

**The Politics of Military Spending**  
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This paper is Chapter 2 from my forthcoming book, *A Political Economy of American Hegemony: Military Buildups, Booms, and Busts*. (New York: Cambridge University Press, 2015).

## **Chapter 2: The Politics of Military Spending**

What drives changes in US military spending? Answering this question is the critical first step toward a deeper understanding of how the military dimension of American hegemony has shaped postwar economic performance. It is such a critical first step because military spending constitutes one of only a handful of government programs with the ability to impart a powerful stimulus to the American economy. Two simple statistics illustrate this point. First, throughout the postwar period, the defense budget has constituted the largest single category of U.S. federal government discretionary spending. In fiscal year 2012, for instance, the Department of Defense accounted for just over half of total discretionary federal government expenditures. Moreover, the gap between first place and second place is huge. The Department of Education received \$79.1 billion, roughly 12% of the amount allocated to the Department of Defense. Second, because the military accounts for such a large share of the federal budget, it constitutes a substantial share of national expenditures. As a share of total national income, military expenditures have averaged roughly six percent across the postwar period. Because military spending occupies so much of federal discretionary spending, and because these expenditures constitute an important share of national income, government decisions about military spending have potential consequences for macroeconomic activity that are unparalleled by any other single private or public activity.

In spite of the economic importance of postwar military spending, we know relatively little about the political dynamics that have driven its variation. This limited insight is not for lack of attention. Research on US defense spending has focused on two models: a threat-driven approach and a bureaucratic politics approach. Throughout the Cold War era, researchers sought to explain US military spending in terms of an arms race between the United States and the Soviet Union (see e.g., Lambelet 1973; Richardson 1960; Ostrom and Marra 1986; Mintz 1992; Moll and Luebbert 1980). It proved difficult to find systematic evidence that annual changes in American military spending were highly responsive to year-to-year changes in Soviet spending, however. As Cusack and Ward (1981, 448) noted in the early 1980s, this research found “little compelling evidence that an arms race embodies the primary dynamic underlying U.S. defense expenditures (Moll and Luebbert 1980).<sup>1</sup> Attention shifted to domestic politics and scholars modeled military spending “as the product of a large, disaggregated, and complex organization where bureaucratic politics and organizational

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<sup>1</sup> The imperial overstretch hypothesis is similar to arms race models that postulate a security-maximizing executive who set military spending in response to decisions taken by a rival. Hence, military spending evolves in response to external developments (for an overview of this approach, see Mintz 1992).

goals and procedures play as important a role ... as the perceived external threat” (Majeski 1989, 130).<sup>2</sup>

Neither model can account for the central empirical puzzle evident in year-to-year changes of US military spending. The puzzle emerges from the rather peculiar distribution of changes in military spending: the distribution exhibits high peaks and fat tails. That is, most year-to-year changes in military spending are very small: spending in a given fiscal year equals spending in the previous fiscal year plus or minus a small amount. Approximately 66 percent of year-to-year changes in military spending fall into this category. Changes of such magnitude are precisely what one expects to observe in an incrementalist process dominated by organizational and bureaucratic routines. Occasionally, however, and far more frequently than we would expect if changes in military spending were normally distributed, military spending changes by an extraordinarily large amount. The mean of the eleven largest year-to-year increases is 35 percent. These outcomes are obvious departures from incrementalism. The puzzle, therefore, is how can a single political process be characterized by the logic of incrementalism most of the time but generate extremely large changes on more than a few occasions?

This chapter offers a solution to this puzzle that focuses on the interaction between policymakers’ assessments of the international security threat and the institutional characteristics of American politics.<sup>3</sup> US policymakers have a strong incentive to set military spending in response to the severity of the threat to US interests present in the international system. We expect expenditures to rise as the perceived external threat increases, and when the threat falls, we expect policymakers to cut military spending. Yet, American policymakers cannot know the true threat to American interests present in the system; they can only estimate its severity. Hence, the threat that shapes military spending decisions is more accurately characterized as a distribution of estimates rather than as a point. The mean of this distribution represents the “best estimate” of the threat, while the variance of the distribution represents the uncertainty of the threat estimate—recognition that the threat could be greater or lesser than the best estimate.

The uncertainty that characterizes the threat estimate interacts with institutional characteristics of the American political system to impart a strong status quo bias to military

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<sup>2</sup> Some scholars discounted the importance of the external threat even more sharply, seeking to explain military spending as a function of electoral incentives to stimulate macroeconomic activity (Nincic and Cusack 1979). More recent work explores the impact of ideology. Fordham (2007), for instance, examines the impact of partisanship on force composition, and finds that in the US context, Republicans support spending on nuclear weapons while Democrats are more likely to support spending on conventional forces. Whitten and Williams (2011), in a study that excludes the United States, find that ideology interacts with the international security environment to shape military spending.

<sup>3</sup> War might seem to resolve this puzzle: military expenditures change sharply when the US fights a war, and change little in other years. Yet, this is a classic begging of the question: it explains the outcome of interest—spending more money on the military—as a function of spending more money on the military (in order to fight a war). This is especially problematic reasoning for the U.S., as in the postwar period the US has never been forced by foreign invasion to fight a war at home. Instead, American policymakers have been able to choose when, where, and if to participate in wars. These decisions did not occur always under conditions of American choosing, but in every instance American policymakers chose to use military force in an environment in which they could have chosen not to use force without placing the territorial integrity or national sovereignty of the United States at risk. Choice was available even in the wake of the 9/11 attacks. During the 1990s, the Clinton administration relied upon the Department of Justice following the first bombing of the Twin Towers and the attack on the USS Cole. The Obama administration seems more attached to low-intensity and covert operations. Because US wars have been elective rather than imposed, they are not exogenous events that can be invoked to explain variation in US military spending.

spending most of the time. American political institutions create a multiple veto player system. Some veto points are occupied by doves who believe that the mean threat estimate over-states the true threat. Because they perceive a lesser threat, they accept lower levels of military spending than the level suggested by the mean estimate. Other veto points are occupied by hawks, who believe that the mean threat estimate under-states the true threat. Because they perceive a greater threat, they believe military spending should be greater than the level suggested by the mean threat. Because each is a veto player, each blocks efforts by the other to shift military spending away from the status quo in any direction. Doves veto hawks' efforts to increase military spending, and hawks block doves' efforts to reduce it. Hence, as long as the distribution of the threat estimate is stable, the institutional characteristics of American politics constrain military spending to points close to the status quo.

Large changes in military spending occur only in response to security shocks. Security shocks are unanticipated exogenous events, like the terrorist attacks of September 11 or the collapse of the Berlin Wall, and ultimately the Soviet Union itself, between October 1989 and December 1991, which alter fundamentally the threat distribution. These shocks provide unambiguous novel information that the security threat is fundamentally greater or lesser than previously believed. Moreover, the clarity of the signal reduces the uncertainty about the threat dramatically. Hence, the mean of the distribution shifts and the variance narrows. As hawks and doves update their beliefs in response to this shock, their preferred military spending levels converge around a budget that is far above (or below) the status quo. As a result, military spending changes sharply.

I develop this argument in three steps. I first articulate the theoretical logic in some detail to derive and defend the core hypotheses. Attention shifts then to empirical evaluation. I demonstrate first that the distribution of spending changes is consistent with a process governed by this logic, highlight the correlation between security shocks and large changes in military spending, and demonstrate that the apparent correlation is robust to other considerations. We then evaluate the causal mechanism. Focusing on the four major military buildups, I draw on primary and secondary sources to demonstrate how the security shock altered the mean and variance of the threat distribution and thus enabled a sharp increase in military spending.

### **A. Security Threats, Veto Players, and Changes in Military Spending**

In an ideal world, policymakers would set military spending at precisely the level necessary to defend American interests against hostile foreign challenges and they would vary military spending in response to changes in this foreign threat. This idealized logic derives from the recognition that military spending carries costs as well as providing indirect productivity gains (Aizenman and Glick 2006). Opportunity costs arise because employing people and resources to defend the realm makes these resources unavailable for other uses. Indirect productivity gains arise because the security that military power provides increases the incentive to invest, and such investment increases society's capital/labor ratio. Thus, given a constant threat, as military spending increases from zero, marginal benefits initially offset marginal costs. Eventually, however, marginal increases of military power must fail to yield additional benefits (once the realm is secure, additional spending offers no further security), and yet marginal costs remain positive. An omniscient benevolent dictator determined to maximize national welfare, therefore, would set military spending to equate marginal cost and marginal benefit. The level of spending at which these equate will depend upon the severity of the threat: marginal benefit equals marginal cost at a higher military

force level in a hostile environment than in a relatively peaceful one.

Two factors intervene to push the real world away from this idealized portrait. First, policymakers are not omniscient. In a complex international environment, the threat to American interests is uncertain. The threat to American interests present in the international system is a function of the intentions and the capabilities of foreign actors. Both characteristics are private information: potential foreign rivals have no incentive to reveal either their capabilities or their intentions to American policymakers. Two things follow. First, policymakers have strong incentives to collect and analyze information in order to estimate the threat. One sees evidence of this incentive operating in US policymaking, where the US government spends as much as \$80 billion each year on intelligence-related activities.<sup>4</sup> Second, even with such extraordinary effort and resources dedicated to the challenge, policymakers continue to confront considerable uncertainty about the threat they face. Information collected does not generate a single point estimate of the threat. Multiple analysts reviewing the same information reach different conclusions about the threat. For instance, in the last year of the Ford administration, the Central Intelligence Agency conducted a competitive threat assessment exercise in which individuals outside the established National Intelligence Estimate process developed independent estimates of the Soviet threat from the same information. These so-called “Team A and Team B exercises” yielded very different estimates. Team B asserted that the information “indicated beyond reasonable doubt that the Soviet leadership ... regarded nuclear weapons as tools of war whose proper employment, in offensive as well as defensive modes, promised victory.” In contrast, team A concluded that Soviet leadership’s uncertainty about its ability to launch and prevail in a nuclear attack constrained aggressive or reckless behavior.<sup>5</sup> Consequently, policymakers confront irreducible uncertainty about the threat they face in the international system.

The second intervening factor that pushes military spending away from the stylized ideal is that spending levels are selected through a decision making process that involves multiple policymakers across multiple departments and branches of the federal government. These multiple veto players typically share the common goal of securing the nation against foreign threats. Almost universally, political elites desire to spend enough on national defense to protect the nation against foreign threats. Yet, in spite of holding this common goal, veto players often hold different preferences over military spending. Some want to spend more, and some want to spend less. Veto players can hold different preferences over the level of military spending because they are drawn from a population that varies along a hawk – dove dimension. Hawks view the world as inherently dangerous and thus tend to prefer more military power. In contrast, doves view the world as less dangerous and believe that potential foreign rivals are willing to cooperate. Distinct outlooks may be a consequence of cognitive processes and holding to different theories of war or they may reflect personality characteristics (D’Agostino 1995; Jervis 1976; Modigliani 1972; Aldrich et al. 2006). Because hawks and doves are typically represented among veto players, military spending decisions typically reflect the outcomes of bargaining between individuals with very different military spending preferences.

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<sup>4</sup> For fiscal year 2012, National Intelligence Program received \$53.9 billion and the Military Intelligence Program received an additional \$21.5 billion (see Federation of American Scientists, Intelligence Resource Program <http://www.fas.org/irp/budget/index.html> , accessed November 9, 2012).

<sup>5</sup> See Preble (<http://www.princeton.edu/~ppns/papers/Preble.pdf>).

We can represent these two central characteristics of the military spending decisionmaking—the uncertainty of the threat and the multiple veto player nature of the decision making process—with a standard spatial model (figure 2.1a). The policy dimension represents the amount of military spending, with spending levels rising as we move from left to right. The distribution above the spending dimension represents the distribution of threat estimates generated by the intelligence community. For simplicity, I assume that the threat estimate is the product of an unbiased intelligence gathering process that generates an estimated threat characterized by the most likely threat level (the mean of the distribution) surrounded by higher and lower estimates (the variance of the distribution).<sup>6</sup>

**(Figure 2.1 about here)**

The location of hawk and dove ideal points reflect their threat perceptions relative to the mean threat estimate. Hawks believe that the mean of the threat distribution underestimates the true threat to American interests. Hawks' ideal level of military spending thus lies themselves somewhere between the distribution's mean and its upper bound. How far from the mean hawks locate depends upon how hawkish they are. In figure 2.1a, the hawk's ideal point (H) sits one standard deviation to the right of the mean. Doves believe that the mean threat estimate likely over-estimates the true threat to American interests. They thus position themselves between the mean and the distribution's lower bound. In figure 2.1a, the dove's ideal point (D) falls one standard deviation to the left of the mean.

Given the environment depicted in figure 2.1a, military spending will likely be set initially to defend against the mean threat estimate. Because the hawk and dove each can veto any proposed spending level, it is likely that a series of offers and counter offers will lead them to the point on the interval midway between their ideal points. Given that the two ideal points lie one standard deviation above and below the mean threat, this initial level of military spending lies at the mean threat estimate. Where precisely the status quo lies is less important for current purposes than understanding how the structure of decisionmaking interacts with the distribution of threat estimates to affect movement from any status quo.

Military spending can increase or decrease relative to the status quo only if the distribution of threat estimates changes. The distribution changes in response to new information generated by international events, and veto players update their beliefs of the existing threat based on the new distribution. These new beliefs in turn prompt veto players to alter their ideal military spending levels. New information can alter the threat distribution in three ways. First, new information can alter the mean estimate of the threat to American interests but leave the variance unaffected. Second, new information can reduce the variance of the estimated threat but leave the mean unaffected. Finally, new information can alter the mean and the variance of the threat distribution. Large changes in military spending occur only when the mean threat estimate changes by a large amount and the variance of the distribution narrows substantially. We can understand why by observing how these three changes alter the decisionmaking environment.

In case one, a large change in the mean alone is insufficient to generate a large change in spending. Consider the scenario depicted in figure 2.1b. Here new information has caused a substantial revision of the estimated threat, pushing the mean threat one standard deviation to the right of its initial position. Hawks and doves update their military spending

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<sup>6</sup>Although the individuals that collect and analyze intelligence data may each have biases, I assume that the distribution of these biases is not itself biased, so that the aggregation of the estimates produced by the thousands of individuals involved yields a normal distribution whose mean is an unbiased estimate of the true threat.

preferences in response to this new information, and reposition themselves one standard above and below this new mean (D' and H'). In this new environment, the hawk is worse off relative to the status quo ante and wants to increase military spending sharply. Doves, however, are better off relative to the status quo ante than prior to the revised threat estimate, for the inherited military spending ( $M_{sq}$ ) falls directly on the new ideal point. Any change in military spending from the status quo therefore reduces doves' utility. As long as the variance remains constant, the mean threat must shift more than one standard deviation to the right of the prior mean in order for the dove to accept any increase in military spending. And even then, the increase in military spending will be quite small relative to the increased threat estimate.<sup>7</sup> Thus, as long as the distribution of threat estimates allows hawks and doves to continue to hold very different ideal points, even a large change in the mean estimated threat has little impact on military spending.

In the second case, a large reduction in the variance alone also is insufficient to change in spending. To see why, consider the scenario depicted in figure 2.1c. As before, spending rests at the mean threat estimate. Now suppose that new information reduces uncertainty about the threat substantially but leaves the mean unaffected. The variance of the distribution narrows and veto players update and adjust their ideal points to remain positioned one standard above and below the mean. The dove recognizes that the world is more threatening and prefers a bit more military spending than previously. The hawk, in contrast, believes the world is less threatening than previously and prefers less spending than did prior to the revised threat estimate. Thus, information that merely reduces uncertainty will not generate more military spending, it will simply reduce the degree to which hawks and doves disagree about the ideal level of military spending.<sup>8</sup>

In the third case, when the mean increases or decreases sharply and the variance narrows substantially military spending increases sharply. This case is depicted in figure 2.1d. Here the mean threat estimate has shifted one standard deviation to the right: the world is perceived to be much more threatening than prior estimates suggested. Simultaneously, the variance around this mean has narrowed sharply: the new threat estimate is much less uncertain than the previous estimate. The hawk and dove update their ideal military spending levels in response to this revised threat distribution and reposition themselves one standard deviation above and below the mean. The dove's ideal point is now far to the right of the status quo ante spending level. Consequently, a large increase in military spending provides the dove a substantial utility improvement. The dove thus votes with the hawk to increase military spending.

Large changes in military spending occur, therefore, in response to events with two distinguishing characteristics. First, the event must demonstrate that the threat is substantially different than the current threat estimate suggests. Events that merely confirm existing estimates, regardless of how substantial a threat they might pose, will not alter the

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<sup>7</sup> Research in cognitive psychology suggests that updating may be more conservative than I characterize it to be here. As Stein (2013, 20) summarizes, "evidence from cognitive psychology suggests that these processes are more conservative than rational models suggests, weighed down by prior beliefs and initial estimates. The implications for threat perception are considerable; once an estimate of threat is generated, it anchors subsequent rates of revision so that revision is slower and less responsive to diagnostic information. Threat perceptions consequently become embedded and resistant to change."

<sup>8</sup> Arguably, this dynamic underlay bipartisanship that characterized American security policy toward the Soviet Union for the pre-Vietnam era Cold War. Intelligence allowed for revised estimates of the Soviet threat that reduced the uncertainty that surrounded estimates of the direct military threat to the U.S. posed by the Soviet Union.

mean. Second, the event must provide unambiguous information; that is the signal must admit of only a single interpretation in order to reduce the uncertainty surrounding the new threat estimate. In other words, large changes in military spending are likely to occur in response to security shocks: unexpected events that cause all veto players to believe that the level of hostility present in the international system is substantially greater (or lesser) than previously believed and causes the gap between hawks and doves to narrow substantially.

This model offers three observable implications. First, the model offers clear expectations about the distribution of changes in military spending. The distribution of changes in military spending should be leptokurtic: high peaked with heavy or fat tails. That is, most changes in military spending will be quite small, but we will observe a few extremely large changes. Second, the model offers clear expectations about the correlation between changes in the global security environment and changes in military spending. Here we expect changes in military spending to correlate with security shocks. Finally, the model offers expectations regarding the causal mechanism through which security shocks generate large changes in military spending. Security shocks should cause policymakers to update their beliefs about the level of hostility to US interests present in the international system. As a result of this updating, all veto players believe that the threat is substantially greater than they had previously believed, and the difference between hawks and doves should narrow. I turn now to evaluate these expectations.

## **B. Military Spending and Security Shocks Across Time**

I turn first to the distribution of changes in military spending across the postwar period. Recall that the model leads us to expect that the vast majority of changes in military spending will be quite small, and only a few changes will be large. I evaluate these expectations using data on military expenditures compiled by the Policy Agendas Project (True 2009). These data provide a measure of defense spending that is consistent across time. This provides confidence that data for military spending in 2008 include the same functional purposes as those for 1948. The data also convert current values to constant values thereby allowing the analyst to compare absolute spending levels across time.

Consider first the relative frequency of small and large changes in military expenditures between 1948 and 2008 (figure 2.2). Notice that defense expenditures increased in real terms in almost half of the postwar years, and decreased in real terms in the other half. Not surprisingly, the average increase has been greater than the average reduction; indeed, over the entire sample period the average increase has been twice as large as the average decrease. Second, most changes in defense spending, both increases and decreases, have been quite small. The average change for the full sample is 5.1 percent, but if we remove the seventeen largest changes (positive and negative), the average of the remaining 44 observations is .9 percent.

### **(Figure 2.2 about here)**

The seventeen large changes in military spending are extremely large relative to the average change. The thirteen largest increases average 31.5 percent, six times greater than the average of the full sample, and 31 times greater than the average of the remaining expenditure increases. These large increases range from 220 percent to 10 percent. Large spending decreases exhibit similar characteristics. The average for the four largest cuts is 23.9 percent (and for the ten largest cuts 14 percent), and they range from one large cut of 36 percent to a cut of 11 percent. To the naked eye, therefore, the distribution of changes in military spending appears to exhibit high peaks and fat tails.



Statistical measures confirm this impression. The full distribution, including increases and decreases in military spending is leptokurtic, with a kurtosis statistic of 44.3. If we restrict the sample to spending increases, the distribution remains leptokurtic (kurtosis of 26.7). In addition, the distribution contains far more very large changes than we would expect in a normally distributed sample. In a normally distributed sample of this size, we expect three observations to lie two standard deviations or more from the mean and .18 observations to fall three standard deviations or more away from the mean. In postwar military spending, however, seven observations (11.7% of total) fall more than two standard deviations away from the mean and three observations (1.85% of the sample) fall three standard deviations away from the mean. Even if we restrict the sample to positive increases, large magnitude increases are far more frequent than a normal distribution expects. Two observations lie more than three standard deviations from the mean, where a normal distribution expects no observations of that magnitude in a sample of this size, and four observations lie further than two standard deviations from the mean against the expected 1.5 such observations in a normal distribution. Our first expectation is thus confirmed: the distribution of changes in military spending is leptokurtic and fat tailed: most changes in military spending are very small, and a few are very large.

This distribution is unlikely to be generated by autonomous developments in domestic politics. A process dominated by bureaucratic politics or constrained by multiple veto players should exhibit incremental growth—small year-to-year changes in spending. And while the resulting distribution of the changes would likely exhibit a high peak, variation would be very compact. That is, the presence of multiple veto players helps us understand why most changes in military spending are small, but offers little insight into why large magnitude changes occur so frequently. One might hypothesize that these large result from developments in presidential politics. Yet, there is little evidence of this. Party of the president is uncorrelated with large increases. About half of these large changes in military spending occur under Democratic administrations (Truman and Johnson), about a quarter fall fully within a Republican term (George W. Bush). The final group of large expenditure increases begins under a Democratic administration and continues during the succeeding Republican administration (Carter to Reagan). Large increases are not related to presidential elections: only one occurs in a presidential election year (Carter in 1980). Finally, the military buildups do not correlate with a change in president's party: when a Republican succeeds a Democrat in the White House or vice versa. The large increases under Truman and Johnson followed multiple years of Democratic control of the White House. A third series of increases begins under Carter and continues under Reagan. Only in the final group of large increases do we observe a Republican administration succeeding a Democrat and engaging in a military buildup. Presidential politics thus offer no obvious explanation for why a process that typically produces very small changes generates extremely large changes more frequently than we expect.

The large changes in military spending are highly correlated with security shocks. I operationalize security shock as military action by a foreign actor that threatens an important American interest or ally. This definition allows me to identify the set of possible security shocks from the universe of inter-state wars that occurred between 1948 and 2002. To minimize complications arising from measuring the novelty of the information these events provide, I assume that each war onset was a surprise for American policymakers. The wars differ, therefore, only in the degree to which they target an American interest or ally.

Twenty-nine interstate wars began in the postwar period (see table 2.1) (Gleditsch 2004). Five of these conflicts posed large magnitude security shocks for American

policymakers: they involved Soviet clients fighting an American ally (South Korea, South Vietnam), a military invasion that threatened an American interest or ally (Soviet Union invading Afghanistan; Iraq invading Kuwait), or a direct attack on American territory (al Qaeda). Three of these conflicts (the three Arab-Israeli wars) are potential large magnitude shocks as they involve Soviet clients (Arab states) fighting an American ally (Israel) in an area of vital strategic importance. The remaining twenty-one wars are small magnitude security shocks; they involved small states fighting over issues with limited significance for American interests.

**(Table 2.1 about here)**

Four of the five large security shocks are followed by a sequence of very large increases in military spending. This relationship is illustrated in figure 2.3. North Korea's invasion of South Korea in June of 1950 is followed by three very large military spending increases. The onset of conflict in Vietnam in 1965 is followed by three years in which of military spending increases sharply.<sup>9</sup> The Soviet Union's invasion of Afghanistan in 1979 is followed by consecutive large increases in military spending. Finally, the attack on the Twin Towers and the Pentagon on September 11, 2001 is followed by a series of large increases. The largest reductions in postwar military spending occur as the US demobilizes following a war. One large cluster of cuts occurred at the conclusion of the Korean War (1953, 1954, and 1955). A second cluster of large cuts came in the early 1970s as the US disengaged from Vietnam. The three other largest cuts in military spending (1991, 1993, 1994) are responses to the collapse of the Soviet Union and the consequent end of the Cold War superpower rivalry. One security shock, Iraq's invasion of Kuwait in 1990, did not spark a large military spending increase. This probably reflects the brevity of the conflict (combat operations concluded in about 50 days) and the US ability to secure financial contributions to offset its costs from its allies. Nor did the three Arab-Israeli wars trigger a series of US military buildups. Thus, although not all security shocks triggered a large change in military spending, the vast majority of large changes in military spending were triggered by security shocks.

**(Figure 2.3 about here)**

Notice also that very few large military spending increases occurred without a security shock. Indeed, perhaps this is the most striking finding. One expects military spending to rise sharply in response to the outbreak of a war that targets an important American interest or ally. It is less obvious that such instances would be the only occasions on which US military spending rises sharply. Yet, figure 2.3 suggests that large military spending increases are exceedingly rare in the absence of foreign military actions that target US interests. The sample contains only two such increases in the late 1950s and early 1960s. Arguably, these constitute partial rather than complete exceptions to the broader pattern, as at least one of these increases occurred in the wake of the Sputnik shock which appeared to suggest that the US was lagging behind in the space race with potentially dire consequences for US national security.<sup>10</sup> Other than these two observations, military spending increased by only small amounts in the absence of an external provocation. Thus, large changes in US military spending throughout the postwar period almost never occur of military action that targets an American ally or interest.

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<sup>9</sup> I recognize the challenge of treating Vietnam as an exogenous event to which American policymakers respond like North Korea's invasion of South Korea. I elaborate this treatment in detail in the next section.

<sup>10</sup> Senator Mike Mansfield is reported to have said in reaction to the Sputnik launch, "What is at stake is nothing less than our survival." Lyndon Johnson spoke of an approaching era in which the "Soviets would be dropping bombs on us from space like kids dropping rocks onto cars from freeway overpasses."

To further evaluate the relationships apparent in the descriptive data, I regressed changes in military spending against security shocks while controlling for other factors. The dependent variable is the percent change in military spending presented above. I coded the security shocks discussed in table 2.1 as two-year events from the date they occur.<sup>11</sup> I created a second security shock variable to capture the end of the Cold War; this is also coded as a two year event. I included presidential election years and the Party of the President. In addition, I controlled for changes in Soviet military spending, for unemployment, and for the Cold War and post-Cold War eras. The results are presented in table 2.2.

**(Table 2.2 about here)**

The statistical model offers strong support for the core argument. Security shocks account for a substantial portion of the variation in postwar changes in military spending. Positive security shocks have been associated with military expenditure increases of almost 20 percent on average. The negative shock of the end of the Cold War was associated with a cut in military spending of about equal magnitude. In addition, changes in military spending exhibit positive feedback, as change in  $t-1$  is positively associated with change in year  $t$ . Thus, spending is highly responsive to global security shocks, and these shocks have a persistent impact on spending changes. The fit of the model overall is evident in figure 2.4, which, plots actual changes in military spending against predicted changes across the entire postwar period. The predicted changes trace the major shifts quite well, though the model underestimates the impact of shocks on the changes in spending.

**(Figure 2.4 about here)**

None of the other variables appear to have any systematic relationship with changes in military spending. Changes in Soviet military spending are signed correctly, but do not approach traditional levels of statistical significance. This result does not change even when one conditions the impact of Soviet spending on the Cold War by including an interaction term in the model. Change in unemployment is significantly related to changes in military spending, but the relationship is negative rather than positive, suggesting that increases in military spending are much smaller during recessions than during booms. The model offers no indication that changes in military spending are larger during presidential election years than in other years, or that such spending varies systematically with the party of the president.

Because the dependent variable is not normally distributed, I re-estimated the model after normalizing changes in military spending. To normalize changes in military spending I transformed the raw data into the log of the absolute values. The results from this model are presented in column 2 of table 2.2. Notice that although the magnitude of the coefficients changes, the statistical significance does not. Of particular importance, the index of security shocks retains statistical significance. Moreover, the coefficient on the security shock variable indicates that a shock in year  $t$  increases the change in military spending by approximately 56 percent. As a final robustness check, I estimated the same model against a sample that includes only the positive increases in military spending. This reduces the sample by half to 30 observations. Nevertheless, security shock continues to return a large positive coefficient—indeed the estimated effect doubles in magnitude, suggesting that the average

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<sup>11</sup> I ran the model with two codings of security shock—a one-year impact and the reported two-year impact. None of the results change substantially across the two models. None of the variables that are significant cease to be significant; none of the variables that are not significant in this specification become significant in the model that relies on the alternative coding. However, overall model fit is somewhat better with the two-year window.

change in the year of a security shock is more than 100 percent larger than the increase in non-shock years—that is statistically significant. The other variables continue to return coefficients that fail to approach conventional levels of statistical significance.

Overall, then, there appears to be substantial evidence that the evolution of postwar military spending has been shaped by the interaction between institutional constraints and exogenous security shocks. Large changes in military spending have occurred in response to security shocks. We rarely observe large increases occurring in the absence of security shocks, and we find little evidence that other characteristics of domestic politics account for the large sudden increases.

### **C. Evaluating the Causal Mechanism**

Our final step is to evaluate the causal mechanism through which security shocks spark large changes in military spending. The theoretical model suggested that decisions about military spending typically are constrained by disagreement between hawks and doves in an environment characterized by uncertainty about the threat to American interests. Security shocks increase (or decrease) the mean threat estimate and reduce the variance around this mean. As hawks and doves update their beliefs in response to this change in the distribution, their ideal spending levels shift. In particular, doves become willing to support larger military spending because of the shock than they had been willing to accept prior to the shock. I evaluate this expectation by examining the impact of security shocks on the decision-making environment in the four episodes identified above.

We look first at the Korean War. The decision-making environment in this episode is depicted in figure 2.4. By the spring of 1950 American policymakers generally agreed that the Soviet Union posed a serious threat to American interests and allies. Moreover, the mean estimate of the Soviet threat had risen fairly sharply over the previous year. Yet, considerable uncertainty remained as to whether the Soviets constituted a military threat that required a large and sustained American military buildup. A group of hawks, led by Paul Nitze, believed that the Soviets represented a powerful military threat. These hawks interpreted the Soviet atomic weapons test and other signs of Soviet assertiveness in Central Europe as evidence of Soviet willingness to risk military confrontation with the United States in order to achieve their objectives. As Nitze wrote in February 1950, “recent Soviet moves reflect not only a mounting militancy but suggest a boldness that is essentially new—and borders on recklessness...Nothing about the moves indicate that Moscow is preparing to launch in the near future an all-out military attack on the West. They do, however, suggest a greater willingness than in the past to undertake a course of action, including a possible use of force in local areas, which might lead to an accidental outbreak of general military conflict” (Pollard, 1989, 228-9).<sup>12</sup> Nitze assembled the hawks into a coherent coalition that put together NSC-68 which advanced a very hawkish view of the Soviet threat and called for a substantial increase of US military spending in response.

**(figure 2.4 about here)**

This relatively hawkish assessment of the Soviet threat was not held universally within the administration. The hawk view sat next to a “widely shared conviction that the Soviets would probably not launch a general war in the near future and that burdensome military expenditures were not a cost effective way to meet the Soviet threat” (Pollard 1989, 219). George Kennan, a leading voice in dove faction, argued as late as the spring of 1950,

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<sup>12</sup> And note also that Nitze’s assessment was itself part of an updating in response to information generated by a series of events during the fall of 1949.

“That there is little justification for the impression” advanced by the hawks, that the Cold War had suddenly taken a turn to the disadvantage of the US. The thrust of the Soviet challenge remained ideological and societal/political rather than military (Wells 1979, 128; Brune 1989). Others shared Kennan’s relatively dovish orientation, including Charles Bohlen in the State Department, who saw a moderate military threat in the Soviet Union and Truman himself, who was seeking to constrain military spending to \$15 billion.

Given the gap between the hawks and the doves allowed by existing uncertainty about the estimated Soviet threat, determined efforts by the hawks to increase military spending was effectively blocked by administration doves, who saw no benefit from such an increase. Indeed, Truman’s immediate response to NSC-68, when he saw it in draft form in the spring of 1950, was to create an ad hoc committee to evaluate the cost of the military buildup Nitze’s group proposed (Wells 1979, 137).

And even had the administration unified around the hawk position, they would have confronted substantial challenges in Congress. The Nationalist Republicans, led by Robert Taft (R-OH) and Kenneth Wherry (R-NE) that constituted a significant block in 1950 were skeptical of the magnitude of the Soviet threat and were quite unwilling to countenance large military budgets. Wherry expressed hope in early 1950 for a negotiated agreement with the Soviet Union that would enable the United States to “put its financial house in order, reduce taxes, and keep off our backs controls, regimentations, and directives issued by our federal bureaus” (Fordham 1998, 112). Taft, who moved increasingly to the front of the Republican Party on foreign policy issues as Arthur Vandenburg fell ill, was deeply skeptical of the expanse of the commitments the US had embraced (Berger 1975). In the face of this opposition, getting major new military spending plans through Congress was a major challenge.

North Korea’s invasion of South Korea altered the mean and the variance of the distribution of threat estimates. President Truman communicated his updated beliefs to the congressional leadership in White House meetings and to a joint session of Congress in the following terms: the invasion demonstrated that the communist world had “passed beyond the use of subversion ... to the use of armed invasion and war” (Gaddis 1982, 110). There was no disagreement about the extent of Soviet involvement or the severity of the threat to American interests. As a State Department analysis concluded: this “move against South Korea must be considered a Soviet move” that threatened the credibility and will of the US to defend Japan, Southeast Asia, and Europe (Bernstein 1989, 420). It became widely believed that action in Korea struck directly at American interests. As Truman articulated to the congressional leadership in a White House meeting on June 27<sup>th</sup>: “If we let Korea down, the Soviets will keep right on going and swallow up one piece of Asia after another... If we were to let Asia go, the Near East would collapse and no telling what would happen in Europe” (Bernstein 1989, 423).

As uncertainty about the Soviet military threat narrowed, administration doves’ ideal military spending levels rose sharply above current spending levels. As they did, military spending levels rose sharply as well. The Truman administration quickly submitted two supplemental appropriations bills to Congress to pay for US involvement in Korea and to enhance US military capabilities more generally. The first, submitted in late July, requested an additional \$11 billion. The second, submitted late in 1950, sought an additional \$17 billion. These supplemental appropriations were followed by two smaller requests in the first half of 1951. Military spending thus rose by 38 percent in 1950 and by 220 percent in 1951 as US forces moved into Korea. Both houses of Congress approved these supplemental appropriations by large majorities.

The second set of large increases of military spending occurred as the US escalated its involvement in Vietnam. This episode differs from the Korean conflict in one important way—it lacks a single massive security shock like North Korea’s invasion. Nevertheless, the Vietnam escalation exhibits a similar process in which decisions are driven by information provided by security shocks that alter the distribution of threat estimates. The decisionmaking environment in 1964 - 1965 is depicted in figure 2.5. Through 1964, estimates of the threat to American interests posed by the situation in Vietnam allowed doves and hawks to hold widely divergent ideal military spending levels. Secretary of Defense Robert McNamara and Johnson’s national security advisor, McGeorge Bundy were the most vocal hawks in the administration. The dove position, advanced most forcefully by Under Secretary of State George Ball, argued against deepening US military involvement and pressed for a negotiated settlement. This hawk-dove divide within the administration was echoed in Congress, where some congressional leaders such as Mike Mansfield and J. William Fulbright) saw few US interests at stake in Vietnam and argued strongly against an escalation of US military involvement while others, including Richard Russell and many other Southern congressmen, saw the Soviet hand at play and supported an increased military role for the American military forces. Doves located themselves at the left of the threat distribution, while hawks were far to the right.

**(Figure 2.5 about here)**

Given the uncertainty about the severity of the threat and the consequent gap between veto player positions, decision making dynamics through mid-1964 revolved around hawks pushing for deeper US involvement and doves resisting. Because doves could veto movement from the status quo, US policy remained unchanged. The administration’s review of policy, concluded in early 1964, advocated adherence to status quo: the US would not increase personnel or resources in the region, but the US would not withdraw support from the regime either.<sup>13</sup>

Escalation followed a series of military actions by the Vietcong against US military targets in South Vietnam during 1964 and early 1965 that altered estimates of the threat North Vietnam posed to US interests and narrowed the variance of the distribution. In contrast to the Korean War, no single security shock was decisive in bringing about this change in the evaluation of the situation. Instead, the cumulative impact of a series of events altered the distribution. As Johnson summarized in his memoirs, “the decision [to escalate US involvement in 1965] was made because it had become clear, gradually but unmistakably, that Hanoi was moving in for the kill” (Johnson, page 132). The series of events that made the threat more certain began with the Gulf of Tonkin incidents of August 1964. Gulf of Tonkin was followed by a series of attacks on US targets in South Vietnam, culminating in the raid on Pleiku air base in early February 1965. By early 1965, the revised threat estimate held that the South Vietnamese regime could not survive given the current level of US involvement. McGeorge Bundy summarized the situation for Johnson in February 1965: “The situation in Vietnam is deteriorating, and without new U.S. action defeat appears inevitable—probably not in a matter of weeks or perhaps even months, but within the next year or so.”<sup>14</sup>

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<sup>13</sup> These conclusions are articulated in “Memorandum From the Secretary of Defense (McNamara) to the President,” March 16, 1964 and adopted as administration policy in “National Security Action Memorandum,” No. 288, March 17, 1964. Both documents are reprinted in *Foreign Relations of the United States, 1964-1968, Volume I, Vietnam, 1964*.

<sup>14</sup>Memorandum from the President’s Special Assistant for National Security Affairs (Bundy) to President Johnson,” February 7, 1965, *Foreign Relations of the United States, 1964-68 Volume II, January – June, 1965*. The

As the distribution of threat estimates changed, veto players updated their beliefs and repositioned themselves along the military spending dimension. Johnson was the critical veto player. As he became convinced that the situation was deteriorating, he became more willing to escalate US involvement. Thus the gap between hawks and doves in the White House narrowed. The narrowing gap extended to the congressional leadership as well. Records of White House meetings between Johnson and the congressional leadership between August 1964 and July 1965 indicate how little disagreement there was about the situation the US confronted in Vietnam.<sup>15</sup> All participants agreed that South Vietnam's survival as an independent state was in jeopardy.<sup>16</sup>

The variance of the distribution narrowed less in this case than it did following North Korea's invasion in June 1950. Critics of the administration's decisions were present and the most prominent of them—including Fulbright and Mansfield—made their disagreement known to Johnson. George Ball remained opposed to escalation, in part because he believed that an American withdrawal would be less damaging to American interests, an assessment that differed sharply from the hawk position. Indeed, administration hawks appear to have been keenly aware that absent shocks such as those that occurred between June 1964 and July 1965, Congress would be unlikely to support deeper US involvement. Meeting on June 10, 1964 administration officials agreed that Congress was unlikely to support administration requests when, as Dean Rusk summarized, "circumstances are such as to require action, and, thereby, force congressional action" (Gibbons 1994, pages 11-12). Arguably, administration hardliners enacted this strategy, taking advantage of events as they occurred in Vietnam to first gain Johnson's assent and then congressional support for increased US involvement in Vietnam. But, the possibility that officials acted opportunistically and used security shocks to loosen the constraints they faced doesn't undermine the broader point: in the absence of these security shocks, the constraints would not be easily escaped.

The third episode differs from these two prior cases in two ways. First, in this case the security shock came from direct Soviet military action—the Soviet invasion of Afghanistan—rather than from the activities of a Soviet client. Second, the US response does not include military action against a hostile force, but was limited to a sustained military buildup. The decisionmaking environment for this episode is illustrated in figure 2.6. Carter's presidency was characterized by a wide gap between hawk and dove preferences over military spending that reflected radically different evaluations of the Soviet military threat. Carter was the leading dove. He was relatively sanguine about the military dimension of the Soviet challenge. As Skidmore (1996, 38) summarizes, President Carter "respected Soviet military might and viewed increases in Soviet activities in the Third World as challenging." He "did not, however, perceive broad geopolitical designs in Soviet behavior." Indeed,

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administration worried that failure in Vietnam would undermine the credibility of the US commitment to other allies.<sup>14</sup> Of particular concern was the perception of American steadfastness in the eyes of other newly independent regimes as the locus of Cold War conflict shifted to the so-called Third World.

<sup>15</sup> See, e.g., *Foreign Relations of the United States, 1964-68 Volume I, Vietnam*. Document 280. Notes of the Leadership Meeting, White House, August 4, 1964. "Memorandum for the Record, White House Meeting on Vietnam, February 6, 1965; "Memorandum of Meeting with Joint Congressional Leadership, July 27, 1965," FRUS Vol. III, Vietnam, June – December 1965.

<sup>16</sup>The overall sentiment was summarized by Bourke B. Hickenlooper, a Republican Senator from Iowa: "In this case there is not the slightest question in my mind that the president ...has the responsibility to protect American institutions and interests when they are attacked." *CQ Weekly*, Week ending August 7, 1964, page 1668.

Carter believed that he could treat developments in the developing world independent of East-West relationships. And he believed that he could use the détente process and arms control negotiations to promote a more cooperative relationship with the Soviet Union.

**(figure 2.6 about here)**

Although Carter and many of his foreign policy team were relatively dovish regarding the Soviet Union, the administration also contained many anti-Soviet hawks. His National Security advisor Zbigniew Brzezinski, was the most influential. Congress contained additional prominent anti-Soviet democratic hawks (Henry “Scoop” Jackson in particular). Influential private groups (such as the Committee on the Present Danger) were continually stressing the severity of the Soviet military challenge. These voices asserted that the Soviet Union remained determined to extend its influence at American expense, was willing to use military power to do so, and that the only way to check Soviet expansion was to strengthen American military power substantially.

Carter thus positioned himself below the mean of the distribution of threat estimate and saw no benefit from increased military expenditures. Brzezinski and the hawks in Congress and in the wings positioned themselves well to the right of the mean and pressed hard for increased military spending. Yet, given Carter’s ideal point, the best that hawks could achieve was to constrain Carter’s ability to reduce military spending still further. As a result, the administration proposed very modest nominal increases in military expenditures for fiscal years 1978 and 1979. Indeed, given the high inflation of the period, real defense expenditures fell in these two years (according to the Policy Agendas project).

The Soviet invasion of Afghanistan in December 1979 raised the mean and reduced the variance of the distribution of threat estimates. The central concern that the Soviet invasion sparked was continued access Persian Gulf oil. “Oil is the lifeblood of modern industrial societies,” Secretary of Defense Harold Brown proclaimed in March 1980. “The loss of this oil... would be a blow of catastrophic proportions. . . . Soviet control of this area would make economic vassals of much of both the industrialized and the less developed worlds.”<sup>17</sup> The possibility of Soviet control of the flow of oil to the West was accentuated by the recent experience of the Arab oil embargo of 1973 and the second oil shock that occurred in connection with the Iranian revolution. These energy price shocks had powerful negative consequences for economic performance in the United States.

President Carter revised his beliefs about the military threat posed by the Soviet Union rather fundamentally in response to this new information.<sup>18</sup> As Carter explained to a journalist shortly after the invasion, “My opinion of the Russians has changed most dramatically in the last week... [T]his action of the Soviets has made a more dramatic change in my own opinion of what the Soviets’ ultimate goals are than anything they’ve done in the previous time I’ve been in office” (Smith 1986, 223-4).<sup>19</sup> The direction of the change was equally clear: Carter came to believe that the Soviet leadership was willing to use military force to advance its goals unless the US demonstrated its determination to resist. As Glad (2009, 205) summarized, “after the Afghan intervention, Carter fully accepted the Brzezinski line that to not stand up to the USSR would simply wet the Soviet appetite.” According to this view, “world peace since World War II had rested on US determination to resist Soviet

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<sup>17</sup> (Leffler 1983, 246).

<sup>18</sup> Although administration officials kept an eye on Soviet activities around Afghanistan through 1979, it is generally conceded that the intelligence community greatly under-estimated the likelihood of a Soviet invasion of Afghanistan. See, e.g., John M. Diamond, *The CIA and the Culture of Failure* (Palo Alto: Stanford University Press), page 73.

<sup>19</sup> See Aronoff (2006) for a detailed examination of Carter’s conversion to hawk.



probes in the Far East and Europe. The Soviet invasion suggested that the US must extend this effort into the Near East. “We are, if you will, in the third phase of the great architectural response that the United States launched in the wake of World War II.”<sup>20</sup>

The administration altered military spending sharply in response. Carter became determined to punish the Soviets for the invasion, and sought “to make sure that Afghanistan will be their Vietnam.” Carter increased US funding for the mujahedeen, enunciated the so-called “Carter Doctrine” in his 1980 State of the Union address. Carter threw his support to the hawks in his administration and in Congress and agreed to increase US military spending substantially. As a first step, he proposed to increase defense spending by 5.4 percent in real terms in 1980 and by 25 percent over a five-year period. Once again, a security shock transformed disagreement among veto players that constrained military spending into a broad consensus that enabled military expenditures to increase sharply.

The final episode, which was triggered by the terrorist attacks of September 11, 2001, differs in one fundamental way from the first three. It is the only postwar instance of a military attack on the American homeland. The decisionmaking environment for this final episode is depicted by figure 2.7. In contrast to the three Cold War cases where the mean threat estimate was relatively high and hawks and doves ideal spending levels were far apart, the pre-911 environment combined a relatively low mean threat estimate and a rather compact variance. In the first post-Cold War decade, the typical American national security official saw no major security challenge in the international system. Indeed, the Clinton administration’s final National Security Strategy, published in 2000, began as follows: “As we enter the new millennium, we are blessed to be citizens of a country enjoying record prosperity, with no deep divisions at home, *no overriding external threats abroad*, and history’s most powerful military ready to defend our interests around the world.”<sup>21</sup> Though some were concerned about the terrorist threat, there was no widely held belief that Islamic extremists were capable of launching a large attack on American soil. As the authoritative 9-11 Commission concluded, “both Presidents Bill Clinton and George Bush and their top advisers told us they got the picture—they understood Bin Ladin was a danger. But given the character and pace of their policy efforts, we do not believe they fully understood just how many people al Qaeda might kill, and how soon it might do it. At some level that is hard to define, we believe the threat had not yet become compelling.”<sup>22</sup>

**(Figure 2.7 about here)**

The familiar hawk-dove divide was present, but quite compact. Some congressional Republicans pushed for higher military spending.<sup>23</sup> Kagan and Kristol summarized this conservative point of view in an editorial in the *Weekly Standard*, in which they asserted that President Bush risked going down in history as the president who allowed US military power to atrophy.<sup>24</sup> Other Republicans, as well as many Congressional Democrats, argued that increased military spending was not urgent; “this is not a terribly hawkish world” noted

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<sup>20</sup> Cited in Glad 2009, 205.

<sup>21</sup> The White House. 2000. *A National Security Strategy for a Global Age* (December 2000), iii.

<sup>22</sup> *The 9-11 Commission Report* (Washington, D.C.: GPO), page 342-3. See the general discussion of intelligence estimates of the terrorist threat in the pre-9-11 environment, *ibid* 340-344. The Commission criticized Congress for a similar failure to appreciate the threat in the pre-9/11 environment. “The legislative branch adjusted little and did not restructure itself to address changing threats. Its attention to terrorism was episodic and splintered” (p. 107).

<sup>23</sup> See, for instance, Dao, James. 2001. “Military Budget Creates Rift in G.O.P.: Fiscal Conservatives Clash With Advocates of Weapons Buildup,” *New York Times* (July 26): A18.

<sup>24</sup> Robert Kagan and William Kristol. 2001. “No Defense,” *The Weekly Standard* (July 23): 11

James Pinkerton.<sup>25</sup> Thus, while hawks wanted to increase spending moderately, doves wanted to hold the line.

In this low threat estimate environment, defense spending took a back seat to other policy concerns. Newly-elected President George W. Bush declared education his top priority in his first State of the Union address, and rather than increase military spending he asked Secretary of Defense Donald Rumsfeld to conduct an extensive review of force structure and make recommendations for reorganization.<sup>26</sup> In this environment, there was little pressure for large increases in military spending and little chance of getting one through Congress given the doves' threat assessment.<sup>27</sup>

The September 11 attack altered the mean threat estimate quite sharply and further reduced the variance. Evidence of the shift in beliefs about the threat posed by terrorist groups lies in the amount of high-level attention Congress and the executive dedicated to terrorism in the years surrounding the attack. The measure of congressional attention is the number of House and Senate Hearings dedicated to terrorism occurred in each year. The measure of executive attention is the number of times terrorism is mentioned in the state of the Union address. All three series track the same trend; terrorism received very little attention in Congress and received little attention in the State of the Union address until the 2001 attack. In the immediate aftermath of the attack, the House, the Senate, and the executive dedicated substantial attention to the threat to American interests posed by global terrorist networks.

**(Figure 2.8 about here)**

Not only did terrorism receive more attention, there was little disagreement that it constituted a serious threat. This compact distribution is evident in the overwhelming congressional support for the use of military power against terrorists and those who harbored them. The House passed the Authorization for Use of Military Force Against Terrorists on September 14, 2001 by a vote of 420 – 1 (with 10 not voting). The Senate passed the bill by a vote of 98 – 0, with two Senators present but not voting. Shortly thereafter, the House approved a \$343 billion defense budget by a 398 – 17 majority, and the Senate followed by passing a slightly larger bill by a 99 – 0 majority. This broad consensus persisted, though less firmly, through the vote on the Authorization for use of Military Force Against Iraq in October 2002. This bill passed in the House and Senate with smaller, but still overwhelming majorities: 297 – 133 in the House and 77 – 23 in the Senate.

We therefore see broadly similar causal mechanisms in all four episodes. In the pre-shock environment, uncertainty about the international threat allowed hawks and doves to hold widely divergent ideal military spending levels. Hawks invariably argued that the mean under estimated the threat and advocated for higher than the status quo military spending. Doves invariably argued that the threat was well below the mean estimate, and sought to reduce spending. In this environment, changes in military spending were quite small. Security shocks altered the variance and the mean of the threat estimate distribution. In particular, these unexpected military actions that targeted important US interests caused policymakers

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<sup>25</sup> Dao, James. 2001. "Democrats Say Bush's Tax Cuts Jeopardize Military Spending," *New York Times* (July 11): A14.

<sup>26</sup> In the spring of 2001, the White House proposed increasing total defense outlays from \$311 billion in FY 2001 to \$325 billion in 2002 and to \$334 billion in FY 2003. These are small increases. Executive Office of the President of the United States. 2001. Budget of the United States Government (<http://www.gpo.gov/fdsys/pkg/BUDGET-2002-BUD/pdf/BUDGET-2002-BUD.pdf>) page 19.

<sup>27</sup> This of course is a difficult counterfactual in absence of prior vote in this session. But see, for instance, Pat Towell. 2001. "Defense Budget Boost 'in Play', *CQ Weekly* (July 14), 1682.

to greatly increase the estimated threat and to sharply reduce the uncertainty around this estimate. As doves updated their beliefs in response to this new threat estimate, they increased their ideal military spending levels quite substantially.

#### **D. Conclusion**

We began this chapter with a simple question: what has driven changes in postwar US military spending? As we noted, the distribution of changes military spending is leptokurtic, characterized by tall peaks and fat tails. This means that most year-to-year changes in postwar military spending have been very small, but a few, and far more than we expect, have been quite large. What are the characteristics of the political process that seems to powerfully constrain military spending most of the time, but permits very large changes to these expenditures on occasion?

This chapter offered an answer to this question based on the interaction between estimates of the international security threat and institutional characteristics of American politics. I have argued that American policymakers have varied military spending in response to the severity of the threat to US interests present in the international system. Their ability to vary military spending in response to this threat is constrained by two factors. First, American policymakers do not know the true threat to American interests present in the system. The threat estimate is better characterized as a distribution rather than as a point. The mean of this distribution represents the “best estimate” of the threat, while the variance of the distribution represents the uncertainty of the threat estimate—recognition that the threat could be greater or lesser than the best estimate.

Second, the uncertainty that surrounds the threat estimate interacts with institutional characteristics of the American political system to impart a strong status quo bias to military spending. In every postwar administration, hawks and doves positioned themselves at different points under the distribution of threat estimates. Doves believed that the mean threat estimate over-stated the true threat and preferred correspondingly lower levels of military spending. Hawks believed that the mean threat estimate under-stated the true threat and preferred correspondingly higher levels of military spending. Once spending is set, each blocks subsequent efforts by the other to pull military spending closer to their ideal point. Consequently, most changes in military spending are quite small.

The system produces large changes in military spending in response to global security shocks. Global security shocks are fully unanticipated exogenous events, like the terrorist attacks of September 11 or the collapse of the Soviet Bloc, the Soviet invasion of Afghanistan, which alter fundamentally the distribution of threat estimates. These shocks provided unambiguous novel information that the security threat is much greater or lesser than previously believed. Moreover, the clarity of the signal reduced the uncertainty around this threat substantially. Hence, the mean of the threat estimate distribution shifts and the variance narrows. As hawks and doves update their beliefs in response to this shock, their preferred military spending levels converge around a budget that is far above (or below) the status quo. As a result, military spending changes sharply.

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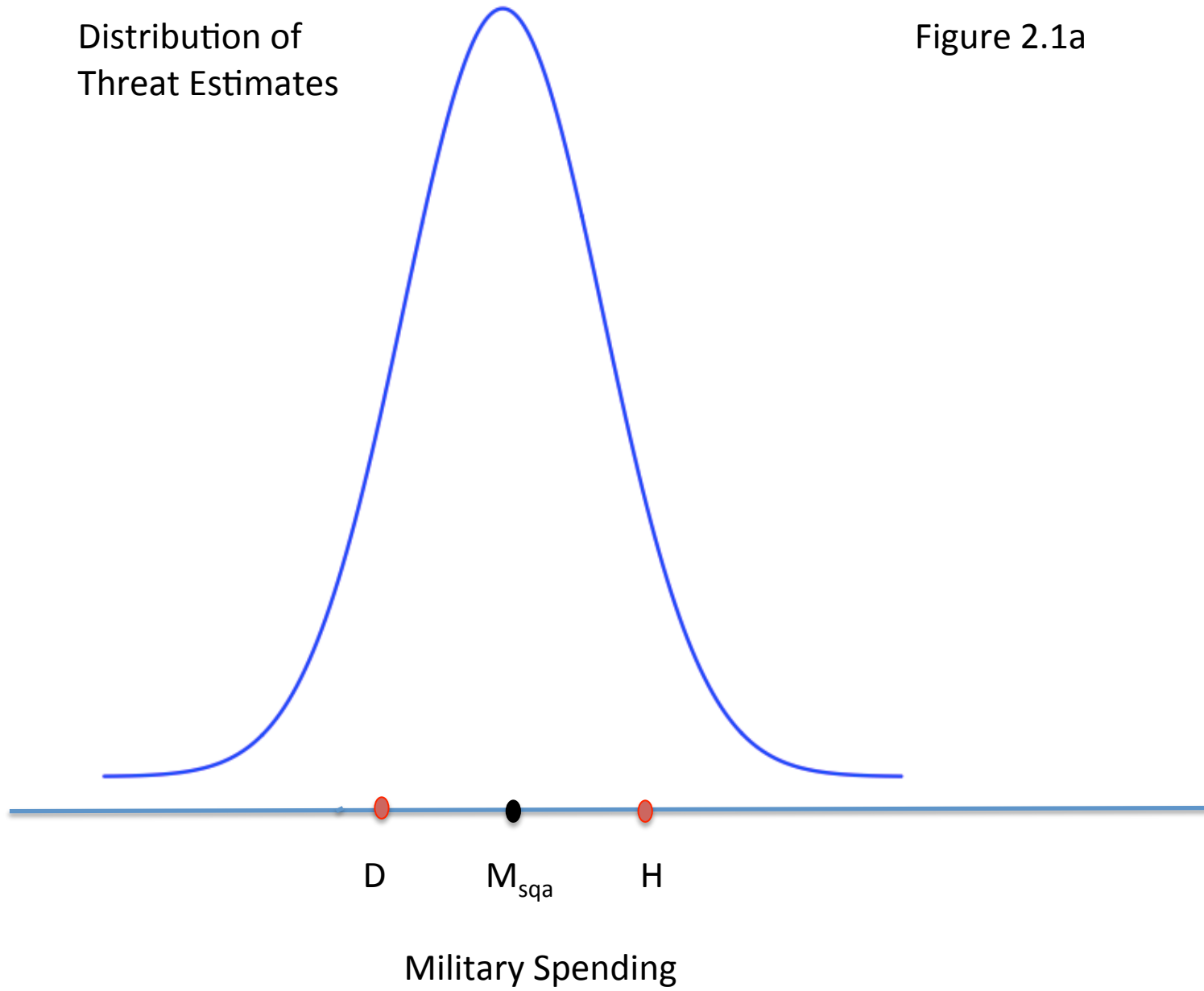
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Distribution of  
Threat Estimates

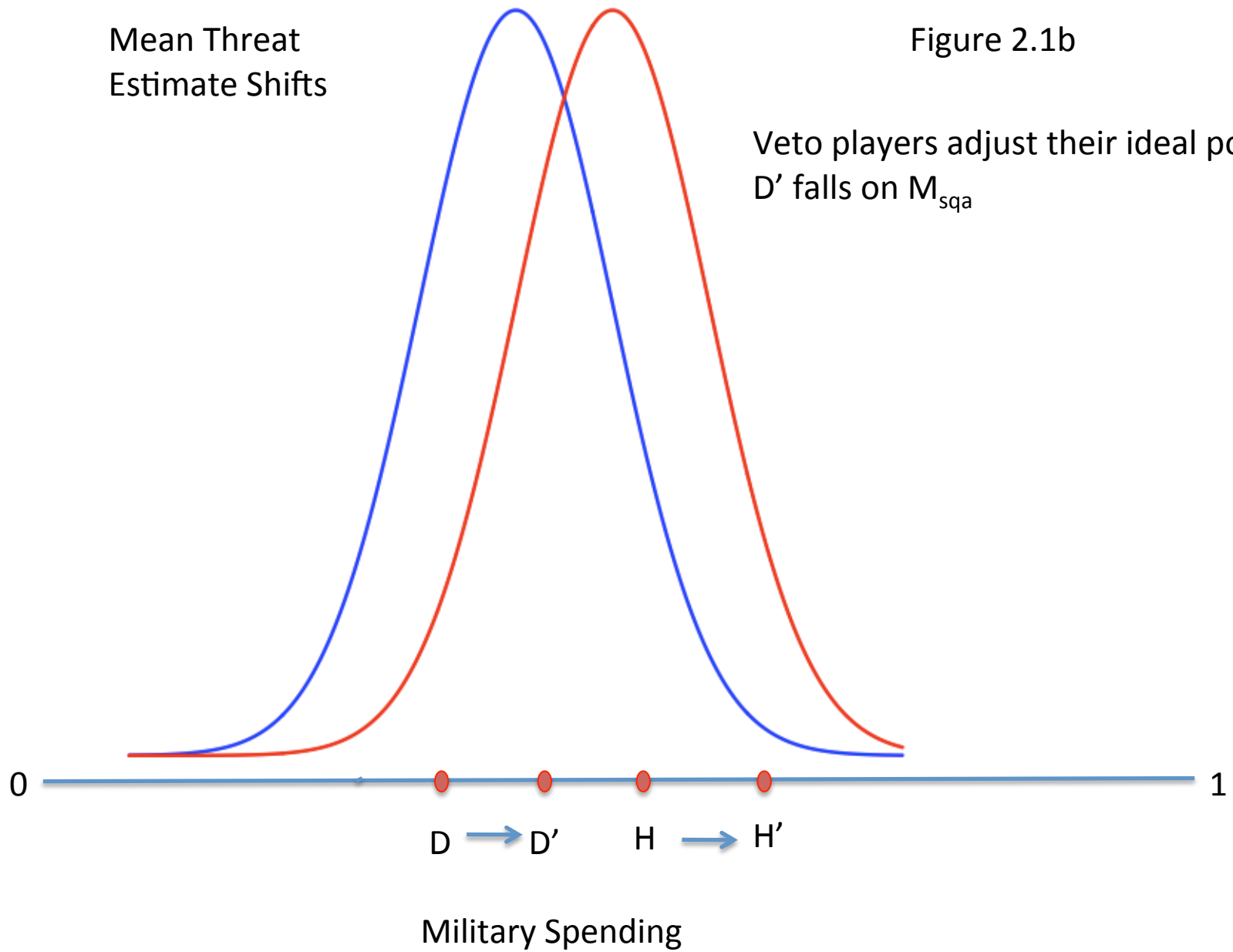
Figure 2.1a



Mean Threat  
Estimate Shifts

Figure 2.1b

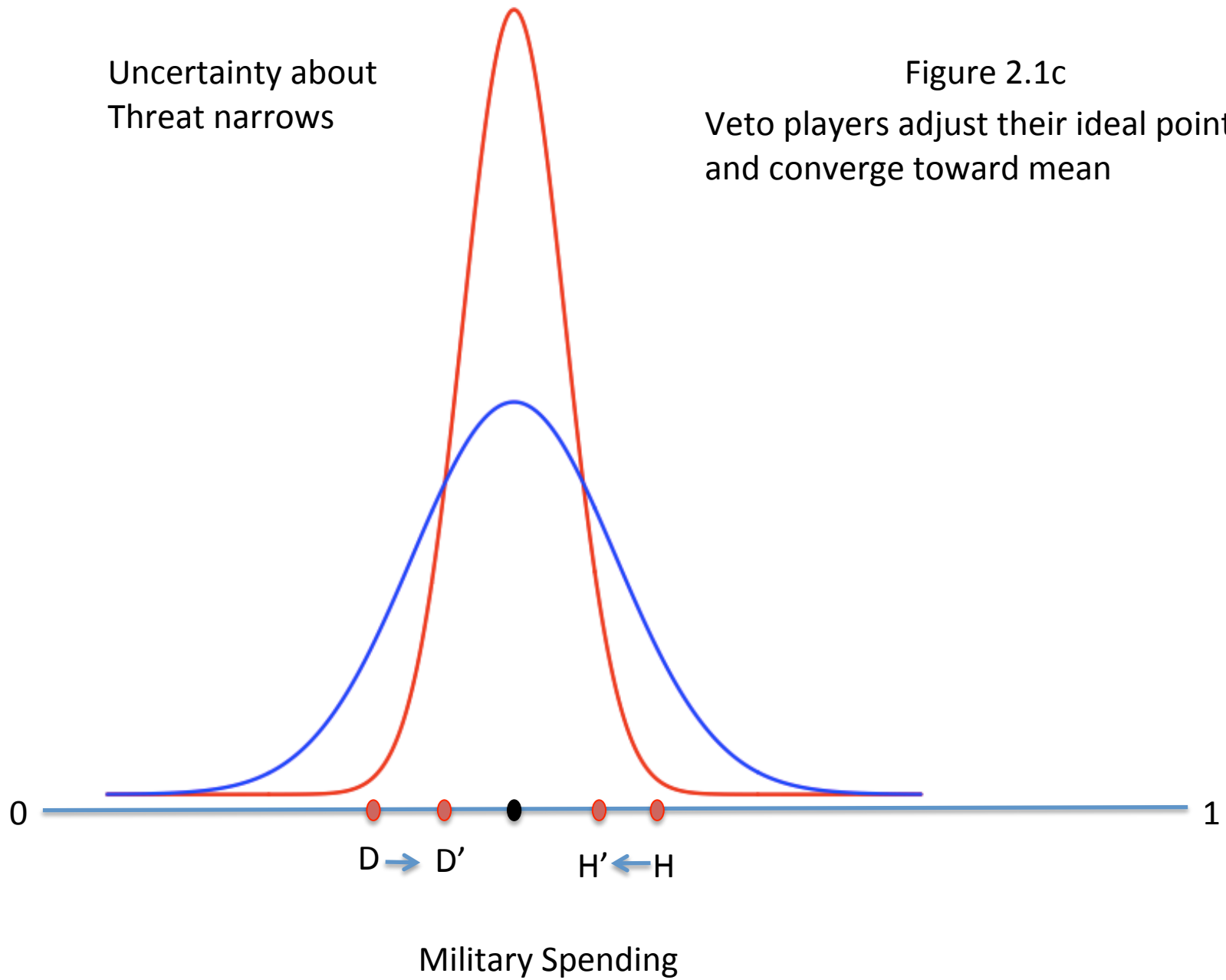
Veto players adjust their ideal points.  
 $D'$  falls on  $M_{sq}$



Uncertainty about  
Threat narrows

Figure 2.1c

Veto players adjust their ideal points  
and converge toward mean

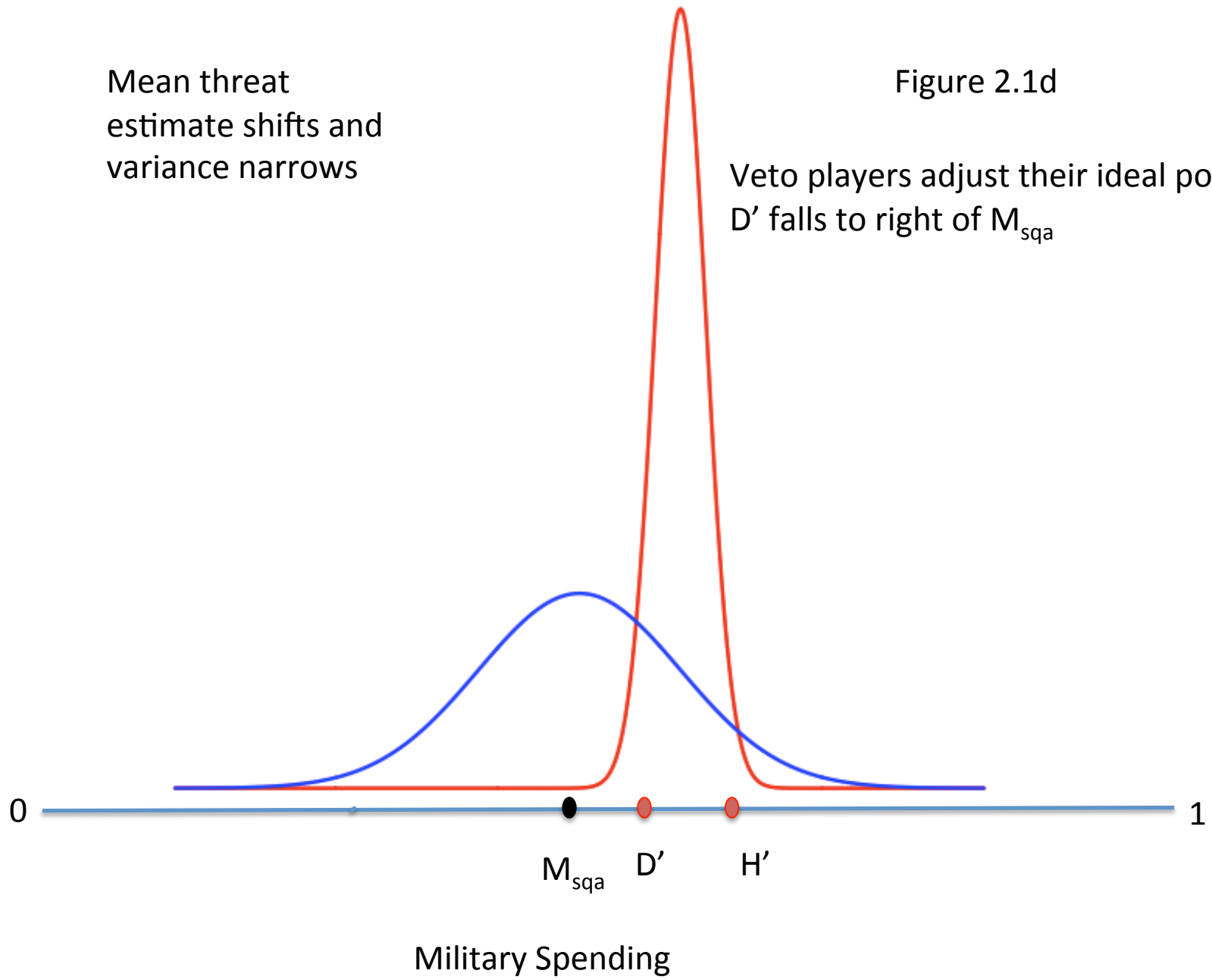




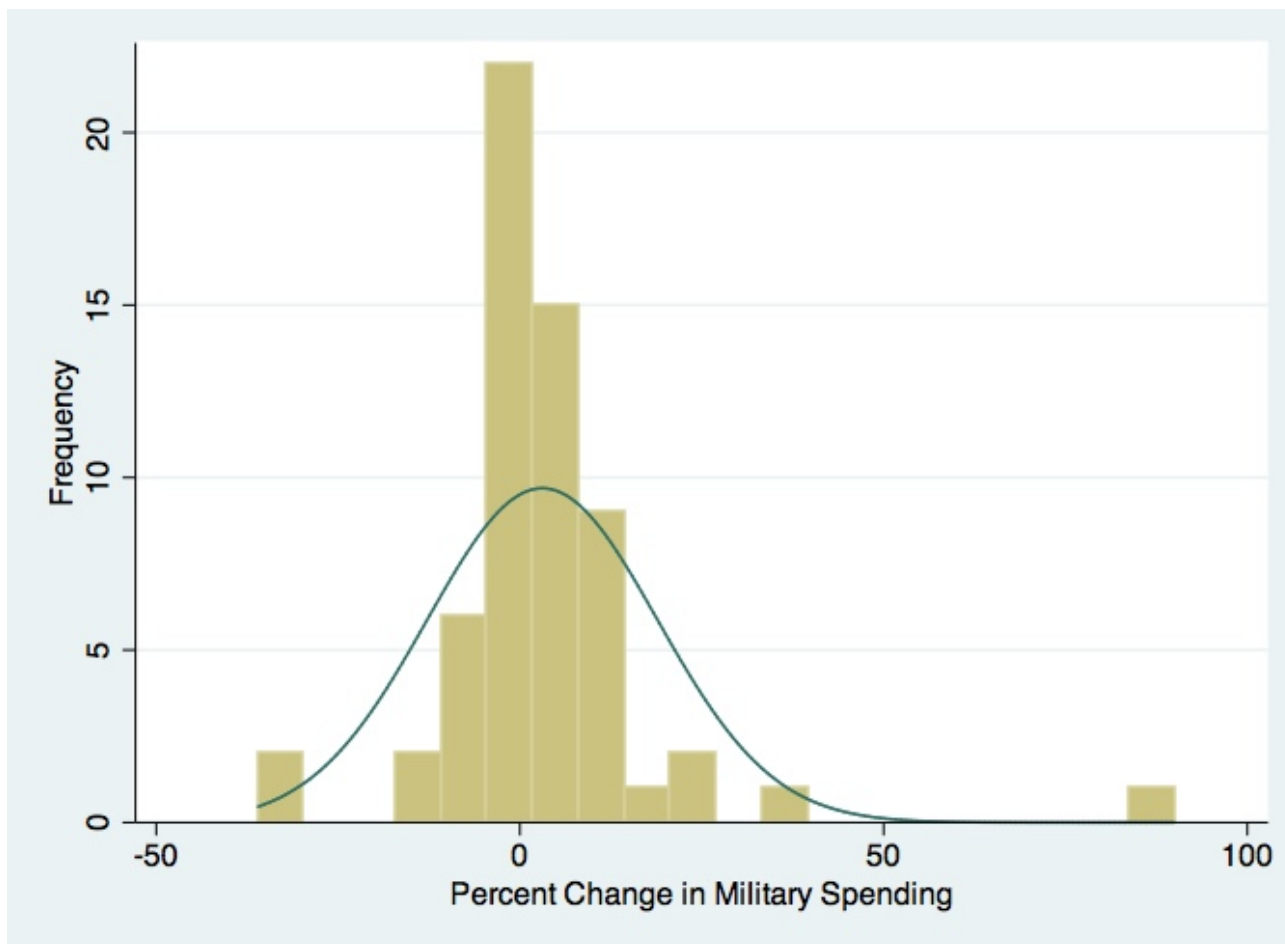
Mean threat  
estimate shifts and  
variance narrows

Figure 2.1d

Veto players adjust their ideal points.  
 $D'$  falls to right of  $M_{sqa}$

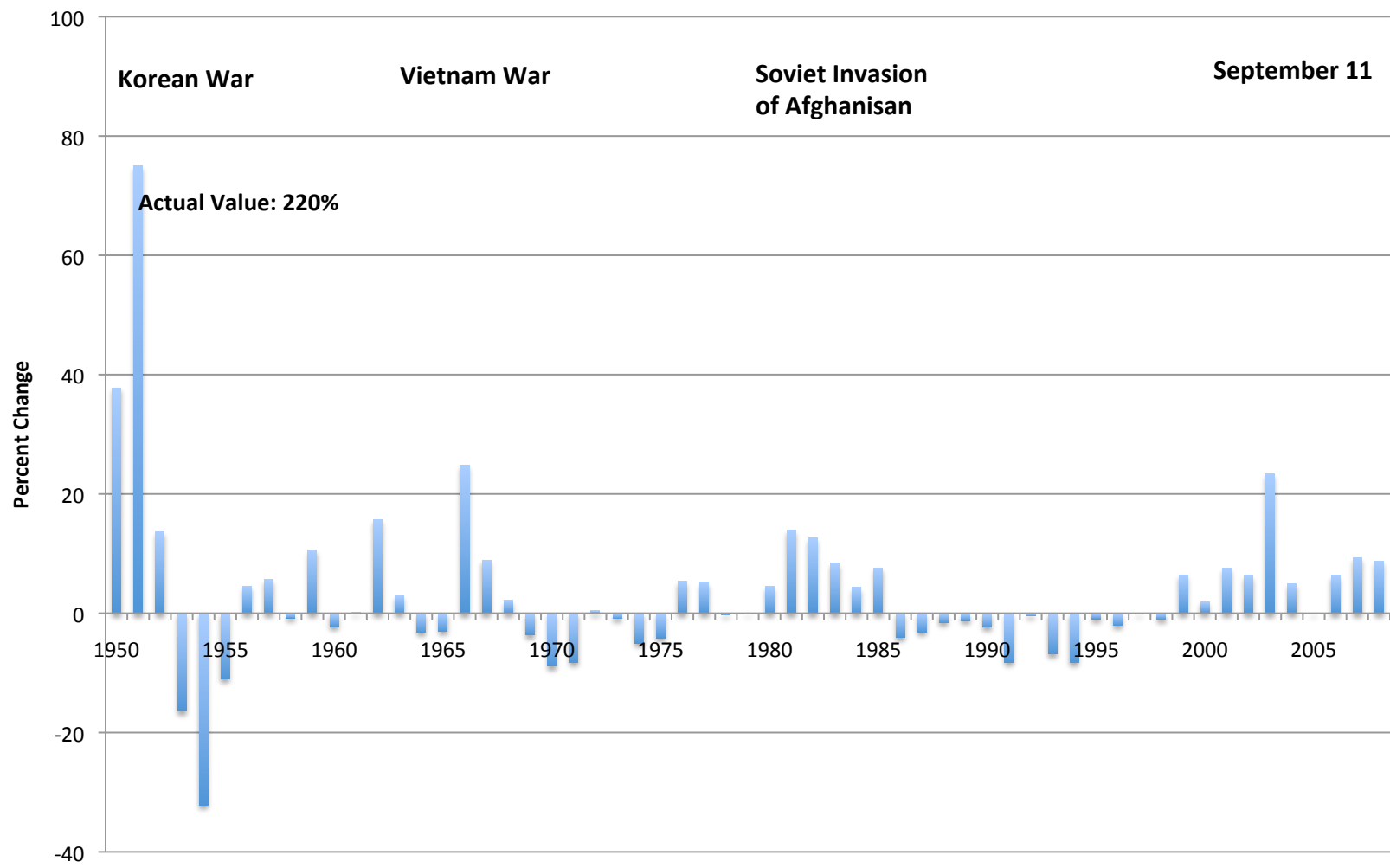


**Figure 2.2: Distribution of Changes in Military Spending**



Conflict	Year War Starts	Year War Ends (If lasts longer than 1 year)	Security Shock	Large Change in US Military Spending
Korean	1950	1953	Yes	Yes
Sino-Tibetan	1950	1951	No	(No)
Russo-Hungarian	1956		No	No
Sinai	1956		No	No
Assam/Sino-Indian	1962		No	No
Vietnamese	1965	1975	Yes	Yes
Second Kashmir	1966		No	No
Six Day	1967		<u>Ambig?</u>	No
Israeli-Egyptian	1969	1970	<u>Ambig?</u>	No
Football	1969		No	No
Bangladesh	1971		No	No
Yom Kippur	1973		<u>Ambig?</u>	No
<u>Turco-Cypriot</u>	1974		No	No
Vietnamese-Cambodian	1975	1979	No	No
<u>Ethiopian-Somalian</u>	1977	1978	No	No
Ugandan-Tanzanian	1978	1979	No	No
Sino-Vietnamese	1979		No	No
Soviet-Afghanistan	1979	1988	Yes	Yes
Iran-Iraq	1980	1988	No	No
Falklands	1982		No	No
Israel-Syria (Lebanon)	1982		No	No
Sino-Vietnamese	1985	1987	No	No
Gulf War	1990	1991	Yes	No
Azeri-Armenian (Nagorno-Karabakh)	1992	1993	No	No
Yugoslavia	1993		No	No
Eritrea-Ethiopia	1998	2000	No	No
India-Pakistan	1999		No	No
NATO-Yugoslavia	1999		No	No
Al-Qaeda-US	2001	<u>ongoing</u>	Yes	Yes

**Figure 2.3: Security Shocks and Changes in Military Spending**



**Figure 2.2: Security Shocks and Changes in Military Spending**

	Changes in Military Spending	Log of Absolute Values of Changes	Log of Positive Changes
Security Shock	19.83	.56	1.28
	(3.84)	(.16)	(.51)
Change in Spending t-1	0.43	.49	.09
	(0.10)	(.11)	(.18)
Change in Soviet Spending $t-1$	0.38	-6.75e-10	1.30
	(3.75)	7.99e-10	(1.59)
Change in Unemployment $t-1$	-2.66	.03	-.10
	(1.36)	(.06)	(.16)
Presidential Election Year	-3.3	-.31	-.68
	(3.07)	(.18)	(.54)
Party of the President	-0.87	-.08	-.21
	(2.98)	(.14)	(.65)
End of Cold War	-22.17	-.61	
	(8.24)	(.38)	
Constant	0.44	.33	2.90
	(1.97)	(.15)	(.96)
Rho	0.004	-.32	
Observations	59	59	30
Adjusted R2	0.49	.40	.28
F Statistic	8.93	5.96	2.10

Figure 2.4: Actual vs. Predicted Changes in US Military Spending

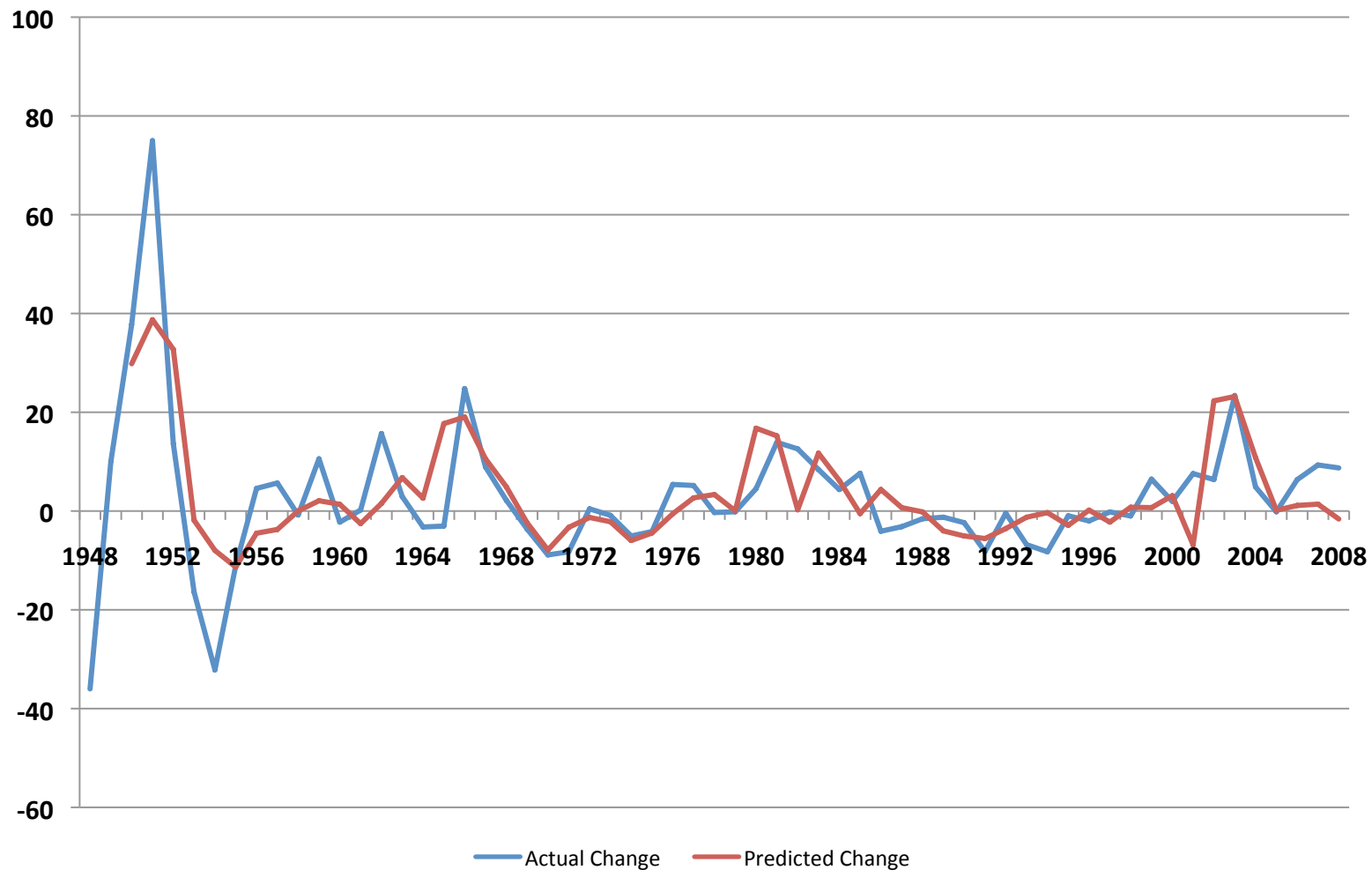


Figure 2.5: Decision Making Environment Pre and Post North Korean Invasion

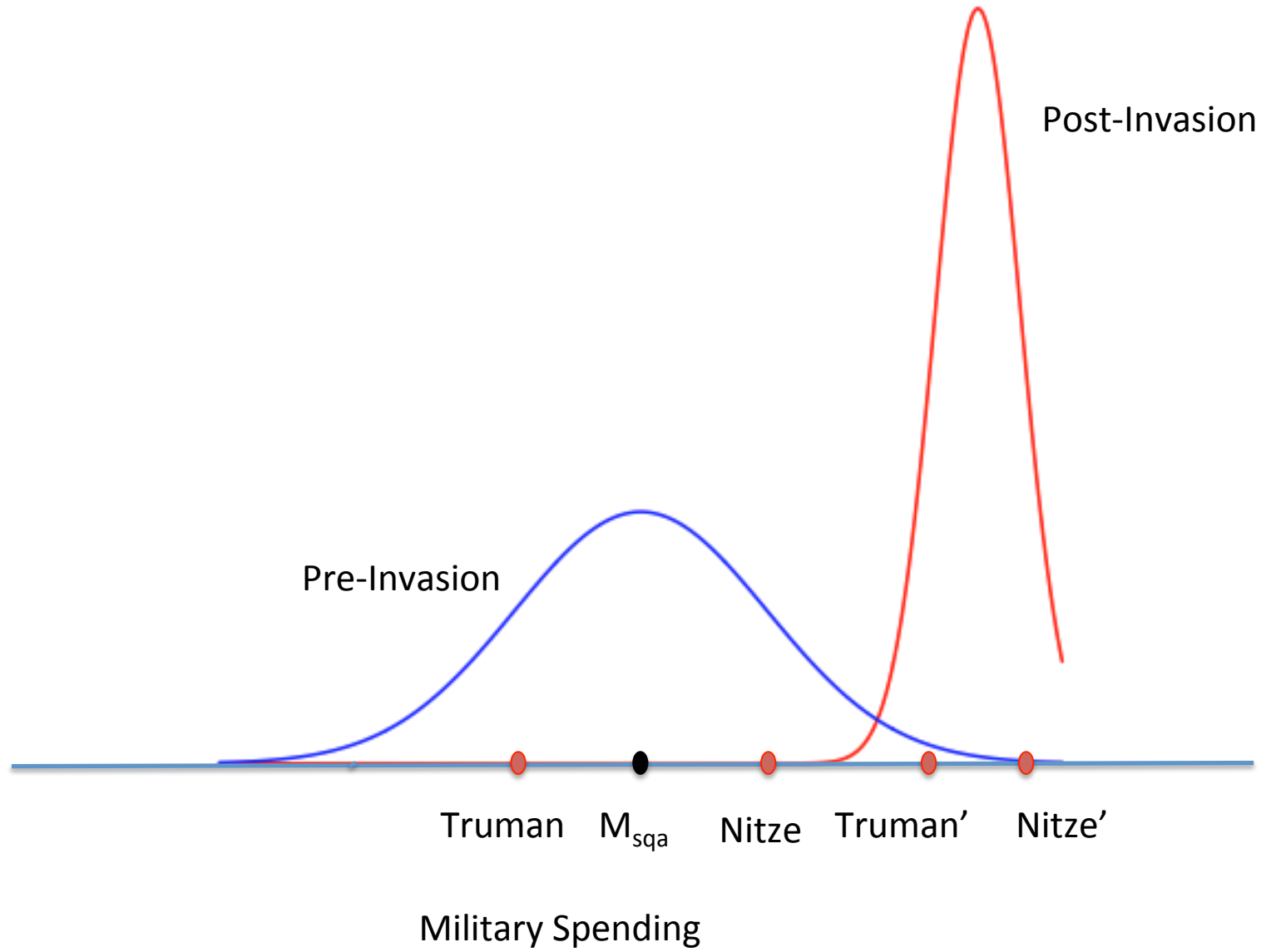


Figure 2.6: Decision Making Environment 1964-1965

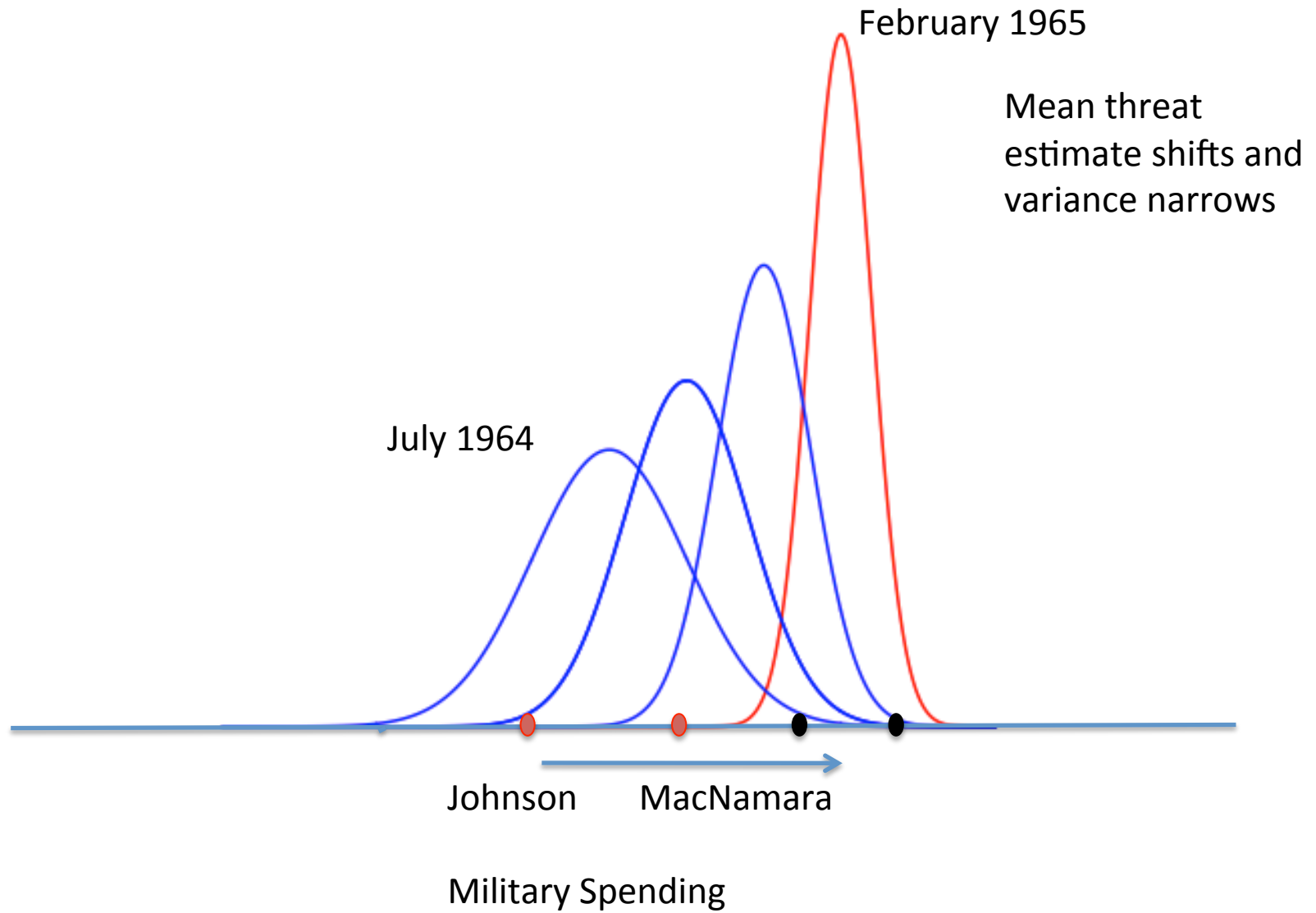




Figure 2.7: Decision Making Environment Pre and Post Soviet Invasion of Afghanistan

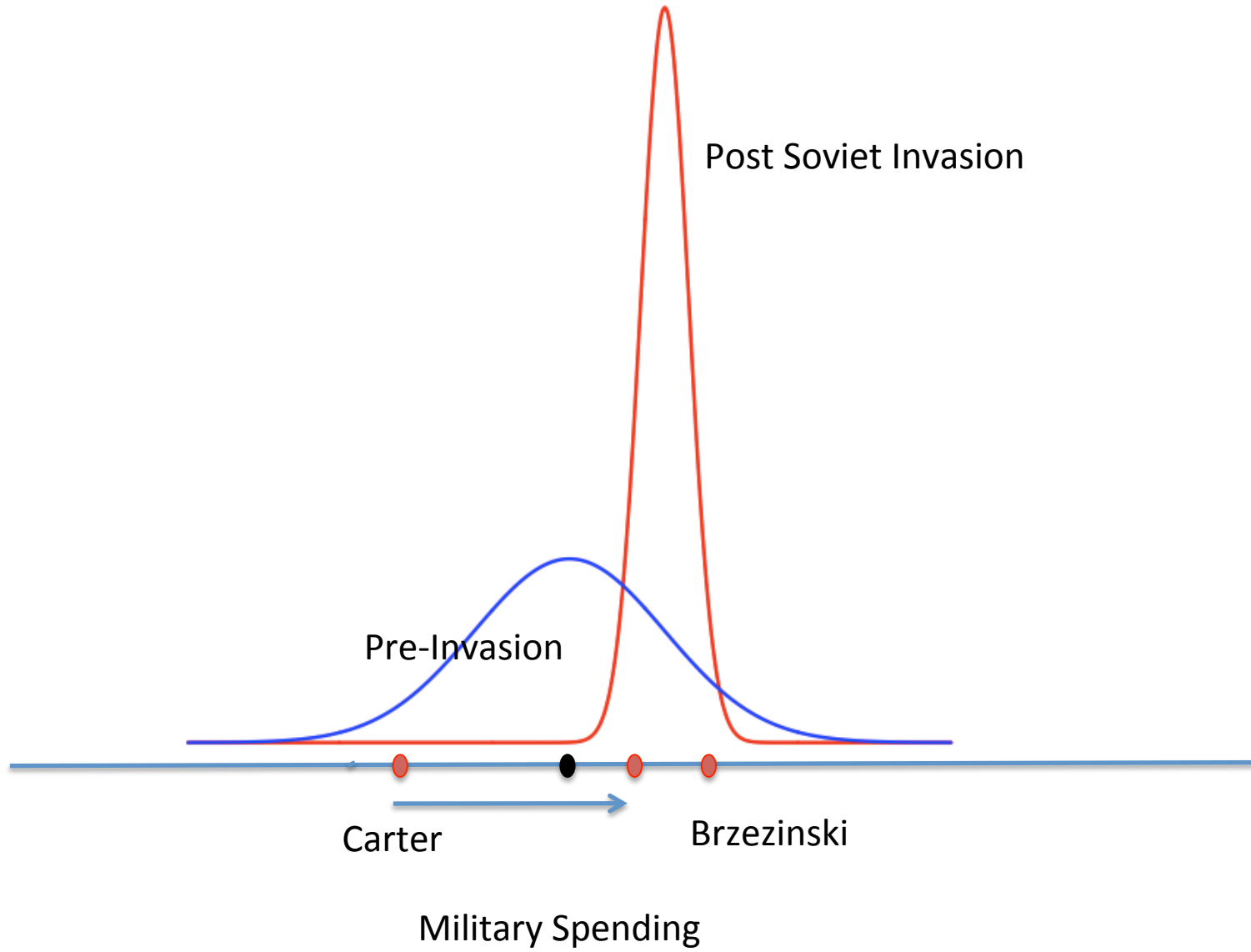


Figure 2.8: Decision Making Environment, Before and After 9/11

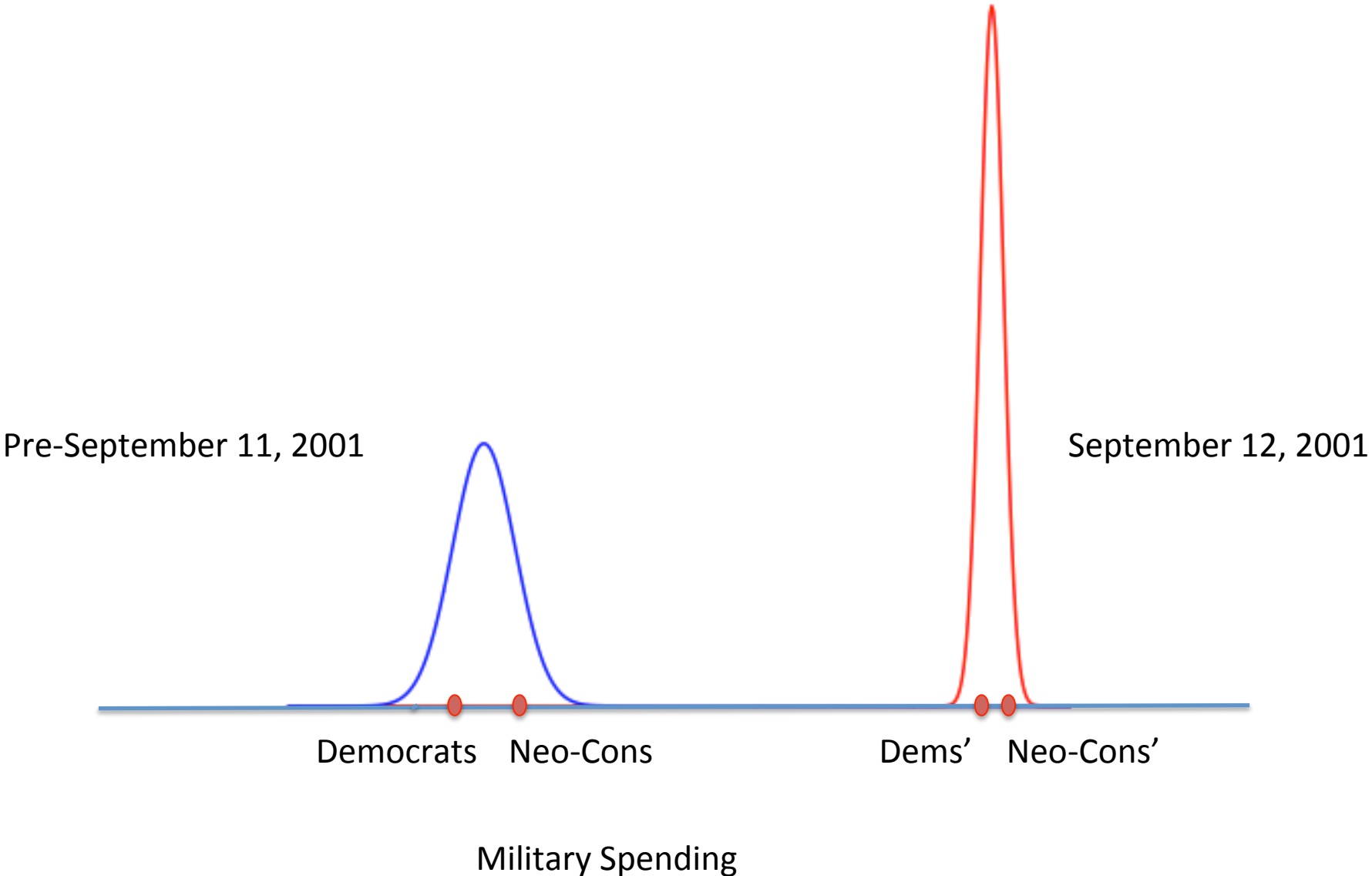


Figure 2.9: Attention Devoted to Terrorism, 1993-2011

