The Strategy of Territorial Conflict

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Many empirical studies have found that disputes over territory are central to the outbreak and intensity of the majority of interstate military conflict. However, the existing literature lacks an explicit theoretical link between the role territory plays in disputes and the outbreak of violence as well as an exploration of how the control of territory is related to conventional military capabilities. This article demonstrates that the targets of territorial claims can consolidate their control over disputed territory to improve their ability to fight effectively on it. The empirical analysis suggests that when territory is strategically located, target states are more likely to consolidate their position, while challenger states are less likely to escalate militarily. Furthermore, when the presence of territorial characteristics such as strategic location makes consolidation an effective strategy, target states are increasingly likely to consolidate as they face stronger opponents.

In the early morning hours of February 17, 1979, China crossed into Vietnam with nearly 100,000 troops backed up by heavy artillery and armored units. The stated purpose of the incursion was to punish Vietnam for its behavior related to disputed territory in the border region between the two countries and some disputed islands. At the outset of the conflict, China possessed both a numerical and a qualitative advantage in its forces stationed at the border. Despite these advantages and a lopsided advantage in overall capabilities, the Chinese incurred very high costs and experienced great difficulty penetrating Vietnamese defenses. The Vietnamese were relatively successful in large part because several key characteristics of the disputed territory made consolidation of their position at the border quite successful. Vietnam had constructed a series of border defenses and traps in the rugged mountainous terrain. Additionally, the Vietnamese implemented a provocative policy of forced emigration that sent about 200,000 ethnic Chinese from the Vietnamese side of the border, fostering chaos and instability on the Chinese side while removing a population potentially friendly to its opponent. After about a month of tough and costly fighting, China withdrew its forces. The Sino-Vietnamese case is puzzling in light of the bulk of empirical findings regarding the balance of capabilities and states’ propensity and ability to escalate and fight militarized conflicts. Despite the existence of numerous similar cases in which a relatively weak opponent was able to favorably consolidate its control over territory in a way that increased its military capabilities relative to a stronger power (e.g., the Vietnam War), existing ideas about how territory relates to military capabilities are not well developed.

I argue that in cases such as the Sino-Vietnamese dispute, territory plays an important, yet largely unexplored, role in affecting military capabilities. Theoretically, the idea that the control of territory significantly affects states’ military capabilities has been noted (Fearon 1995a, 1995b; Powell 2006; Smith 1998; Wagner 2000, 2007). However, how the possession of territory affects military capabilities is largely unexplored. I argue that the effect that a piece of territory has on the balance of military capabilities between disputants is in large part a function of the actions the state in control of the territory can take in it. In territorial disputes, it is generally the target of territorial claims that controls disputed territory. Consequently, I argue that territory can augment a target state’s capabilities if its control of it can be consolidated in a way that improves its military position relative to its opponent.
Territorial consolidation specifically refers to attempts by the target state to alter the military, economic, or political status quo in disputed territory such that its military capabilities are augmented. Obviously, territorial consolidation is not equally effective across all pieces of territory. I argue that territory with characteristics directly relevant to the military, economic, and political situation is especially ripe for consolidation. Specifically, I focus on the characteristics of strategic location, the presence of valuable economic resources, and/or the presence of a minority with ties to the challenger state. The presence of any or all of these three characteristics presents the target state with conditions that, all else equal, can be effectively manipulated to alter the status quo. Thus, two factors helped Vietnam to successfully battle against long odds: the strategic nature of the mountainous region as the bottleneck to the entire Red River valley and the presence of a sizable population of ethnic Chinese. The Vietnamese were able to effectively consolidate because key characteristics of the disputed territory facilitated alteration of local conditions in a militarily favorable manner. I show that this case is just one in a general, but thus far overlooked, pattern in territorial conflict.

This article demonstrates that territory plays an important endogenous role in shaping military capabilities. The possession of territory with important characteristics affects a state’s ability to consolidate and improve its military position. To show the implications of territory’s endogenous role, I develop an intuitive theoretical framework that illustrates why and when the target of a territorial claim strategically consolidates its position in the disputed territory. The model demonstrates that as target states are weaker relative to their opponents, they are more likely to consolidate their position in the disputed region, conditional on consolidation having a large enough effect on a target’s military prospects. Targets consolidate disputed territory when they face stronger opponents because strong challengers represent more of a military threat and are more apt to find the application of military force an attractive means to resolve a dispute. I demonstrate empirically that consolidation is effective in reshaping the military situation when territory is strategically located, as this increases the probability the target consolidates and simultaneously deters some challengers from escalating disputes. Furthermore, a clear understanding of the logic behind the target’s decision to consolidate sheds new light on a set of interesting cases in which weak states very effectively defended territory when facing stronger opponents (e.g., the Sino-Vietnamese dispute).

1 All three characteristics are specifically defined later in the article.

The Territorial Gap in the Conflict Literature

Scholars of international relations have long found conflict over territory to be one of the key factors that lead states to war (Goertz and Diehl 1992; Hensel 2000; Hill 1945; Holsti 1991; Kocs 1995; Luard 1986; Vasquez 1995). For instance, in analyzing the population of interstate wars from 1816 to 1992, Paul Hensel (2000, 63) finds that over 50% of wars included issues of disputed territory. Additionally, regardless of whether two states have a contiguous border, disputes with a territorial dimension are much more likely to lead to conflicts with fatalities than disputes with no territorial dimension (Hensel 2000, 72–74). Similarly, John Vasquez (1995, 284) finds that in five historical periods from 1648 to 1990, a minimum of 79% of wars were fought over territory-related issues.

In spite of a wealth of powerful empirical evidence that territorial disputes play a central role in the outbreak of international conflict, no study explores how territorial characteristics affect states’ abilities or incentives to consolidate their military position. Consequently, our understanding of how consolidation affects military capabilities and thus the outbreak and character of military conflict is limited.

A massive amount of scholarship deals with the connection between disputed territory and the eventual outbreak of war. One prominent vein of literature is the territoriality explanation for war. Scholars advocating this explanation generally argue that geographic proximity provides states with an opportunity to initiate conflict, while the relative salience of territorial disputes makes states willing to bear the associated risks and costs (Goertz and Diehl 1992; Senese 2005; Vasquez 1995). Thus, authors such as Senese (2005) investigate the effects of variables such as contiguity and the geographic distance between disputants. While such analysis is quite useful in highlighting broad empirical trends, it only provides a very general analysis of the conventional military situation facing states in territorial disputes. Furthermore, distance and contiguity undoubtedly affect states’ military calculations, but neither are variables that states have much ability to alter. Thus, the territoriality viewpoint leaves us with a rather static view of the military strategy surrounding territorial disputes. Furthermore, it provides little traction in putting forth a rich explanation of cases such as the Sino-Vietnamese dispute since nearly all territorial disputes involve contiguous states.

The work of Huth (1996) and Huth and Allee (2002) goes a step further by analyzing the effect that important territorial characteristics have on dispute initiation.
FIGURE 1 Consolidation of Disputed Territory

and escalation. Despite providing several significant advances, neither of these studies addresses the idea that territory itself is a source of power, especially when a disputant can strategically consolidate disputed territory. Territorial characteristics such as strategic location are analyzed primarily as factors that increase the disputants’ valuations of the territory and not as variables that can affect states’ means to obtain territory (i.e., military capabilities). Consequently, the theoretical frameworks employed by Huth (1996) and Huth and Allee (2002) do not make significant distinctions between how territorial characteristics affect the behavior of the challenger and target states. Rather, both the challenger and target are hypothesized to be more likely to escalate as their relative capabilities increase and when the territory holds valuable characteristics such as strategic location. As I show below, territory with key characteristics can be consolidated in a way that augments the capabilities of target states. This finding has important and previously unexplored implications for how variables such as relative military capabilities or strategic location influence challenger and target behavior.

As noted above, the theoretical idea that territory is a source of power has been recognized by scholars but has not been developed. Fearon (1995b, 408–9) and Powell (2006, 186–88) argue that disputes over territory with characteristics that make it a source of military power (e.g., valuable economic resources) can lead to militarized conflict due to commitment problems. In short, because the transfer of such territory leads to large shifts in the balance of capabilities, the potential recipient of the territory cannot credibly commit not to use its increased power to gain further concessions. However, when territory possesses characteristics that are a source of power, the target has incentives to consolidate its control of the territory to augment its capabilities, a point that has been previously overlooked. This article focuses on how the possession of territory with key characteristics affects a state’s ability to consolidate and improve its military position.

The Territorial Dispute Game

In order to show the strategic logic of the consolidation of territory, or why and when target states consolidate territory to augment their military capabilities, the complete and perfect information game-theoretic model pictured in Figure 1 is formulated. The game starts with a potential challenger state that chooses to keep active (or activate) a challenge to the territorial status quo or not. If no dispute is active, then the status quo ensues and the challenger state receives a payoff of 0, while the target state receives its valuation of the disputed territory, \( v_t(r) > 0 \). The variable \( \tau \in [0, 1] \) measures the territory’s tangible characteristics relevant to the state’s military, political, and/or economic situation. Thus, values of \( \tau \) close to 1
indicate territory that is endowed with many relevant tangible characteristics, while values close to 0 indicate that the territory has few, if any, identifiable characteristics. If a challenge is made, the target decides whether to respond via an attempt to consolidate its position in the disputed territory. Consolidation refers to attempts by the target state to alter the military, economic, or political status quo in the disputed territory in its favor. Thus, via consolidation, the target is trying to strengthen its grip on the disputed territory in a way that augments its capabilities relative to the challenger. Consolidation is intended to make fighting easier for the target. The final move is taken by the challenger, who after observing target action, decides whether to attempt to take the territory via military force.3

If the target does not consolidate and the challenger does not choose to use force, the challenger receives a payoff of \( x_i \in (-\infty, \infty) \), while the target receives \( v_i(\tau) + x_i \), where \( x_i \in (-\infty, \infty) \). The \( x_i \in (-\infty, \infty) \), where \( i \in \{c, t\} \), terms capture any additional negative or positive payoff associated with the two outcomes in which a dispute is active but fighting does not occur. A reasonable argument can be made for the \( x_i \) terms being either positive or negative. On the one hand, it is widely noted that territorial challengers have an incentive to ensure a claim is kept open, even if they do not aggressively pursue their claim. Given the importance of precedents in territorial issues, challenger states let claims become inactive at the risk of losing any solid legal basis for their claims (Murphy 1990; Ratner 1996). It is also plausible that challenger states may face something similar to an “audience cost,” domestically (Fearon 1994) or internationally (Sartori 2003), for not acting aggressively on an active claim. Thus, while the literature on territorial claims suggests that challenger states receive positive payoff from keeping disputes open, the theoretical literature on audience costs suggests that the opposite is also plausible.

If the target does not consolidate and the challenger chooses to fight, then both sides receive a payoff of their valuation of the territory multiplied by the probability they win, \( p(m)v_i(\tau) \) for the challenger and \( [1 - p(m)]v_c(\tau) \) for the target, minus the costs of fighting, \( k_c > 0 \) for the challenger and \( k_t > 0 \) for the target. The function \( p(m) \in [0, 1] \) measures the probability the challenger wins a war over the disputed territory, which is an increasing function of the challenger’s share of the two states’ total military capabilities, or \( m \).

If the target chooses to consolidate its position in the disputed territory and the challenger chooses to fight, the players’ payoffs change to reflect the effect of target efforts. The coefficient \( \alpha(\tau) \in (0, 1) \) measures how effective consolidation is in altering the military situation that faces the two states in the disputed territory. Values that approach 0 indicate that consolidation is extraordinarily effective in augmenting target capabilities while values that approach 1 indicate that consolidation efforts have little effect. We assume that \( \alpha \) is a nonincreasing function of the territory’s relevant military, political, and economic characteristics. Thus, while characteristics can increase the effectiveness of consolidation, they are not assumed to always have such an effect. Given that target consolidation is also costly, the target’s utility for fighting given consolidation is \( [1 - p(m)\alpha(\tau)]v_c(\tau) - k_t - k_a \), where \( k_a > 0 \) captures this cost. The challenger’s utility for fighting, \( p(m)\alpha(\tau)v_t(\tau) - k_c \), is (possibly) negatively affected by consolidation.4 If the target consolidates but the challenger chooses not to fight, the challenger receives \( x_c \), while the target receives \( v_t(\tau) + k_t - k_a \).

Summary of Results

I use the subgame perfect equilibrium (SPE) concept to analyze the game. Since the game is sequential and played once with complete and perfect information, there is a unique equilibrium in pure strategies for any distribution of the parameters in the model (Mas-Colell, Whinston, and Green 1995, 276).5 Complete and perfect information is appropriate here because I am primarily interested in the observable physical effects that consolidation has on the military situation, not in informational asymmetry or how target consolidation signals “resolve.”

The equilibrium conditions are summarized in Table 1. The table displays the equilibrium behavior of the two players in the game with the corresponding conditions that must hold for each possible path of play to be optimal. The table is constructed to correspond with the logic of backwards induction the challenger and target use to decide what action to choose. The column on the far left indicates the three possible equilibrium paths of play for the challenger when it has already activated a dispute. The formal condition for this path of play to be optimal

\[ \text{If the target consolidate...} \]

3This model is not intended to explain why states initiate militarized conflicts instead of agreeing to some division of the disputed territory. Relatedly, Carter and Goemans (2010) provide considerable evidence that territory is not treated continuously when divided up by states.

4The character of the results are not dependent on the assumption that \( p(.) \) is a linear function of \( \alpha(\tau) \). We make the relation linear in order to keep the equilibrium conditions relatively intuitive.

5For formal demonstration of this uniqueness result, see Proposition 9.B.2 in Mas-Colell, Whinston, and Green (1995, 276). The only additional requirement for this result to hold is that no player be indifferent over two possible actions. I make the fairly standard assumption that indifferent players take the less conflictual action.
Table 1 Summary of Results

<table>
<thead>
<tr>
<th>Condition for Active Dispute</th>
<th>Target Action Given Dispute</th>
<th>Challenger Action Given Dispute</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \frac{p(m)v_t(\tau)}{} )</td>
<td>T Consolidates If</td>
<td>C Always Fights If</td>
</tr>
<tr>
<td>( \frac{p(m)v_t(\tau)}{c(\tau)} )</td>
<td>T Consolidates to Deter If</td>
<td>C Fights If No Consolidation</td>
</tr>
<tr>
<td>( \frac{p(m)v_t(\tau)}{c(\tau)} &lt; 1 )</td>
<td>T Consolidates to Not Consolidate If</td>
<td>C Never Fights If</td>
</tr>
<tr>
<td>( \frac{p(m)v_t(\tau)}{c(\tau)} = 1 )</td>
<td>T Never Consolidates</td>
<td></td>
</tr>
</tbody>
</table>

The strategy of territorial conflict is summarized in Table 1. The first column lists the conditions under which the challenger consolidates its position. The second column indicates the target's action if the consolidation occurs. The third column describes the challenger's action. The precise condition that must be met is listed to the right of each condition. For example, if the challenger is strong enough and values the territory highly enough, then it is possible for it to prefer to fight regardless of target actions. Furthermore, the target consolidates if doing so has a great enough effect on its chances of winning. This is true when the challenger always prefers fighting (i.e., the first row) as well as when the challenger never prefers to fight in the absence of consolidation (i.e., the second row). In the latter case, consolidation acts as a deterrent to the challenger. The third row depicts the scenario in which the challenger is too weak or values the territory too little to ever prefer a militarized confrontation. If this is the case,
the target never consolidates as it knows that a militarized confrontation will not occur.

**Empirical Implications**

The model has interesting implications for the effect that target consolidation has on the conventional military situation and the outbreak of militarized conflict. Since the implications of the model are assessed below with data, I begin to introduce some of the variables used in the theoretical model. Additionally, I introduce the language of the statistical model by discussing the actors’ choices probabilistically.

First of all, the three equations in the second column of Table 1 indicate that militarily stronger challengers are more likely to fight, since \( x + k / p(m, \tau) \) decreases as the military balance, \( m \), increases to favor the challenger.

**Expectation 1.** The probability the challenger chooses to fight increases in its relative military strength.

On the hand, the effect of territorial characteristics, \( \tau \), is more nuanced. If the target does not attempt consolidation, then higher values of \( \tau \) increase the attractiveness of military force to the challenger by increasing its valuation of the territory, \( v_c(\tau) \). However, if the target consolidates, the effect of territorial characteristics is less obvious. While more relevant characteristics still increase \( v_c(\tau) \), they can also serve to decrease the probability the challenger obtains the territory due to the effect of \( \alpha(\tau) \) on the probability of winning. Thus, whether or not the probability the challenger chooses to escalate militarily is increasing in \( \tau \) when the target consolidates depends upon the influence characteristics have on the rate of decrease in \( \alpha(\tau) \) relative to the rate of increase in \( v_c(\tau) \). This tension gets to the heart of whether territorial characteristics affect states’ valuations of territory (Huth 1996; Huth and Allee 2002) or whether territorial characteristics play a significant role in shaping states’ abilities to alter the military environment.

The target’s decision to consolidate or not is conditional on whether it faces a challenger that will likely prefer war, as it will not consolidate if there is no credible threat of military action (see the final row of Table 1). All else equal, stronger challengers are more likely to prefer war. Thus, target states are more likely to augment their capabilities through consolidation as they face relatively stronger challengers. Consequently, **target consolidation efforts are increasingly likely as the challenger state is stronger.** However, this statement needs qualification, as the target will not always attempt consolidation even if facing a challenger that chooses war with certainty. In order for a consolidation attempt to be optimal, it must affect the military environment enough to justify the cost, \( k_c \). Recall that this is likely when the territory is endowed with more relevant characteristics as well as when the challenger is relatively strong. Examination of the two inequalities in the fourth column of Table 1 indicates that both expressions are more likely to hold as \( m \) and \( \tau \) increase. In sum, target consolidation is increasingly likely as it faces stronger challengers, but only if the territory possesses enough relevant characteristics to make it ripe for consolidation.

**Expectation 2.** If consolidation is effective, the probability the target consolidates increases in the relative strength of the challenger.

Given the important role effective consolidation plays in expectation 2 and in the theoretical model generally, I now make explicit the territorial characteristics I focus on with data. Recall that the characteristics relevant to target consolidation efforts are related to the military, economic, and political situation. Thus, we need data on characteristics that pertain to these three dimensions. I utilize data from Huth (1996) that indicate whether a piece of disputed territory (held by the target) is strategically significant for the two states, contains economically valuable resources, or contains a minority population of the same ethnicity as the majority in the challenger state. Thus, we have data on the military, economic, and political dimensions. Comparability to previous work in the literature by Huth (1996) and Huth and Allee (2002) is an important added benefit of focusing on these three characteristics. If it is indeed the case that any or all of these characteristics significantly affect states’ means to reshape the military environment, the result can be attributed to theory and speculation about whether the result is just an artifact of different data is avoided.

Before presenting the rest of the expectations, I make explicit the definitions used for strategic location, economic value, and/or a border minority with ties to the challenger. Territory is defined as strategically located if it is of significant military value to the target and challenger. Territory can have strategic military value because of its geographic features (e.g., a mountain pass) or due to the presence of key military installations (e.g., major target base site). Territory is of economic value if it contains natural resources that can generate revenue from export. Potentially profitable natural resources include energy sources (e.g., oil) or mineral deposits (e.g., iron ore). Territory contains a border minority if there is a
population in the disputed territory that is a minority in the target state and shares ethnic or lingual ties to the majority population in the challenger state.

The relation between strategic territory and effective consolidation is the most direct. The building (or expansion) of fortifications and military installations and/or the stationing of troops is generally undertaken to improve fighting conditions for a state. Undertaking such actions in a location of strategic import is particularly effective. This is a point that is well documented by military historians. For example, in discussing the vital import of good communication lines to battle effectiveness in the eighteenth century, Hew Strachan notes that good roads and waterways were of vital strategic importance to advancing armies. “Communications became like funnels, through which the army had to pass, and which revealed to its enemy its likely course of advance. In peacetime, therefore, a state could take precautions by the erection of forts at the confluences of rivers, at defiles and junctions.” For this reason, “[t]he dominance of forts . . . was well-nigh crippling to the offensive” (1983, 11). The relation between strategically located territory, consolidation, and the military environment is rather straightforward and leads us to the following two expectations.

**Expectation 3a.** Consolidation is more likely to be effective when territory is strategically located.

**Expectation 3b.** The consolidation of strategically located territory decreases the probability the challenger will militarily escalate a dispute.

If valuable economic resources (e.g., coal) are present in a (potentially) disputed piece of territory, I argue that target investment in the development of these resources has effects in the military realm. For instance, the mining of coal implies some investment in infrastructure (e.g., to transport the mined coal to the market), which also makes it easier for troops to be quickly moved or stationed at or near the border.

Historically the connection between the development of infrastructure and the movement of troops and supplies and the maintenance of communication lines has been both explicitly exploited and a fortunate side effect of the development of economic resources. William McNeill, in discussion of eighteenth-century improvements to infrastructure, points out that “even when relatively short-term economic returns were what governed private as well as official action, transport improvements always had the further effect of facilitating military supply” (1984, 164). In eighteenth-century Prussia, the construction of canal systems, which had obvious economic benefits, was also explicitly linked to strategic military planning. Frederick the Great explained the logic, stating that “[t]he advantage of navigation is, however, never to be neglected, for without this convenience, no army can be abundantly supplied” (quoted in McNeill 1984, 163). The presence of exploitable economic resources only provided further impetus, as was the case in the construction of a canal system for the Ruhr River, which was intended to expand coal production (Henderson 1958; McNeill 1984). In many cases, economically valuable resources even lower the costs of building infrastructure and moving settlers into the territory, since there is some economic impetus to such actions.

**Expectation 4a.** Consolidation is more likely to be effective when territory contains economically valuable resources.

**Expectation 4b.** The consolidation of economically valuable territory decreases the probability the challenger will militarily escalate a dispute.

I expect the presence of a border minority to increase the effectiveness of target consolidation because it gives the target a potentially hostile political environment that can be favorably altered. Thus, I assume that the minority is relatively friendly to the challenger or is at least susceptible to mobilization. For example, in 1980, shortly after initiating a war with Iran over the status of the Shatt al-Arab, Iraq developed contacts with the minority of roughly 200,000 Arabs in the Iranian province of Khuzestan. This minority population had aired grievances with both the new Islamic regime and the previous government. The Iraqis stoked existing resentments among the Arab minority by promising to aid in forming an independent state in Khuzestan, which the Iraqis rhetorically referred to as Arabistan (Day 1987, 238).

Given the presence of a (potentially) restive minority population, the target can take a variety of actions to solidify its political position. For instance, the target can implement a policy of forced emigration for the minority population. A forced emigration policy can remove a population from the territory that can potentially aid the challenger (or hinder the target) militarily. Another possibility is a policy of forced immigration, where the population is infused with large numbers of the majority ethnicity in the target state.

Consolidation efforts can range from extreme cases of attempted genocide (e.g., Bosnia in 1992) to the more common example of relatively nonviolent policy decisions. An instance of the latter is observable in the dispute between Italy and Austria over the South Tirol region. In
October 1957, Italy implemented a legislative policy to build 5,000 houses in the city of Bolzano. This policy was seen by German-speaking South Tyrolean and the Austrians as intended to import Italian workers to upset the ethnic balance (Calvert 2004, 260–62). Such a policy can even be coupled with forced emigration, or increased monitoring of the minority population. In any event, regardless of the exact mechanism, the basic idea is that the presence of the minority group can increase the effectiveness of political and military consolidation by simply being a problem or potential problem to try to “solve.” It is important to note that the claim is not that, all else equal, target states prefer to have an ethnic minority; rather, when such a minority exists it provides a situation that the target may find beneficial to alter. Thus, the presence of a minority provides incentives for the target to consolidate because such efforts can affect the probability of winning (i.e., $[1 - p(m)\alpha(\tau)]$).

**Expectation 5a.** *Territory that contains a minority is more likely to make consolidation effective.*

**Expectation 5b.** *The consolidation of territory that contains a minority decreases the probability the challenger will militarily escalate a dispute.*

Importantly, expectations 3–5 also allow us to assess whether the three characteristics discussed above are not related to the effectiveness of consolidation. If any of these characteristics are not significantly related to effective consolidation, then the probability of consolidation will not increase as the target faces stronger challengers when any or all of these characteristics are present. Consequently, if expectation 3a, 4a, or 5a is not supported in the data analysis, then we can conclude this is the case. Relatively, if territorial characteristics have greater effect on states’ valuations of the disputed territory than on the effectiveness of consolidation, we would observe that expectations 3b, 4b, and 5b do not find support. Specifically, recall that if strategic location, the existence of a border minority, and the presence of economically valuable resources have a greater effect on the challenger’s valuation of the disputed territory, $v_i(\tau)$, than on the effectiveness of consolidation, $\alpha(\tau)$, then these characteristics will positively affect the probability that the challenger chooses war. Thus, in the subsequent empirical analysis I assess whether strategic location, economic value, and the presence of a border minority are primarily ends that states seek or whether they also significantly affect states’ means to forcefully obtain disputed territory.

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### Statistical Analysis of the Territorial Dispute Game

The statistical model in Figure 2 is structurally the same as the model depicted in Figure 1. Use of a statistical strategic model ensures that we capture the strategic nature of target consolidation and that we avoid strategic misspecification issues (Signorino and Yilmaz 2003). In order to statistically analyze the strategic logit equivalent of the game, the plausible assumption that both the challenger and target state are boundedly rational is made (Signorino 1999, 2003). Thus, they play with some error during the dispute process. Specifically, we use the logit quantal response equilibrium solution concept (LQRE). Nicely, the subgame perfect equilibrium solution concept used to solve the theoretical model is a special case of the LQRE in which there is no uncertainty. Thus, while the empirical model is structurally consistent with the theoretical model, it is also more general as it allows for errors to be made by challenger and target states.

### Logic of the Statistical Model

The statistical model captures the idea that the challenger and target make each decision in the game by weighing their expected utilities for each possible action. I start from the last move in the game, the challenger’s decision to fight or not, and move up the game tree to show the players’ expected utility calculations. For each observation, $i = 1 \ldots n$, the challenger decides whether or not to exercise the military option after observing whether the target consolidated its position. If the target consolidates, the challenger makes the following comparison:

$$p_{i,k} = U_C^k(F|C) > U_C^k(\neg F|C)$$

$$= U_C(F|C) + \epsilon_k > U_C(\neg F|C) + \epsilon_7.$$  

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6This is also a strategy that was utilized by the Chinese in their border disputes with the Soviet Union (An 1973; Ginsburgs and Pinkele 1978; Jones and Kevill 1985).

7Of course, in many cases the costs of consolidation (i.e., $k_0$ in the theoretical model) may be too high to justify. For instance, a policy of emigration intended to alter the demographics of a region can backfire and create increased problems with the minority. While this is an important possibility, it is fully consistent with the logic of the model.

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Note that $F$ stands for fight, $C$ for consolidate, and $A$ for activate. The numbers on the $\epsilon$ terms correspond to the numbers assigned to the players’ actions in Figures 1 and 2.
Assume the \( \varepsilon \) terms are independent and identically distributed (i.i.d.) Type 1 Extreme Value, which yields

\[
\begin{align*}
    p_{i,8} &= \frac{\exp UC(F)}{\exp UC(F) + \exp UC(\neg F)} \tag{3} \\
    p_{i,7} &= 1 - p_{i,8}. \tag{4}
\end{align*}
\]

In deciding whether or not to militarize the dispute when the target does not consolidate, the challenger makes a similar comparison which leads to expressions almost identical to those in equations (1–4). The target makes its decision to consolidate or not by comparing, with some error, its utility for each possible outcome weighted by the probability the outcome will be realized. If we again assume that the \( \varepsilon \) terms are i.i.d. Type 1 Extreme Value, we obtain

\[
\begin{align*}
    p_{i,4} &= \frac{\exp(p_{i,4}UC(C, F) + p_{i,6}UC(C, \neg F))}{\exp(p_{i,4}UC(C, F) + p_{i,6}UC(C, \neg F)) + \exp(p_{i,4}UC(\neg C, F) + p_{i,5}UC(\neg C, \neg F))} \tag{5} \\
    p_{i,3} &= 1 - p_{i,4}. \tag{6}
\end{align*}
\]

The probability the challenger activates a dispute for a given observation, \( p_{i,2}, i \), is expressed similarly. The challenger compares the utility for the status quo, \( UC(SQ) \), to the expected utility for activating a dispute, which is calculated by multiplying each of the four possible postactivation utilities with the probability each outcome is realized.

**Specification of the Model**

Specifying the statistical version of the game with regressors is no simple task, as identification issues must be dealt with in a theoretically palatable way. In order for the model to be identified in this context, both the target and challenger must have the utility for at least one outcome that is possible at their initial information set and affects their utilities normalized to zero.\(^9\) Also, no regressor can be estimated in every utility. The specification for the statistical model is depicted in Figure 2. The players’ utilities for the outcome in which there is a dispute, the target does not consolidate, and the challenger does not choose high escalation \( (UC(\neg C \neg F) \text{ and } UT(\neg C \neg F)) \) are normalized to zero. Thus, all coefficients are interpreted relative to the outcome obtained when a dispute is activated, the target does not consolidate, and the challenger chooses not to escalate militarily. This is the most “benign” disputatious outcome and is a nice baseline against which to judge the estimated coefficients.

The data set used was collected by Huth (1996) and includes 8,328 observations across 129 nondisputes and 129 territorial disputes between 1950 and 1990. The game is modeled as being played once each year a dispute is active. Huth (1996, 252–55) collected data on the whole population of territorial disputes between 1950 and 1990 but randomly sampled 129 of 447 cases of nondisputes. Thus, the data exhibit choice-based sampling, which will

\(^9\) An initial information set is just the node at which each respective player makes its first move in the game (Lewis and Schultz 2003).
introduce bias into the results without correction. Bas (2009) shows that bias from choice-based sampling can be quite severe in strategic settings. To avoid bias, the likelihood function is corrected with the weighted exogenous sampling technique introduced by Manski and Lerman (1977).

Regressors

The specification of the challenger’s utility for the status quo must include the key variables that affect a state’s decision to activate a dispute or not. Potential challenger states generally activate territorial disputes that have historical roots (Murphy 1990). Thus, to model potentially revisionist states’ utility for the status quo, historical factors that influence its valuation of a potentially disputed piece of territory are included. The variables used to capture historical context measure whether the challenger experienced a previous loss of territory to the target, a previous gain of territory from the target, whether there was a pre-WWII territorial dispute between the two states left unresolved, a previous settlement that clearly delimited the two states’ border, and whether the disputed territory is a colonial holding.10 I expect states to be more likely to activate a dispute when territory was previously lost, is a colonial holding, or if there is a history of territorial disputes (i.e., unresolved dispute). Potential challengers will be less likely to activate a dispute if they have previously settled boundary issues in a clear and unambiguous way or if they have previously gained territory from the potential target. Thus, the utility for the status quo is:

\[
U_C(SQ) = \beta_{11.0} + \beta_{11.1} \text{PreviousSettle} \\
+ \beta_{11.2} \text{PreviousGain} + \beta_{11.3} \text{PreviousLoss} \\
+ \beta_{11.4} \text{Colony} + \beta_{11.5} \text{UnresolvedDispute} \\
+ \alpha_{11}.
\]

Recall that the three key territorial characteristics we discuss are whether the territory is strategically located, contains a minority population with ties to the challenger, and/or is imbued with economic value. Thus, these three variables are included in both players’ utilities for the militarized outcomes, as each of them are expected to affect the states’ valuations of the territory as well as the effectiveness of target consolidation efforts. Territory is coded as strategically located if at least one of the following six militarily relevant characteristics is present: (1) “it is in close proximity to major shipping lanes or choke points of narrow straits; (2) it is located in close proximity to military bases of the challenger; (3) it would provide an outlet to the sea for an otherwise landlocked country; (4) it was being used as a military base site for the target; (5) it could be used to establish a second military front against the target; or (6) control of disputed territory blocked the principal route through which a challenger could attack a target” (Huth 1996, 256). Territory is economically valuable if it contains natural resources that can produce export revenues. Finally, territory contains a border minority if a minority in the disputed territory shares language or ethnicity with the largest group in the challenger state. The military balance, or \( m \) in the theoretical model, is also included in both players’ utilities over militarized outcomes as it is an essential component of the probability the challenger is victorious militarily, \( p(m) \).

Several additional variables not explicitly discussed above that are related to the parameters in the theoretical model are also included. Whether the target is a member of a deterrent alliance is included in both players’ utilities to capture the effects of anticipated military help in the event that the two states end up fighting over the disputed territory. Militarily relevant aid to the target from an ally is not captured in the measure of the military balance; thus, including this variable ensures that we capture the effect such aid may have on the military situation. Additionally, if an ally of the target will contribute help in the event of an armed conflict, this is likely to make fighting more costly for the challenger while diverting some costs for the target. The number of times the target defeated the challenger is included to both account for rivalry and to capture the notion that challengers who have previously fought the target but still do not possess the disputed territory will have learned something about target capabilities, fighting prowess, and how costly fighting the target is. The time since the target last consolidated is also included to account for decreasing marginal returns to building more fortifications, solidifying political control, and any other such measure. Thus, if the target has just consolidated its position, this will undoubtedly affect how effective further consolidation can be above and beyond what was accomplished in the previous year. Thus, the utilities for the militarized outcomes are:

\[
U_C(CF) = \beta_{18.1} \text{MilitaryBalance} + \beta_{18.2} \text{StrategicLoc} \\
+ \beta_{18.3} \text{EconValue} + \beta_{18.4} \text{BorderMinority} \\
+ \beta_{18.5} \text{DeterrentAlly} + \beta_{18.6} \text{Defeats} + \alpha_{18}
\]

\[11\]See Huth (1996) for an exact list of qualifying resources.

\[12\]Note that I omit the two players’ utilities for fighting when the target does not consolidate because their specification is identical to those shown.

For all regressors, see the article’s supporting information or Huth (1996) for details on coding.
In order to estimate the strategic model, data indicating what decision is made at each node by the challenger and target are required. The action variables are then used to create binary variables, \( d_{i,j} \), that indicate the outcome \( j \in \{1, 5, 6, 7, 8\} \) for each observation \( i = 1, \ldots, n \) in the data.\(^{13}\)

The target state’s only decision in the game is whether to consolidate its position in the disputed territory (i.e., play Consolidate) or not (i.e., play \( \neg \text{Consolidate} \)). The target is coded as playing Consolidate if it creates military establishments in the disputed territory, actively pursues the extraction or development of valuable natural resources from the disputed territory, or takes legislative or constitutional action to further incorporate the territory into the target or hinder any future attempts by the challenger to take the disputed territory (Huth 1996, 259–60).

There are three dependent variables for challenger actions. The first variable is a binary variable that indicates whether a dispute was activated or kept active in a given year. The second indicates whether the challenger state chooses to militarize a dispute after the target consolidates, while the third indicates the challenger’s action if the target does not consolidate. The challenger is coded as not fighting following the target’s decision if it chooses low- or moderate-level diplomatic conflict. In contrast, if the challenger confronts the target militarily with credible threats and/or the actual use of military force, it is coded as having chosen to fight.\(^{14}\)

\(^{13}\)The \( j \) correspond to the action probabilities depicted in Figure 2. For example, \( j = 1 \) indicates that the challenger decides not to activate a dispute, just as \( p_1 \) is the probability the challenger chooses not to activate a dispute. Note that outcomes are a result of challenger and target decisions.

\(^{14}\)The decision to fight is essentially equivalent to a decision to start a war, as war breaks out in the data 95% of the time when it is chosen.

I combine the target and challenger action variables to create a dependent variable, \( d_{i,j} \), that takes a value of 1 if a given terminal node \( j \) is reached in observation \( i \) and 0 otherwise. Thus, if a dispute is active and the target plays Consolidate while the challenger plays Fight in observation \( i \), then \( d_{i,8} = 1 \), while all other terminal node dummy variables would be given a value of 0 for this observation. Given dummy variables \( d_{i,j} \) and a probability \( p_{i,j} \) for each terminal node, the log-likelihood to be maximized is:

\[
\ln(L) = \sum_{i=1}^{n} \left( \omega_{\text{No Dispute}} d_{i,1} \ln(p_{i,1}) + \omega_{\text{Dispute}} d_{i,5} \ln(p_{i,5}) + \omega_{\text{Dispute}} d_{i,7} \ln(p_{i,7}) + \omega_{\text{Dispute}} d_{i,8} \ln(p_{i,8}) \right).
\]

The probabilities correspond to the probabilities estimated for each observation as shown in equations (1–6). The \( \omega \) terms are weights to correct for the choice-based sample. The \( \omega \) terms ensure that the imbalance in the sample between nondispute and dispute cases is explicitly taken into account in estimation of the coefficients.

### Results

The regression results in Table 2 imply considerable support for several of the key expectations derived from the theoretical model. To account for a variety of potential issues with the standard errors, I bootstrap with sampling clustered by dyad. A known issue with the standard errors is bias induced from the use of a choice-based sample, while other possible issues are a violation of independence across within-group observations. The average bootstrap sample size is 7,800 across 1,000 iterations.\(^{15}\) Since the challenger and target play the game by figuring out each others’ moves via backwards induction, the results are presented moving “up the game tree.”

### Challenger Escalation Utilities

Unsurprisingly, the balance of military forces is positive and significant regardless of whether the target has consolidated or not. Thus, more powerful challengers get higher utility from fighting relative to not fighting in the no consolidation case. This result is what we would expect given expectation 1, as possessing more military forces relative to the target should increase the benefits of military confrontation. The presence of a deterrent target

\(^{15}\)The sample size is an average because the number of observations across groups differs according to the number of years a dispute between two states is active.
Target Victorias

Deterrent Alliance

Border Minority

Economic Value

The existence of ethnic brethren does not significantly affect the challenger’s utility for fighting regardless of whether the target has consolidated. The coefficients are both positive, which suggests that the presence of a minority is not related to effective target consolidation as suggested by expectation 5b, or at least implies that any effects from consolidation are washed out by its influence on the challenger’s valuation of the territory. The insignificance of ethnic brethren for the challenger’s decision to fight contrasts sharply with Huth’s finding that a border minority is the most substantively significant factor that increases the probability a challenger uses force (Huth 1996, 107–9).

The presence of economic resources has a positive effect on the challenger’s propensity to militarize a dispute when the target has consolidated, although it negatively affects the challenger’s utility for military escalation in the absence of consolidation. Thus, counter to expectation 4b the development of economic resources does not seem to be related to effective consolidation; rather, the coefficients suggest that the impact upon the challenger’s valuation of the territory outweighs any change in the military situation. At first glance, the fact that the challenger’s valuation of the territory outweighs any change in the military situation. At first glance, the fact that the consolidation of

alliance decreases challenger payoffs for both militarized outcomes, although it is not significant if the target has consolidated. Previous military defeats at the hands of the target do not have any significant effect when the target has not consolidated. However, when the target consolidates its position, the challenger derives positive utility from escalation of the dispute.

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economically valuable territory (in the absence of other territorial characteristics such as strategic location) may increase the value of the territory in addition to strengthening the target's hold over it. For economically valuable territory this makes sense, as the value of natural resources is in large part a function of their development.16 The finding that the presence of economically valuable resources decreases the challenger’s propensity to fight when the target does not consolidate is consistent with the findings of Huth (1996). Huth argues that challengers are reluctant to escalate when disputed territory is economically valuable because joint gains from trade are lost (which is thus how they affect $u_c(\tau)$). Interestingly, this is unlikely to be a concern if the target has already acted aggressively in consolidating the valuable resources.

Strategically located territory has a negative and significant effect on challenger utilities for both violent outcomes. This finding indicates that when the target’s strategic consolidation decision is modeled, challengers do not seem to pursue strategically located territory more vigorously, which is the opposite effect found by Huth (1996) and Huth and Allee (2002). Neither Huth (1996), Huth and Allee (2002), nor any other work that examines territorial disputes models the strategic choices available to the target to use territory to improve its military standing. Not modeling target actions ensures that prior studies do not pick up whether consolidated territory that is strategically located augments target capabilities enough to deter challengers from militarily contesting it, which is what I find here. While these results are very promising and consistent with expectation 3b, examination of predicted probabilities and target utilities is necessary to fully understand the relationship between strategic territory and the challenger’s escalation decision.

The top two graphs in Figure 3 (i.e., Figures 3(a) and 3(b)) substantiate the support for expectations 1 and 3b. The graph in Figure 3(a) shows that when the target does not consolidate, the probability that the challenger chooses military escalation is increasing in its strength, although the probability decreases if the territory is strategically located or economically valuable and barely increases if there is a border minority. Figure 3(b) displays the probability that challengers of differing relative strength choose military escalation when the target has consolidated its position in the disputed territory. It shows that the probability the challenger fights is essentially zero until it is overwhelmingly powerful if the territory has no relevant characteristics. Interestingly, the presence of economic resources greatly increases the propensity of strong challengers to resort to military means in resolution of disputes. This substantiates the finding above that the consolidation of economically valuable territory actually increases its value in ways that offset any security gains for the target. However, if the territory is also strategically located, the probability that the challenger resorts to military means plummets and lingers close to 0, even when challengers are overwhelmingly powerful. Thus, the negative effect of strategic location (i.e., expectation 3b) overpowers the positive effect of economic value.

In general, Figure 3 shows that target consolidation significantly alters the strategic calculus of the challenger, as escalation is more clearly associated with greater military strength than when the target does not consolidate. Strikingly different dynamics for military capabilities after target consolidation suggests that consolidation is significantly changing the military calculus of both states as the theory suggests. Also, the existence of strategic territory always lowers the probability that the challenger highly escalates when the target has consolidated, which provides considerable support for the notion that consolidation is more effective when territory is strategically located.

The changes in probability associated with each regressor shown in the first four columns of Table 3 affirm the observation that when targets consolidate, challengers are significantly less likely to attempt favorable resolution of disputes militarily. Comparison of the baseline cases, in which all regressors are held at their median values, is particularly telling, as the probability of military escalation is almost zero postconsolidation while it is 0.166 in the absence of target consolidation.

### Target Escalation Utilities

At this stage, the target has observed challenger activation of a dispute and now must decide whether to consolidate conditional on the expected escalation decision of the challenger. Interpretation of the coefficients here is difficult, as the effect of any variable is also influenced by its effect on challenger utilities. For this reason, predicted probabilities and graphical illustrations are necessary to assess the meaning of the results.
The last two columns of Table 3 provide a good overview of the effect of each variable on the target’s consolidation decision. The substantive effects for each variable are calculated holding all other variables at their median value, where the first row is a baseline case with all variables at their median. First, notice that of the three variables hypothesized to increase the effectiveness of target consolidation, only strategic location has a particularly strong substantive effect. Both economic value and border minority have positive effects, but these effects are comparatively small. The number of previous victories over the challenger also has large positive substantive effects on the target’s decision to consolidate.

The two graphs in the second row of Figure 3 (i.e., Figures 3(c) and 3(d)) illustrate nicely that strategically located territory has significant and positive influence on the effectiveness of consolidation. Figures 3(c) and 3(d) show that when the disputed territory does not possess any economic value, strategic importance, or ethnic brethren of the challenger, the probability that the target consolidates is generally low and decreases slightly in challenger strength. This is true even when the
territory is economically valuable and/or contains a minority, which confirms the weak effects found for these two variables in Table 3. At this point, these weak effects for economic value and border minority are encouraging because they lend overall coherence to the results of the statistical model. The findings for the challenger imply that strategic territory is associated with effective consolidation, while economic value and border minority do not have such effects. Thus, these findings increase our confidence that the expectations derived from the theoretical model present a meaningful characterization of the strategic situation facing disputants.

In Figure 3(c), the probability of consolidation increases considerably when the disputed territory is strategically located, although the probability still decreases slightly in challenger strength for most of the range of the military balance. Figure 3(d) demonstrates that when territory is both economically valuable and strategically important, the probability of target consolidation not only increases, but increases markedly in challenger strength. If the majority of the population in the territory is also of the same ethnicity as the dominant one in the challenger, a similar trend is shown in Figure 3(c), although the probability decreases somewhat after the challenger controls roughly 80% of total dyadic capabilities. These results, taken in tandem with the results for the challenger, strongly suggest that strategic territory facilitates effective consolidation. Additionally, they imply that while strategic location is the key factor, the presence of economically valuable resources and/or a border minority can further increase the effectiveness of consolidation. When strategic location is present along with one or more of these other factors, the probability generally increases in challenger strength once targets are paired with challengers stronger than themselves.

In sum, examination of target utilities and action probabilities provides powerful support for several of the theoretical expectations. In particular, expectation 2 in conjunction with expectation 3a found strong support. In contrast, economically valuable territory and territory with a border minority did not have strong individual effects on target consolidation. Thus, the territorial characteristic most directly related to the military situation, strategic location, had the expected effects, while the more indirect mechanisms via the development of economic resources and the political consolidation of territory with a border minority did not have strong independent effects on target consolidation.

### Challenger Utility for Activation

All of the coefficients in the challenger’s utility for the status quo work in the expected way and are statistically significant. If a challenger has previously settled its border issues with the target unambiguously, this exerts a positive influence on $U_{C}(SQ)$ relative to $U_{C}(<F)$. Having previously experienced a net gain of territory from the target also has a positive effect. Furthermore, potential challengers that have either signed agreements clearly delimiting their borders with potential targets or experienced a net gain of territory from the potential target generally prefer the status quo to the activation of a dispute. Conversely, previously losing territory to the target state has a negative effect on the potential challenger’s utility for the status quo; thus, states that have lost territory to their potential target generally prefer to challenge the status quo. If the target is a colonial power, this also unsurprisingly exerts a negative effect.

### The Sino-Vietnamese Dispute

The dispute between Vietnam (Democratic Republic of Vietnam) and China discussed briefly in the introduction...
nicely illustrates some of the key aspects of the theoretical model that found support in the empirical analysis. This is an especially interesting case because Vietnam, the target of military action in early 1979, is much weaker than China. Additionally, the disputed territory was strategically located and also contained a border minority of ethnic Chinese. Thus, the model would predict (and the results of the empirical analysis would suggest) that Vietnam undertake consolidation if it thought that China would attack militarily. Indeed, Vietnam undertook extensive consolidation efforts in the territory that had real military consequences.

Although active, the dispute was relatively quiet throughout the early 1970s as the Vietnamese were preoccupied with the fight against the United States while China played an important role as benefactor in this effort. After the conflict in South Vietnam ended, the territorial dispute became increasingly contentious in each year after 1975. Throughout 1978, the Vietnamese became increasingly aggressive in the border region and consolidated their position. They consolidated in two ways. First, they attempted to solidify their military and political control over the region through expulsion of thousands of ethnic Chinese. By the end of 1978, approximately 200,000 ethnic Chinese were expelled from the Sino-Vietnamese border region (Chang 1985; Chen 1987). The Vietnamese undertook this massive forced emigration not only to consolidate their position in the disputed border region, but also to destabilize Chinese control over its border region, which was quite successful (Chang 1985; Chen 1987). Additionally, the Vietnamese built extensive border defense installations that were meant to present the Chinese with an “impregnable fortress” (Chen 1987, 107). It is important to note that the mountainous border region was of particular strategic value, as it had historically provided the gateway to control of the entire Red River Delta for invaders. The defensive structures built across the mountain range were “characterized by tunnels, caves, and trenches manned by well-trained and well-armed militia” (Chen 1987, 107). The Vietnamese had also planted numerous land mines, booby traps, and anything that generally increased the difficulty of the already difficult terrain.

On February 17, 1979, Chinese forces launched a massive attack that was stated to be in retaliation for numerous Vietnamese-instigated border incidents. Even though China initiated attacks with around 100,000 troops (a third of all troops massed at the border) against local Vietnamese forces and militias, they met with considerable difficulty (Womack 2006). China was eventually able to take the important strategic border city of Lang Son on March 4 after several weeks of tough and surprisingly costly fighting. However, the immense difficulties encountered in fighting the Vietnamese made the Chinese even more eager to present the fall of Lang Son as being a symbolic victory important enough to lead to a halt in fighting (Duiker 1986, 87). It should be noted that the fall of Lang Son came after two bloody weeks that cost the Chinese 25,000 troops to the Vietnamese loss of 20,000 (Womack 2006, 200). This is particularly striking given that the Chinese were not even fighting Vietnamese regulars; rather, the DRV’s elite troops were either fighting in Cambodia or stationed around Hanoi. Thus, the Vietnamese defenses had performed quite well despite the fact that local forces were used and the DRV’s best troops were not even involved.

This case nicely demonstrates how strategic consolidation of strategic territory was quite beneficial for the Vietnamese against their considerably stronger Chinese counterpart. The forced emigration of ethnic Chinese stabilized the political and military situation for the Vietnamese and simultaneously fostered chaos and disorder on the Chinese side of the border. Additionally, Vietnamese consolidation of their military defenses made Chinese incursions very difficult, making clear that China would not be able to easily defeat and occupy Vietnam. It is also clear that the defensive fortifications made fighting easier for the Vietnamese, as they were able to defend quite well against a superior power without even using their best troops.

It is clear from this discussion that the model should predict that Vietnam consolidate and China fight (i.e., row 1 of Table 1). Since the Sino-Vietnamese dispute is a case in our data, we now examine the predictions of the model given the data. Specifically, we examine the model’s predictions in 1979, the year discussed above. Given that the model makes rather clear predictions with

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17 The two states disputed three pieces of territory in total: their nearly 800-mile border, the Gulf of Tonkin, and the Paracel and Spratly Islands.

18 Some analysts such as Ross (1988) argue that the Chinese attack was actually in response to Vietnamese actions in Cambodia and not a direct consequence of territorial issues. While this view is not wholly implausible given that all analysts acknowledge that Cambodia was an important factor, it is not of much consequence for my purposes. I am interested primarily in the impact that Vietnamese consolidation of strategic territory had on thwarting attacks from a stronger challenging enemy. In any event, I think Ross’s analysis goes too far in putting Cambodia front and center given that the Chinese and Vietnamese had been having militarized incidents along the border since as early as 1974.

19 The Chinese asserted that they were just punishing the Vietnamese for numerous border violations and did not intend to penetrate deeply into Vietnam. However, the tough fighting conditions ensured that this was the only sensible course of action for China.
regard to this case and that our discussion of this case indicates that it should fit the patterns found in the data, this is a nice way to assess the face validity of the empirical model. First, we examine predicted Vietnamese behavior in 1979, holding all variables at their actual values except military balance. The dashed line in the leftmost graph in Figure 4 depicts the probability Vietnam consolidates across the entire range of the military balance, holding all other variables at their actual values. Given that the actual value of the military balance is 0.78 (i.e., the “x” in the graph), the model predicts that Vietnam consolidated its position with probability 0.87, a very strong prediction that is well above the typical threshold of 0.50. If we entertain the counterfactual that the territory is not strategic, as depicted by the solid line, we see a starkly different relationship. If the territory was not strategic, the model predicts that consolidation is decreasingly likely as China gains in strength relative to Vietnam. For the actual value of the military balance, the model predicts Vietnamese consolidation with probability 0.25, which is a null prediction.

In sum, the empirical model makes the correct predictions for both Vietnam and China. In conjunction with the qualitative evidence discussed above, this provides a quite compelling explanation of what occurred in the Sino-Vietnamese war fought in 1979.

**Conclusion**

Numerous historical examples corroborate the finding that the relatively weak augment their capabilities through the consolidation of territory. Herodotus, referred to by many as the “father of history,” notes a similar dynamic in the war between the Phocians and the stronger Thessalians of ancient Greece. In an important engagement, the Phocians took advantage of the location of strategically significant mountain passes that Thessalian forces needed to advance. In order to thwart the advance of Thessalian cavalry, they dug a large trench in the pass and filled it with empty wine bottles, subsequently recovering the trench to camouflage it. The Thessalian cavalry advanced quickly upon seeing the Phocian forces and became messily entangled in the trench, which broke their horses’ legs and made them susceptible to ambush (Asprey 1975, 32). Of course, without a strategically located mountain pass, the Phocians would have likely found it exceedingly difficult to effectively consolidate their position in such a cunning manner. This rather illustrious case shows how the use of territory to augment capabilities has been effective for centuries despite being absent from quantitative studies.
I generate a new set of hypotheses about how military capabilities and territorial characteristics (e.g., strategic location) affect state behavior in territorial disputes by focusing on the role territory plays in disputes. Rather than simply defining how much states value territory, characteristics also affect states’ abilities to obtain disputed territory through armed conflict. Territorial characteristics affect states’ means to obtain territory by force because they define how effective target state consolidation is in reshaping the conventional military situation. By incorporating this insight into a game-theoretic model, I come to the conclusion that relatively weaker target states are more likely to consolidate their position when territorial characteristics imply that consolidation will significantly change the military environment. I hypothesize that consolidation is effective when territory holds important characteristics such as strategic location. Using a statistical estimator that is the structural equivalent of the theoretical model, I find that the consolidation of territory is a significant source of power, especially when it is strategically located. The results for strategic territory and disputant behavior vis-à-vis the balance of military capabilities represent new and interesting findings that are at odds with the findings of previous studies by Huth (1996), Huth and Allee (2002), and Walter (2006), but consistent with numerous historical cases ranging from the Phocians of ancient Greece to the Vietnamese in the twentieth century.

References


