines, as well, conform to the conventional wisdom of the conflict: the parties were relatively similar in their support for the conflict (with hawkish Republicans supporting the war under Lyndon Johnson) until Richard Nixon came into office. At this point, support from Democrats quickly evaporated as the lack of a copartisan in office allowed them to return to their more dovish predispositions and call for an end to the conflict.<sup>45</sup> Republicans, in contrast, stayed more supportive of the war as a fellow Republican now occupied the White House. Thus, we see a large divergence between Republicans and Democrats between 1970 and 1972. Republicans were, on balance, supportive of the 1970 Cambodian Incursion while Democrats opposed it, for example. By 1973 and the signing of the Paris Peace Accords, however, members of both parties were highly opposed to American reintervention in the conflict (Kissinger 2011*b*).

## Systematic Tests: Votes and Polls

The underlying benchmarks utilized in the Vietnam example—roll call votes and public opinion polls—can also be utilized more systemically across the crises in the dataset. As noted, roll call votes are relatively rare. Although there are approximately 67 roll call votes related to the use of force in the postwar period, this includes both houses of Congress and covers only around 20% of all crises. Separately, public opinion polls were identified for 67 of the crises (35% of the dataset). The Congressional Support Score data and alternative proxies one might consider for congressional

<sup>&</sup>lt;sup>45</sup>Senator Robert Kennedy—seen as the likely Democratic nominee for president in 1968 before his assassination the same year—was highly critical of the Johnson Administration's war effort, and Senator George McGovern—the 1972 presidential nominee for the party—was a long critic of the Vietnam War.

sentiment toward the use of force are then tested against these benchmarks.

### **Use-of-Force Votes**

First, a way to more systematically "test" how well this approach works is to compare the Congressional Support Score yielded by the speech data to the roll call votes we do have regarding use of military force decisions. The performance of these scores in predicting vote outcomes can then be examined both in an absolute sense and in relation to other commonly used measures.

Each of the plots in Figure A8, below, plots on the X-axis the percentage of lawmakers in favor of the use of force in sixty-seven roll call votes in postwar crises. The votes include, for example, authorizations for the use of military force in the early Cold War (Formosa, the Middle East, Cuba, and Southeast Asia), and more recent AUMFs such as those passed prior to the Gulf War and the 2001 and 2002 AUMFs. Also included are prominent votes against the use of force, such as the 1973 Case-Church Amendment banning the use of military force in Southeast Asia.<sup>46</sup>

The Y-axis for each of the nine figures, in contrast, varies and consists of different possible metrics used as a proxy for congressional support for the use of military force. An optimally performing measure of congressional support would (theoretically) provide a trend line from the bottom left of the square to the top right (represented by the blue dashed line in each plot), with observations close to the line. Given the continuous nature of the variables on each plot, ordinary least squares regression is used to determine how well each measure predicts use of force vote share. A black trend line for the observations is shown in each figure, and a simple R-squared metric is presented below each plot. The R-squared is a useful measure of how well each variable performs as a proxy for congressional support.

The first plot in the upper left corner shows how well the hand-labeled "Congressional Support Scores" from the speech data predict vote share in these key war votes. While predictions are imperfect,<sup>47</sup> the R-squared of 0.61 is relatively high. The black trend line is quite close to the blue

<sup>&</sup>lt;sup>46</sup>For resolutions opposing the use of force, the votes shares are, of course, "flipped".

<sup>&</sup>lt;sup>47</sup>Note, however, that even when the sentiment score does not closely match the vote share, it is not necessarily the case that the sentiment score is the metric missing the true congressional opinion at the time. For example, it is well understood that several of the members of Congress who voted in favor of the 1964 Gulf of Tonkin Resolution had serious reservations. The congressional support score shows this, while the actual vote does not.



Figure A8: Performance of Competing Measures in Predicting Use of Military Force Votes

dashed line representing a "perfect" trend line, and the observations are relatively close to the line.

The second plot similarly utilizes the Congressional Support Scores, but using the speech labels given by GPT-3.5 instead of the human coders. Note, again, that while hand-labeling was limited (due to the enormous resource cost of human labeling) to speeches by foreign policy leaders in Congress, here speeches from all members of Congress have been considered. Members outside the elite group of foreign policy leaders might have less influence over foreign policy, but given their sheer numbers, it is not inconceivable that their opinions could alter the findings presented (ultimately, they do not). This measure performs well—indeed it has a slightly higher R-squared than the hand-labeled measure. The trend line, however, suggests the measure consistently predicts lowerthan-actual congressional support (the black trend line is below the blue line), and there appears to be heteroscedasticity in the data. Regardless, the GPT measure, like the hand-labeled measure, performs well overall. Most importantly, both of these Congressional Support Score measures from the speech data clearly outperform each of the potential competitors when examining either the plot or the R-squared.

The third plot (top right) utilizes the predicted sentiment of speeches from the popular "sentimentr" package in R. This utilizes a standard dictionary method to create an overall polarity score for a speech based on positive-sentiment and negative-sentiment words and phrases. Standard sentiment packages and dictionaries such as these have a difficult time deciphering support and opposition to the use of military force because politicians advocating for military action often do not utilize "happy" words. This proxy performs far worse than the first two, with a much lower R-squared (0.17). Others have utilized custom dictionaries to good effect in the use of force context (McManus 2017), but for a different purpose. McManus uses the dictionary method to measure statements of resolve from presidents by utilizing both a customized dictionary from prior work (Wood 2012) and additional terms added for her specific purpose. The major difference between presidential rhetoric and congressional speech, however, is that presidents in a crisis tend to avoid conveying a lack of resolve publicly—regardless of their private thoughts or intentions (Fearon 1995). Thus, because the rhetoric tends to only go in one direction, McManus can reasonably argue that the word "fail" will much more likely be used by the president to say "we will not fail" than "we will fail" (McManus 2017, pg. 211).<sup>48</sup> Members of Congress, on the other hand, are much more willing to speak out against the use of force. The word "fail" in a congressional speech could very well be used in a context conveying opposition to the use of force. It is partially for this reason that others have recently argued that dictionary methods are not well suited to determining policy prescriptions in speech data (Schub 2022).

Foreign policy ideal point estimates from Jeong are tested in the next figure (middle row, left) (Jeong 2018, Jeong & Quirk 2019). These scores are available for each member of Congress from 1945-2010, and are intended to represent the hawkishness or dovishness of each member. The median score can be used to represent the hawkishness of the Congress as a whole, and thus plausibly represent congressional support for the use of military force in a crisis occurring during that congressional session. This measure turns out to be a poor proxy, however. Not only is the R-squared quite modest—at 10% compared with the 61% yielded by the speech data—but the predicted relationship is actually in the wrong direction. Here, the more "hawkish" Congresses are predicted to be more opposed to the use of force.

A series of other off-the-shelf metrics are similarly tested, including presidential support scores (Lewis, Poole, Rosenthal, Boche, Rudkin & Sonnet 2022), and NOMINATE dimensions 1 and 2 (Lewis et al. 2022).<sup>49</sup> Of these, presidential support scores perform the best, yielding an  $R^2$  of 0.29, and in the correct direction. Nominate Dimension 1, however, exhibits little relationship with supporting the use of force in these key war votes, while Dimension 2 yields an  $R^2$  of only 0.13. Again, the Congressional Support Score estimates from the speech data thus yield a better proxy of vote share in actual use of force votes than any of these possible alternatives.

Lastly, we consider two key metrics that have been used in the political science literature as deliberate proxies for congressional support for the use of force. The first is the partian composition of Congress, in terms of Democrats vs. Republicans. The theory behind this measure is that Republican members of Congress have a reputation for being more hawkish than their counterparts across the aisle.<sup>50</sup> Arguably, using the percentage of Congress made up of Republicans can be

<sup>&</sup>lt;sup>48</sup> "For example, presidents often say, 'we will not fail,' but almost never say, 'We will fail.' Therefore, 'fail' is considered to be a word associated with resolve," (McManus 2017, pg. 211).

<sup>&</sup>lt;sup>49</sup>Again, the median scores for Congress as a whole at that time are utilized.

<sup>&</sup>lt;sup>50</sup>As but one example, consider the Afghanistan "surge" early in the Obama Administration. Obama anticipated

viewed as a proxy for how supportive Congress is for the use of military force (McManus 2017). Interestingly, however, with an  $R^2$  of 0.03 (and in the wrong direction), the partisan composition of Congress seems to exhibit little relationship with congressional support for the use of force revealed in roll call votes. Others have recently noted that while Democrats have a reputation of being more dovish than their Republican counterparts, the actual empirical evidence of this claim is limited (Kertzer, Brooks & Brooks 2021).

Second, others have focused not on the absolute partian composition of Congress, but instead on the amount of copartians a president has on the Hill (Howell & Pevehouse 2007, Kriner 2010).<sup>51</sup> Howell and Pevehouse find that a larger number of copartians in Congress predicts an increased likelihood of initiating major uses of force in the postwar period (2007).<sup>52</sup> Kriner similarly finds that the duration of American uses of force are predicted by the percent of the legislature composed of lawmakers in the president's party (2010). The proportion of Congress made up of presidential copartians does yield a positive relationship with the support shown for the use of force in roll call votes, and this measure seemingly outperforms each of its off-the-shelf competitors. Nevertheless, with an  $R^2$  of 0.29 this still leaves much of the variance unexplained and suffers from many of the drawbacks highlighted above.

## **Public Opinion Polls**

A similar test of performance can be undertaken by comparing the potential proxies to public support polls taken during the crises. While congressional sentiment need not necessarily align with that in the public at large, institutional incentives for lawmakers to follow the desires of constituents (Mayhew 1974, Canes-Wrone, Brady & Cogan 2002)—and, conversely, the ability of lawmakers to shape public opinion (Christenson & Kriner 2020)—mean that the two measures should correlate.

The plots below test the same nine proxies for their performance in predicting public support

<sup>&</sup>quot;There won't be universal applause on Capitol Hill", because "Everyone knew that the Democrats were going to be the biggest naysayers, and the Republicans the biggest supporters," (Woodward 2010, pg. 326).

<sup>&</sup>lt;sup>51</sup>Recent research suggests both copartisanship with the president and Republican Party identification separately predict support for the use of force by members of Congress (Böller 2021).

 $<sup>^{52}</sup>$ Gowa, however, finds no relationship between divided government and proclivity to use military force (Gowa 1998).

for military intervention in each of sixty-seven crises, ranging from the 1948 Berlin Airlift to the 2022 crisis in Ukraine. Note that while some of these crises are also covered by the roll call votes explored above, the majority are not. Thus, this is a substantially different test of performance than that analyzed above.



Figure A9: Performance of Competing Measures in Predicting Public Support for the Use of Military Force

In general, each of the proxies has a more difficult time predicting public opinion than congressional roll call votes—although this is not surprising given that congressional sentiment need not perfectly align with popular sentiment, and roll call votes would thus likely be a better proxy than public opinion polls. Nevertheless, the relative performance of each of the nine proxies reflects a pattern similar to the prior figure: the Congressional Support Scores far outperform any of the potential other measures.

The scores derived from the hand-labeled data of foreign policy leaders in Congress yield an R-squared of 0.53, while those yielded by GPT-3.5 predicted labels exhibit a similar performance with an R-squared of 0.42. Of the other seven measures, none yields an R-squared above 0.03. In other words, none of the other proxies exhibits any meaningful relationship with public support for the use of force in postwar crises.

In sum, each of the potential off-the-shelf proxies for congressional support for the use of force is substantially outperformed by the scores derived from the speech data—regardless of whether we use roll call votes or public opinion polls as our baseline to measure proxy performance. While these "Congressional Support Scores" are imperfect, they are far better than any other measure currently available. Because those scores yielded by simply utilizing the hand-labeled speeches demonstrate the best performance in predicting public opinion and similar performance predicting vote share,<sup>53</sup> these are utilized in the main text and the analysis below. Analyses were rerun utilizing the scores yielded by the GPT-3.5 labels and were found to be very similar.

 $<sup>^{53}</sup>$ While the R-squared for the GPT-labeled measure is slightly higher when predicting vote share, the trend line consistently under-estimates congressional support and there appears to be heteroscedasticity in the data. Hence, it is unclear whether the hand-labeled or GPT-labeled measures are better performing on predicting vote share, while the hand-labeled data clearly outperforms the GPT-labeled data in predicting public opinion.

# Appendix III: Positive Cases—Military Force Utilized

Crisis	Formal	Hand-	GPT-	U.S.	Qualitative Evidence
	Auth.	$\mathbf{coded}$	3.5	Combat	
				Fatalities	
Berlin Blockade	No	0.30	0.30	No Combat	Strong bipartisan support (Haas 2016,
(1948)					pg. 225).
Korea (1950)	No	0.32	0.42	1000+	Strong bipartisan support (Schlesinger
					1973, Beschloss 2018, Acheson 1969).
7th Fleet Taiwan	No	0.33	0.33	No Combat	Strong bipartisan support (Digest of
Strait (1950)					Congressional attitude on U.S. defend-
					ing Taiwan. White House, 1954. U.S.
T 1	V	0.19	0.00	0	Declassified Documents Online).
Lebanon	res	0.13	0.08	0	Generally lavorable to Lebanon land-
Intervention (1958)					1065 pm 271, EDUC 1058 1060
					1905, pg. 271; FRUS, 1958–1900,
					124 222)
Cuban Missiles	Ves	0.39	0.43	1-5	Strong bipartisan support even push-
(1962)	105	0.00	0.10	10	ing for stronger action (Zelizer 2009).
Vietnam (1964)	Yes	0.25	0.28	1000+	Significant Bipartisan Support though
		0.20	0.20		1967 (Gibbons 1995, McNamara &
					VanDeMark 1996).
Dominican	No	0.10	0.37	0	Significant Bipartisan Support—House
Intervention (1965)					passes Selden Resolution 312-52 (CQ
					Almanac, U.S. Troops Sent to Domini-
					can Republic 1965, Johnson 1971).
Mayaguez (1975)	No	0.28	0.29	6 to 25	Generally favorable to limited rescue
					operation (CQ Almanac Last Vietnam
					Aid Bill Dies in House 1975).
US Hostages In	No	0.04	0.40	6  to  25	Significant Bipartisan Support for Ac-
Iran (1979)	27		0.10		tion (Brzezinski 1985, pg. 489).
Gulf of Syrte I	No	0.00	0.10	0	Unexpected air combat. FONOP
(1981)					And Self-Defense well supported (e.g.,
					Carter Administration conducted
Lahaman (1092)	Vag	0.16	0.02	101 to 250	FONOPS in the area).
Lebanon (1965)	res	0.10	0.05	101 to 250	split support, but Reagan realized
					therization (Roogan 2000) Admin
					istration secures formal authorization
					from Congress before barracks bombing
					incident
Invasion Of	No	0.10	0.10	6 to 25	Supported anticipated due to rescuing
Grenada (1983)		0.20	0.20		of Americans. Ex post, widespread
					bipartisan support. Democratic-led
					congressional fact-finding mission sup-
					ports invasion (CQ Almanac Invasion
					of Grenada 1983).

Gulf Of Syrte II (1986)	No	0.10	0.18	1-5	Bipartisan support ex ante, given links to terrorist activity (CQ Almanac Clashes With Libra Burger Wey P
					clashes with Libya Renew War Pow- ers Debate 1986).
Reflagging Kuwaiti	No	0.11	-0.04	Operations	Reflagging plan originally tolerated,
Tankers (1987)				Preying	but friendly fire incident against USS
				Mantis and	Stark (separate from, and prior to,
				Nimble	reflagging operation) creates congres-
				Archer: 0	dor international reputational pressure
					goes ahead anyway. Both major com-
					bat engagements (Nimble Archer and
					Preving Mantis) well supported by
					Congress ex ante (CQ Almanac Persian
					Gulf Escorts Continue, Despite Debate
					1988).
Libyan Jets (1988)	No	0.00	0.30	0	FONOP and self-defense well sup-
					ported. Ex post praise.
Invasion Of	No	0.26	0.16	6 to 25	Majority pressure in Congress on White
Panama (1989)					House ex ante to intervene (Bush ac-
					cused of being a "wimp") (Howell &
					Pevenouse 2007, Powell 1995 at 419-
					20, CQ Amanac U.S. Invasion Ousis Danama'a Noricaa 1080)
Gulf War (1991)	Ves	0.14	0.12	101 to 250	Overwhelming congressional support to
	105	0.14	0.12	101 00 200	defend Saudi Arabia and punish Iraq
					Support among Democrats decreases
					enormously in the late fall as plans
					move to liberate Kuwait. Bush secures
					formal authorization from Congress
					three days before launching Operation
					Desert Storm (Woodward 1991, Bush
					& Scowcroft 1999, CQ Almanac 1991
					Begins With War in the Mideast 1991).
Somalia (1992)	No	0.21	0.14	6 to 25	Strong support in Congress for inter-
					vention in last six months of Bush ad-
					ministration. Both nouses of Congress
					mat but hills never reconciled (CO Al-
					manac Hill Demands Early '9/ Soma-
					lia Withdrawal 1993).
Iraq No-Fly Zone	No	0.20	0.10	0	Strong bipartisan support for Contin-
(1992)					ued hard line-including limited military
					force-against Iraq. (CQ Almanac Sad-
					dam's Staying Power 1992).
GHWB	No	0.30	0.40	0	Strong bipartisan support (CQ Al-
Assassination					manac Persian Gulf War Has Linger-
Attempt (1993)					ing Aftermath 1993).

Haiti Mil. Regime (1994)	No	-0.22	-0.42	No Combat	Significant bipartisan opposition (CQ Almanac <i>Clinton's Haiti Gamble Pays</i> <i>Off</i> 1994 Clinton 2005)
Bosnia (1992-95)	No	-0.03	-0.04	Airstrikes: 0/ Troop Deployment post-Dayton: No Combat	Support for airstrikes but resistance to ground forces 1992-95 (CQ Almanac Hill Supports Use of Force To Aid 1992, Administration Struggles With Bosnia Policy 1993, Bosnian War Re- mains Intractable 1994, Bosnian War Sparks Conflict at Home 1995). Note that 20,000 troop deployment is post- conflict.
Desert Strike (1996)	No	0.10	0.20	0	Strong support for tough line against Iraq (CQ Almanac Export Controls, Drug Trafficking, and Military Inter- vention Influence Foreign Policy Legis- lation 1996).
US Embassy Bombings (1998)	No	0.00	0.10	0	Overwhelming support in Congress with several leading Republicans calling for tougher action ( <i>NY Times</i> 1998).
Unscom II (1998)	No	0.13	0.28	0	Broad support. Iraq Liberation Act passed overwhelmingly two months prior. Some Republicans argued that attack was to deflect from impeachment vote but otherwise advocated for more hawkish policies ( <i>NY Times</i> 1998).
Kosovo (1999)	No	0.05	-0.02	0	Majority support in Congress with sev- eral leading Republicans calling for tougher action. Senate votes to autho- rize use of military force, while resolu- tion fails on tie vote in House. House, nevertheless, overwhelmingly approves ground deployment (CQ Almanac Law- makers Conflicted Over U.S. Involve- ment in Kosovo Peacekeeping Effort 1999).
Afghanistan (2001)	Yes	0.46	0.48	1000+	Near unanimous support, 2001 AUMF passed.
Iraq (2003)	Yes	0.29	0.13	1000+	2002 Iraq AUMF passed with substan- tial Democratic support.
Libyan Civil War (2011)	No	0.20	0.00	0	Moderate support. Senate unani- mously passes resolution calling for no- fly zone. Significant support in House as well (Kenealy 2022, Gates 2015, pg. 519).
ISIS (2014)	No	0.16	0.28	6 to 25	Strong support for airstrikes; weak support for reintroduction of ground troops (CQ Almanac <i>Iraq, Syria Policy: Cash and Wary</i> 2014).

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# Appendix IV: Negative Cases—Congressional Support Insufficient

Crisis	Hand-	GPT-3.5	Qualitative Evidence of Congressional Oppo-
	coded		sition Constraining Presidential Decision
Dien Bien Phu (1954)	0.06	-0.22	Eisenhower reluctant to intervene absent approval
			from Congress, but Congress refuses to authorize
			(Fisher 2013, Prados 2002, Logevall 2013).
Second Taiwan Strait	0.20	-0.33	Military and Chinese Nationalists strongly push for
(1958)			declaration that offshore islands will be defended,
			but administration refuses due to opposition in
			Congress (Halperin 1966).
Laos $(1961-62)$	0.38	-0.21	Clear opposition to ground intervention (Rust 2014,
			Schlesinger 2002 at 339). Such opposition "the de-
			ciding factor as far as the President was concerned,"
			(Ball 1968, pg. 2).
Six Day War (1967)	0.06	0.15	Johnson desires to intervene but unwilling to do
			so absent formal approval congressional authoriza-
			tion, and cannot get due to "Tonkinitis" (FRUS
			1964-1968, Volume XIX, Arab-Israeli Crisis and $1067$ D $1067$ D $1061$
D 11 (1000)	0.02	0.10	War, 1967, Doc 48, Jonnson 1971, Rusk 1991).
Pueblo (1968)	0.03	0.16	Johnson reluctant to intervene without Congres-
			Sional authorization—advisers and former President
			Elsennower agree ( $FRUS$ , 1904–1908, volume XAIX, Dant 1, Konga, Daga 217, 225, 228, 220)
EC 191 Spy Dlana	0.00	0.10	Part 1, Korea, Docs 217, 225, 228, 259).
EC-121 Spy Plane (1060)	0.00	0.19	no response because of expected congressional and popular resistance (Kissinger 2011a at 413 Nivon
(1909)			1990 at 385).
Bangladesh (1971)	-0.50	-0.36	Congressional opinion against helping Pakistan
			(Kissinger $2011a$ ). Show of force (carrier to Indian
			Ocean) while Congress out of session (Blechman &
			Kaplan 1978).
Post-Paris	-0.35	-0.41	Congress highly opposed to re-intervention against
Enforcement (1973)			North Vietnam (Kissinger $2011b$ ). White House
			seeks to enforce Paris Peace Agreement but unable
			to do so in face of overwhelming congressional resis-
			tance.
October-Yom Kippur	-0.13	-0.01	Congress opposed to U.S. ground intervention—"it
War (1973)			was clear none of these menwas enthusiastic about
			the prospect of a Mideast war'we want no more
			Vietnams'," (Nixon 1990, pg. 924).
Cyprus III (1974)	-0.50	-0.27	Congress highly opposed to intervention—"My con-
			sultations with Congressional leaders produced the
			unanimous advice that we should not get involved at
			all," (Kissinger 2011 <i>b</i> , pg. 1814).

Final N. Vietnam Off. (1974)	0.06	-0.37	Congress highly opposed to re-intervention against North Vietnam (Kissinger 2011 <i>b</i> ). Refuse to permit even evacuation of at-risk Vietnamese (Ford 1979). White House seeks to enforce Paris Peace Agreement but unable to do so in face of overwhelming congres- sional resistance (See also CQ Almanac Last Vietnam Aid Bill Dies in House 1975).
War In Angola (1975)	-0.50	-0.36	Clark Amendment bans even covert assistance in An- gola. Small, ineffective response due to lack of con- gressional support—active opposition expected and encountered (Kissinger 1999).
Ogaden II (1977-78)	0.00	0.00	Congressional opposition—even for mere weapons transfers—unless Somalia invaded by Cuban forces. "Close consultation with Congress would be essen- tial." Carter says "Congress would react with horror" at the prospect of American military help for Somalia but also that "he had no doubt about the reaction of the Congress if the Cubans invade in the face of So- viet and Ethiopian assurances," ( <i>FRUS</i> , 1977–1980, Volume XVII, Horn of Africa, Part 1, Docs 36 and 62).
Shaba I & II (1977-78)	-0.10	-0.40	Strong opposition—"Congress and the American people would not support direct U.S. military in- volvement" (Vance 1983 at pg. 92); Could not muster "sufficient congressional support" for "com- mitment of U.S. troops" (NSC-36). "Military actions denied to us by current legislation and sentiment on the Hill," (Draft responses to NSC-36). Carter states "his own hands had been tied by Congress," (Mitchell 2018, pg. 439).
El Salvador (1980's)	-0.29	-0.16	Widespread resistance to introduction of Americancombat troops—mixed support and opposition formilitary aid (CQ Almanac El Salvador Aid Approved— With Strings 1983).
Nicaragua (1980's)	-0.33	-0.12	Bipartisan consensus against sending troops. Mixed support on funding (Reagan 2011, Shultz 1993, Haig 1984, Howell & Pevehouse 2007).
Cuba (1981)	0.10	-0.11	Anticipated congressional opposition—Reagan: "How can we solve this problem with Congress and public opinion being what they are? We are talking about an impossible option," (NSC 24, Nov. 10, 1981).
Suriname (1983)	0.30	0.00	Congressional opposition anticipated, deterring ac- tion (Shultz 1993, Kengor & Doerner 2007).
Rwandan Genocide (1994)	-0.07	-0.11	Anticipated strong congressional opposition due to recent Somalia debacle, deterring action (Clinton 2005, pg. 593, William Perry Interview 2006).

Iran Nuclear II (2006)	-0.22	-0.17	Nuclear program, support for terrorism, direct aid to groups killing American soldiers in Iraq, and sanctu- aries across the border for such groups created strong push within the administration to conduct strikes into Iran. Strong resistance from Congress (espe- cially after 2007 NIE) forces Administration to aban- don plans for military action (Bush 2011, Woodward 2020, Gates 2015, Crist 2012).
Syria Chemical Weapons (2013)	-0.13	-0.23	Most in executive branch push for intervention, but Obama reluctant to do so without formal con- gressional authorization after experience of Libya (Kenealy 2022, Rhodes 2019, Rice 2019, Kerry 2019).
Yemen (2014-2022)	-0.39	-0.30	Intelligence and military support for Saudi Arabia started under Obama Administration and continued under Trump Administration. In 2019, Congress passed a resolution requiring removal of U.S. forces from hostilities in Yemen, but failed to override veto from the president. The administration, did, how- ever, stop the refueling of Saudi planes—its most di- rect military involvement and the activity that was creating the greatest congressional opposition.
Iran Tankers (2019)	-0.21	-0.24	Retaliation contemplated for Iran shoot-down of American drone. Hawkish Republicans push for re- taliation. Trump backs off at the last minute due to considerations of re-election and attitudes of lawyers and members of Congress ( <i>NY Times</i> "An Abrupt Move That Stunned Aides: Inside Trump's Aborted Attack on Iran" 2019).
Venezuela (2019)	-0.20	0.04	"Military force was not the answer, especially given the inevitable congressional opposition[M]ilitary force inside Venezuela was a non-starter" (Bolton 2020, pgs. 249, 274).

## Appendix V: Necessary Condition Analysis

Statistical methods are not appropriate for testing necessary conditions (Mahoney 2010, Dul 2015, Goertz 2017). The underlying additive model utilized in the quantitative (statistical) tradition of political science essentially assumes variables are sufficient conditions in degree, with each element of a statistical model having a (potential) independent effect on the outcome. In other words, low values for certain variables in the model can be compensated for by high values on other variables in the specification. A necessary condition, in contrast, implies something quite different: the absence of the necessary condition will prevent the outcome *regardless of the values of the other variables* (Dul 2015, Goertz & Mahoney 2012).

The "qualitative" tradition, in contrast, utilizes logic (set theory) that takes explicit consideration of necessary conditions (Goertz & Mahoney 2012, Goertz & Dul 2023). While qualitative comparative analysis would be appropriate if one were seeking to identify different causal pathways to the dependent variable, here the specific focus is on whether one specific variable—congressional support—is a necessary condition in all pathways (Dul, Vis & Goertz 2021). Political scientists have long recognized the relevance and potential importance of necessary conditions, but relatively few have analyzed them with data larger than small-N analyses (Braumoeller & Goertz 2000, Goertz & Starr 2003, Goertz & Dul 2023). Conflict scholars have perhaps given more attention to the concept than others.

Necessary condition analysis is a growing technique, although it is a relatively recently developed methodology (Dul 2015, Dul, Vis & Goertz 2021, Dul, van der Laan & Kuik 2020, Goertz, Hak & Dul 2013, Goertz & Dul 2023). Essentially, the technique attempts to identify a ceiling line for the data. A continuous necessary condition (i.e., a certain level of the outcome variable requires a certain level of the explanatory variable) will have a large empty space (often triangular) in the top left corner (see Figure 8 in the main text). That is precisely what we find when plotting Congressional Supports Scores versus the escalation level reached by the United States. The plot below utilizes Dul's NCA package in R (Dul 2022) to perform the necessary condition analysis (Dul 2016).

Note first the light gray line, which is the OLS line of the bivariate relationship. This is effectively



## Necessary Condition Analysis: Congressional Sentiment

Figure A10: Necessary Condition Analysis

what is analyzed in the quantitative section below: estimating the average effect an increase in congressional support has on the escalation level reached by the United States. Ultimately, however, this is actually not the line we are interested in. The theory presented in the main text suggested that the *maximum* amount of force a president would use would be limited by congressional support for the use of force. The bargaining model of war tells us that the possibility of a negotiated outcome short of war is often possible (Fearon 1995)—and perhaps even more likely than an actual resort to force. Thus, there is a substantial likelihood that in many cases the president need not actually utilize the full amount of force they were willing to use because they were able to acquire a negotiated deal. Because of this, our focus is on the maximum amount of force a president would be willing to utilize—not the average they do utilize.

Thus, the line we are more interested in is the "ceiling" line separating the empty space in the upper left corner from the data. Presented in the plot are the two most common ways to determine this barrier: the step function CE-FDH (Ceiling Envelopment – Free Disposal Hull) and the straight line CR-FDH (Ceiling Regression – Free Disposal Hull). The CE-FDH simply follows the maximum values of the outcome variable at successively larger levels of the explanatory variable. The CR-FDH basically tries to create a line separating observations from empty space by running an OLS line through the observations on the CE-FDH line. This line is then used to calculate the size of the "empty space", which can then be utilized to determine the effect size (and statistical significance) of the necessary condition. Regardless of the ceiling line utilized, the effect is large and significant at the .001 level. This suggests congressional support for the use of military force is a (very substantial) necessary condition for the level of force utilized.

## Spurious Relationship?

A major concern when utilizing the additive model of statistics is omitted variable bias, and thus one has to have a well-specified model with all relevant control variables before they can say with any confidence what the effect of the independent variable of interest is on the dependent variable. Because necessary conditions sit outside of the rest of the causal chain, omitted variable bias is not a concern (Goertz 2012, Dul 2015). It is, however, still theoretically possible that the suggested necessary condition relationship is spurious.<sup>54</sup> Specifically, this is possible if another variable (Z) were both sufficient for the independent variable of interest (the proposed necessary condition–X) and necessary for the dependent variable (Y) (Dul 2016, Mahoney 2007). Here, the most obvious proposed Z would be the magnitude of the threat faced by the United States. The logic of this argument would be something like the following: bigger threats lead to more congressional support, and are also met with more escalation and force by the United States. This then could lead to an observed association between congressional support and escalation level without any constraint causal mechanism actually operating between the two. This possibility can be tested both by seeing whether the level of a threat is a necessary condition for the escalation level observed, and also considering whether external threats are sufficient for congressional support.

### Is threat magnitude a necessary condition for escalation level?

There are two ways one could conceive of the magnitude of a threat: objectively (looking at, for example, adversary power or proximity) and subjectively (looking at how it was perceived from the administration's perspective). First, consider possible objective measures of threat. Two variables often believed to contribute to the concept of "threat" are power and proximity (Walt 1987). Both can be analyzed to see whether they meet the criteria of being necessary conditions for the outcome variable, utilizing the same method introduced above. Neither, however, turn out to be necessary conditions for the level of U.S. escalation—having very small, or zero, effect size and lacking statistical significance (as tested with the NCA R package (Dul 2022)).

More promising is the White House's subjective perception of threat. This is, of course, very difficult to measure, but it seems plausible that presidents would only risk American lives and resources in proportion to the importance of the foreign policy objective. For the sake of argument, let us assume that this subjective perception of threat in the eyes of the White House is a

<sup>&</sup>lt;sup>54</sup> "Observing a data pattern that is consistent with the causal hypothesis is not evidence of a causal connection. Hence, it is important that identified necessary conditions are theoretically justified, namely, that it is understood how X constrains Y and Y is constrained by X. Requirements for causal inference in empirical studies for building or testing necessary cause effect relations are the same as for any other type of cause-effect relation. For example, a necessary cause is more plausible if the cause precedes the outcome and is related to the outcome and if an observed outcome cannot be explained by another cause," (Dul 2016, pg. 33).
necessary condition for the escalation level reached. We then consider whether this is sufficient for congressional support.

# Is threat magnitude (as perceived by the White House) a sufficient condition for congressional support for the use of force?

Some might argue that an external threat to the United States will rather directly lead to a convergence in support. If this were the case, the size of the threat could conceivably be a sufficient condition for congressional support for the use of force, and the observed relationship between congressional support and escalation level could be spurious. Recent scholarship, however, suggests an external threat is *not* sufficient for congressional support for the use of force (Myrick 2021).

Another way to assess whether perceived threat is a sufficient condition for congressional support is to utilize a useful property of necessary and sufficient conditions: counterexamples can disprove a proposition. In this case, examples in which the White House perceived a major threat and yet Congress did not converge in its support for the use of force would eliminate the possibility that a subjectively perceived threat were sufficient for legislative support. Notably, there are *many* counter-examples. See Appendix IV, above, or Table 5 in the main text, for many such counterexamples.

These episodes—and others—suggest it is not uncommon for the executive and the legislature to have vastly different perceptions of threat magnitude and importance (consider, for example, the Reagan administration's efforts to intervene in Central America in the 1980s). Thus, a latent concept of threat, as perceived by the White House, is not a sufficient condition for congressional support. This would then eliminate the possibility that this potential Z variable was causing the apparent necessary condition relationship between congressional support and escalation level. Thus, with this potential confound eliminated as the source of the seeming necessary condition relationship—and with a strong theoretical reason to suspect congressional sentiment is limiting the amount of force a president is willing to utilize—we have a strong candidate for a necessary condition.

More directly, and perhaps most compellingly, we can look within the cases to examine whether

the constraint seems to be operating. In this case, we specifically look to see if presidents and their advisers actually feel constrained in their decision-making. See qualitative descriptions in Appendix IV, above, or Table 5 in the main text. Here, the evidence is clear: decision-makers perceive congressional sentiment (and, for the largest uses of force, formal authorization) as a strong constraint on their room for maneuver. When facing congressional opposition to the use of force, they often describe certain courses of action as politically infeasible or impossible: options theoretically available to the White House are frequently avoided due to insufficient support from lawmakers (See Appendix IV, above, and [citation removed]). Overall, the evidence is consistent with the theory presented here and highly inconsistent with the widespread belief of an imperial presidency unconstrained by Congress.

# Appendix VI: Multivariate Analysis

Multivariate statistical models similarly suggest a strong relationship between congressional support for the use of military force and a president's willingness to actually engage in combat. While statistical models are not well suited to testing for a necessary condition (instead, they attempt to measure an average treatment effect),<sup>55</sup> political scientists nonetheless frequently utilize them to do so.<sup>56</sup> Indeed, necessary conditions often create problems for statistical models because they can create separation in the data (Goertz 2012). However, the purpose of the analysis below is to show that there is a strong relationship between congressional sentiment and the size of force utilized, even after controlling for a slew of potential confounds.

Below, Tables A8 (ordered probit) and A9 (OLS) present a series of regressions utilizing robust standard errors in order to account for heteroskedasticity in the data. The unit of observation is the crisis-dyad.<sup>57</sup>

### Dependent Variable

Here, the dependent variable is the level of U.S. involvement in the crisis. This attempts to measure the scale of force undertaken or risked by the United States—e.g., amount of fatalities the U.S. has incurred or risks incurring in a crisis. Codings from the International Crisis Behavior events (ICBe) dataset (Douglass et al. 2024) were examined to determine the most escalatory action undertaken by the United States in the course of the crisis (note that this is the same variable displayed on the Y-axis of Figure 9 in the main text). This was coded on a 15-point ordinal scale as follows:

- 1. No military action taken (e.g., mere diplomatic protest)
- 2. Aid or sanctions utilized
- 3. Threats absent deployments
- 4. Show of force or military exercise
- 5. Military advisors outside of combat

 $<sup>^{55}</sup>$ It is entirely possible to in reality have a strong necessary condition and yet a find no average treatment effect when running a statistical model (Goertz, Hak & Dul 2013).

<sup>&</sup>lt;sup>56</sup>Although it is technically incorrect to do so (Goertz 2017, pg. 117).

<sup>&</sup>lt;sup>57</sup>Thus, if the U.S. faces two adversaries in the same crisis, this will yield two separate observations. This follows, for example, McManus (2017). All tables were rerun utilizing individual crises as the unit of observation, and yield very similar results.

- 6. Uncontested military action (e.g., occupation without resistance)
- 7. 0 U.S. combat deaths
- 8. 1-5 U.S. combat deaths
- 9. 6-25 U.S. combat deaths
- 10. 26-50 U.S. combat deaths
- 11. 51-100 U.S. combat deaths
- 12. 101-250 U.S. combat deaths
- 13. 251-500 U.S. combat deaths
- 14. 501-1000 U.S. combat deaths
- 15. Over 1000 U.S. combat deaths

#### Independent Variables

<u>Congressional Sentiment</u>: As described above, the "congressional support score" is measured by dividing speeches in favor of the use of force by all speeches relevant to the use of force, in support or in opposition. In crises that saw U.S. forces engaged in combat, speeches are limited to those that occur before combat commences.<sup>58</sup>

<u>Congressional Copartisans</u>: The percentage of Congress made up of lawmakers of the same political party as the president, measured in the year the crisis is triggered (Howell & Pevehouse 2007).

**Congressional Republicans**: The percentage of Congress made up of Republican lawmakers, measured in the year the crisis is triggered (McManus 2017).

**Relative Capabilities**: In order to create an estimate of the proximate distribution of power (i.e., adjusted for distance), I simply divide a state's power by the distance<sup>59</sup> to the location of potential conflict. This is done in order to account for the loss-of-strength gradient (Boulding 1962).

$$Proximate \ Distribution \ of \ Power = \frac{\frac{State \ 1 \ CINC}{distance_1}}{\frac{State \ 1 \ CINC}{distance_1} + \frac{State \ 2 \ CINC}{distance_2}}$$
(81)

<sup>&</sup>lt;sup>58</sup>This is important, because information tends to be revealed once conflict begins (Baum & Potter 2008, Wagner 2000), and members of Congress could change their position as a certain outcome comes to look more likely. The tables below use the data yielded from the hand-labeled speeches. Tables rerun using scores estimated from GPT-3.5 yield even stronger findings.

<sup>&</sup>lt;sup>59</sup>Note the "distance" measured here is that between a state's capital and the location of potential conflict. It is not the distance between the two capitals and therefore differs for both states.

Note that accounting for the loss-of-strength gradient when measuring relative power greatly increases model fit. Nonetheless, models rerun using the more conventional measure of relative power (i.e.,  $\frac{State \ 1 \ CINC}{State \ 1 \ CINC \ + \ State \ 2 \ CINC}$ ) yield substantially similar results.<sup>60</sup> Note that when the primary U.S. adversary is a non-state actor (e.g., ISIS), a proxy CINC score is utilized based on a closely related state (for ISIS, Syria), as noted in the dataset.<sup>61</sup>

<u>Year</u>: To account for possible trends over time, the starting year of the crisis is included.

**Political Polarization**: Political polarization in Congress is measured by taking the difference in party mean ideological ideal points. Specifically, this consists of the distance between NOMINATE Dimension 1 averages for each party (Lewis et al. 2022). This is calculated for each chamber of Congress separately, so the average of House and Senate polarization is utilized.

**Presidential Approval**: Percent of Americans approving of the president's job performance in the Gallup Poll most proximate to the date the crisis is triggered.

Unemployment Rate: Monthly unemployment rate from U.S. Bureau of Labor Statistics.

<u>Cold War</u>: Following Howell and Pevehouse (2007), a dummy variable for crises occurring prior to 1990.

**U.S.** to Crisis Distance: Distance between Washington, D.C. and the location of the crisis.

<u>Concurrent War</u>: Dummy variable with a value of "1" if the crisis takes place at the same time as a major war for the United States. This includes crises occurring contemporaneous to the Korean, Vietnam, Gulf, Afghan, and Iraq Wars.<sup>62</sup>

<u>Crisis Part of Continuing War</u>: Dummy variable with a value of "1" if the crisis takes place as part of a continuing major war for the United States. For the purposes of the ICB dataset utilized here, this only applies to crises in the Korean and Vietnam Wars that took place after the initial North Korean invasion of South Korea and the Gulf of Tonkin incident, respectively. As a robustness check, these cases can also simply be dropped from the dataset—in which case similar results are still found.

 $<sup>^{60}</sup>$ One can also use log(distance) instead of raw distance in calculating the proximate distribution of power. Again, this still yields substantially similar results.

<sup>&</sup>lt;sup>61</sup>Similar overall results are yielded when dropping observations in which a non-state actor was the primary U.S. adversary.

<sup>&</sup>lt;sup>62</sup>Ending with the final pullout of U.S. forces from Iraq in December 2011.

Lastly, because the U.S. response could vary based upon the characteristics of the individual president, some models control for a triad of leader characteristics:

**Leader Willingness to Use Force**: President's willingness to use force as estimated by Carter and Smith (2020). M2 utilized as authors note this is their best performing model.

<u>Party of the President</u>: Several authors have suggested that Republicans are more hawkish than Democrats, or more generally that right-wing leaders are more belligerent than their counterparts on the left (Yarhi-Milo 2018, Bertoli, Dafoe & Trager 2019). Thus, a dummy variable representing the party of the president is included (1 = Republican, 0 = Democrat).

<u>High Self Monitor</u>: Yarhi-Milo argues high-self monitors are more disposed to use force than low-self monitors (2018). Therefore, a dummy variable is included for presidents Yarhi-Milo codes as high self-monitors.

## Results

The results are displayed in Tables A8 (ordered probit) and A9 (OLS). A total of eight models are presented. The models differ in the measure utilized as a proxy for congressional support or opposition to the use of force, and in regard to whether leader characteristics are included. Three different measures of congressional support for the use of military force are considered. First, informal congressional sentiment from the Congressional Record (i.e., the Congressional Support Score for this crisis, described above) is used in Models 1a and 1b ("Cong. Sent."). Second, following Howell and Pevehouse (2007) and Kriner (2010), one can use the percent of Congress consisting of copartisans of the president as a proxy for congressional support. This is used in Models 2a and 2b ("Copartisans"). Third, following McManus (2017), one can utilize the percent of Congress made up of Republicans—the idea being that Republicans tend to be more hawkish than Democrats. This is used in Models 3a and 3b ("Republicans"). Lastly, all of these measures can be included. This is the case in Models 4a and 4b ("All").

Because the relevant measures of leader characteristics are only available through 2008, utilizing them requires dropping post-2008 observations. Thus, models are rerun both without (a) and with (b) such measures. This yields in total eight models:

- Model 1a: Congressional Sentiment
- Model 1b: Congressional Sentiment, with leader characteristics
- Model 2a: Percent copartisans
- Model 2b: Percent copartisans, with leader characteristics
- Model 3a: Percent Republicans
- Model 3b: Percent Republicans, with leader characteristics
- Model 4a: All
- Model 4b: All, with leader characteristics

First, Models 1a and 1b show that the relationship between congressional sentiment and the level of force utilized is in the anticipated direction and significant. Controlling for the proclivity of the president to use force using the triad of measures described above (LWUF, party of president, and whether a president is a high self-monitor) does not meaningfully affect this relationship.

Next, models 2a and 2b utilize the number of copartisans a president has in Congress as the measure of congressional support for the use of force. This is the most commonly used proxy in the literature (See, e.g., Howell & Pevehouse (2007) and Kriner (2010)). In Model 2a, there is a strong relationship between the number of copartisans in Congress and the level of force utilized. The statistical significance of this relationship goes away, however, once leader characteristics are taken into account (Model 2b). Models 3a and 3b utilize the other measure of congressional support found in the literature: the number of Republicans in Congress (see, e.g., McManus (2017)). Here, we see that the measure is in the wrong direction.

Lastly, Models 4a and 4b utilize all three measures. Here, we see that informal congressional sentiment appears closely related to the level of force utilized. In addition, note that models using congressional sentiment instead of % copartisans or % Republicans consistently exhibit much better model fit. This is shown by the AIC and BIC of Models 1a and 1b compared to the alternative models. This suggests that the congressional sentiment scores are better measures of congressional support.

Similar findings are found in Table A9, which utilizes OLS instead of ordered probit models.

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	Cong. Sent.	Cong. Sent.	Copartisans	Copartisans	Republicans	republicans	AII	All
		w/ Leader Char.						
Informal Cong.	$1.506^{***}$	$1.532^{***}$					$1.385^{***}$	$1.494^{***}$
Sentiment	(0.311)	(0.383)					(0.330)	(0.387)
% Copartisans			$2.291^{**}$	3.213			0.851	2.219
			(0.832)	(1.831)			(0.952)	(1.710)
$\%  { m Republicans}$					-2.502	-3.682*	-0.961	-3.180
					(1.280)	(1.803)	(1.473)	(1.751)
Power Ratio	-0.006	0.021	-0.123	-0.125	-0.141	-0.167	0.002	0.029
	(0.245)	(0.259)	(0.243)	(0.255)	(0.242)	(0.257)	(0.248)	(0.264)
Year	0.005	0.015	-0.009	-0.008	-0.016	-0.007	0.003	0.001
	(0.016)	(0.020)	(0.015)	(0.020)	(0.015)	(0.019)	(0.016)	(0.021)
Polarization	0.572	-1.615	2.848	2.602	4.077	3.494	1.035	-0.726
	(3.281)	(5.220)	(3.127)	(5.258)	(3.222)	(5.168)	(3.352)	(5.252)
Pres. Approval	0.003	0.003	0.004	0.003	0.004	0.003	0.003	0.001
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Unemployment Rate	0.050	0.053	$0.116^{**}$	$0.118^{*}$	$0.103^{*}$	0.106	0.049	0.021
	(0.048)	(0.063)	(0.045)	(0.057)	(0.045)	(0.057)	(0.050)	(0.065)
Cold War	0.106	-0.004	-0.045	-0.197	-0.224	-0.362	0.061	-0.392
	(0.393)	(0.431)	(0.383)	(0.454)	(0.381)	(0.441)	(0.389)	(0.473)
Distance	-0.002	-0.002	-0.001	-0.001	-0.001	-0.001	-0.002	-0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Ongoing War	-0.223	-0.206	-0.195	-0.209	-0.167	-0.123	-0.264	-0.370
	(0.204)	(0.238)	(0.197)	(0.239)	(0.194)	(0.224)	(0.205)	(0.250)
Continuing War	$3.581^{***}$	$3.568^{***}$	$3.326^{***}$	$3.341^{***}$	$3.226^{***}$	$3.303^{***}$	$3.620^{***}$	$3.605^{***}$
	(0.331)	(0.343)	(0.326)	(0.324)	(0.325)	(0.321)	(0.330)	(0.343)
Leader Willingness		0.166		0.073		0.289		-0.154
to Use Force		(0.257)		(0.335)		(0.273)		(0.327)
Pres. Party		-0.000		0.002		-0.000		0.006
		(0.002)		(0.003)		(0.002)		(0.003)
High Self-Monitor		0.172		0.205		0.398		0.269
		(0.181)		(0.184)		(0.208)		(0.215)
Ν	280	251	280	251	280	251	280	251
AIC	1032.69	941.36	1048.43	955.03	1051.97	954.56	1034.48	939.85
BIC	1112.66	1029.50	1128.40	1043.17	1131.94	1042.70	1121.72	1035.03
Standard errors in parent	leses							

Standard errors in parentheses \* p < .05, \*\* p < .01, \*\*\* p < .001

	Cong. Activity	Cong. Activity w/ Leader Char.	Copartisans	Copartisans w/ Leader Char.	Republicans	Republicans w/ Leader Char.	All	All w/ Leader Char.
Informal Cong.	$4.114^{***}$	$3.916^{***}$					$3.828^{***}$	3.855***
Sentiment	(0.771)	(0.909)					(0.811)	(0.915)
% Copartisans			$6.087^{**}$	6.319			1.474	2.755
			(2.176)	(4.428)			(2.250)	(4.011)
$\% \ { m Republicans}$					$-6.951^{*}$	$-8.927^{*}$	-3.210	$-8.249^{*}$
					(3.417)	(4.194)	(3.459)	(3.951)
Power Ratio	0.182	0.055	-0.111	-0.316	-0.154	-0.395	0.195	0.078
	(0.599)	(0.656)	(0.623)	(0.677)	(0.626)	(0.673)	(0.606)	(0.664)
Year	0.021	0.022	-0.015	-0.027	-0.036	-0.029	0.017	-0.004
	(0.039)	(0.044)	(0.038)	(0.048)	(0.039)	(0.046)	(0.040)	(0.046)
Polarization	-0.686	6.141	5.109	15.971	8.684	17.698	0.355	6.918
	(8.092)	(11.424)	(8.015)	(12.463)	(8.351)	(12.234)	(8.155)	(11.391)
Pres. Approval	0.005	0.006	0.007	0.005	0.007	0.006	0.004	0.000
	(0.008)	(0.008)	(0.008)	(0.010)	(0.008)	(0.009)	(0.008)	(0.009)
Unemployment Rate	-0.016	0.018	0.160	0.180	0.121	0.135	-0.030	-0.066
	(0.116)	(0.155)	(0.112)	(0.146)	(0.119)	(0.152)	(0.125)	(0.163)
Cold War	0.158	0.370	-0.333	-0.088	-0.839	-0.634	-0.039	-0.603
	(0.952)	(1.111)	(0.962)	(1.196)	(0.965)	(1.160)	(0.940)	(1.194)
$\mathbf{Distance}$	0.000	0.001	0.003	0.003	0.001	0.003	0.000	0.001
	(0.005)	(0.006)	(0.005)	(0.006)	(0.005)	(0.006)	(0.005)	(0.006)
Ongoing War	-0.450	-0.381	-0.419	-0.360	-0.341	-0.238	-0.565	-0.704
	(0.528)	(0.628)	(0.539)	(0.670)	(0.532)	(0.631)	(0.541)	(0.670)
Continuing War	$10.537^{***}$	$10.784^{***}$	$10.266^{***}$	$10.565^{***}$	$10.122^{***}$	$10.419^{***}$	$10.513^{***}$	$10.706^{***}$
	(0.539)	(0.553)	(0.585)	(0.581)	(0.609)	(0.587)	(0.537)	(0.561)
Leader Willingness		0.838		0.863		1.208		0.269
to Use Force		(0.589)		(0.781)		(0.678)		(0.715)
Pres. Party		-0.003		0.001		-0.002		0.009
		(0.004)		(0.008)		(0.004)		(0.008)
High Self-Monitor		0.521		0.706		$1.121^{*}$		0.796
		(0.421)		(0.423)		(0.483)		(0.480)
Z	280	251	280	251	280	251	280	251
AIC	1352.12	1229.61	1372.70	1245.96	1376.35	1244.32	1353.80	1229.16
BIC	1392.11	1278.97	1412.68	1295.31	1416.33	1293.67	1401.05	1285.56
Standard errors in parent! * $m < 05$ ** $m < 01$ *** m	leses							
$P \leq \cdots P \leq \cdots P \leq \cdots P$								

Table A9: Escalation Level (OLS)

Hence, even when controlling for these other variables, the statistically significant and substantively large relationship remains virtually unchanged. Note that this relationship strengthens if the GPT-estimated Congressional Support Scores are utilized instead of those yielded by hand-labeling.

Moreover, because war is ex post inefficient (Fearon 1995), the relationship here is likely substantially underestimated. In other words, the dependent variable used here does not actually measure the maximum amount of force a president was willing to use—it only tells us how much was actually utilized. A president clearly has little incentive to use more force—even when willing to otherwise do so—*if the adversary has agreed to peacefully concede the object being bargained over*.

This highlights a broader problem unaddressed by the methodological approach utilized by other authors (Howell & Pevehouse 2007, Kriner 2010, e.g.): bargaining (Fearon 1995). If increased numbers of copartisans leads to more, or larger, uses of force, why is this not simply being priced into the bargain between the U.S. and its adversaries, when this is eminently observable ex ante (Fearon 1994, Fearon 1995, Gartzke 1999)? Taking account of the bargaining theory of war would seemingly suggest support in Congress is some kind of a necessary, but not sufficient, condition for observing armed conflict (Gartzke 1999)—suggesting it is appropriate to empirically test this claim with a set-theoretic approach and not a statistical approach looking for an average treatment effect.<sup>63</sup>

Nevertheless, as an imperfect solution to this problem, one can simply drop certain observations from the dataset in which a negotiated deal has occurred. If crises in which the United States "wins without fighting" are dropped, the relationship becomes even stronger. This relationship is shown in Figure A11.

Nevertheless, note the shortcomings here when attempting to utilize statistical methods to "test" for a necessary condition. Beyond the fact that statistical models estimate an average treatment effect, and <u>not</u> the presence or absence of a necessary condition (Goertz & Mahoney 2012, Mahoney 2010), there are other problems with this method.

First is the lack of consideration of bargaining, discussed above. Second, while we have controlled

<sup>&</sup>lt;sup>63</sup>Scholars of international relations and crisis bargaining have noted that statistical methods rarely take strategic interaction into account (Goemans & Spaniel 2016). Such strategic interaction is the essence of war (Clausewitz 1976, Schelling 1960, Fearon 1995).



Figure A11: Predicted Escalation Level By Level of Support Expressed in Congress (Model 4b, Table A9, "Win without fighting" dropped)

for many different measures of leadership characteristics, here it is not possible to fully control for the president's preferred response in the crisis at hand. It is possible, for example, that the president and Congress simply wanted the same thing in the crisis (and, thus, the relationship seen between the congressional support scores and the level of force used is spurious). This cannot be fully ruled out through the regressions presented.<sup>64</sup>

Lastly—but, perhaps, most importantly—even if one could achieve high-quality causal identification of an average treatment effect of congressional sentiment on the amount of force used, such a finding would not actually be helpful in adjudicating between the theory presented in this paper and the imperial presidency thesis. Effectively, in order to use the estimation of an average treatment effect to adjudicate between the two theories, one would have to take the position that the imperial presidency thesis predicts zero average treatment effect. This is unfair to proponents of the theory: they do not claim Congress has no effect whatsoever (i.e., no average treatment effect); they just claim that Presidents sometimes utilize force in contradiction of the will of Congress (i.e., a lack of a necessary condition). In order to avoid straw-manning the imperial presidency thesis, therefore, it is important to analyze the data with a set-theoretic approach.

<sup>&</sup>lt;sup>64</sup>A set theoretic approach, in contrast, helps us avoid this problem, because we can easily take consideration of this possibility. Specifically, we ask whether there are cases in which the president and Congress wanted different things, and whether the White House felt constrained in these situations. Appendix IV, above, as well as Table 5 in the main text, gives 24 such examples, demonstrating that a constraint is indeed operating (each of these examples is highly inconsistent with the proposition that the relationship is spurious).

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