Regime Uncertainty and Interstate Conflict

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Regime type is an important variable in international relations. Numerous scholars have theorized its effects on actors' crisis behavior and outcomes. Despite regime type's importance, the literature has not focused on the role its uncertainty might play in interstate politics. This is in stark contrast to the scholarly attention given to uncertainty about other similarly important variables like actor capabilities, intentions, or fighting costs. In this paper, we aim to address this gap in the literature by providing a theory of regime uncertainty's effects on conflict, and developing a novel measure of uncertainty about regime type in interstate relations to test our hypotheses. We find that regime uncertainty breeds caution rather than conflict: higher uncertainty about the opponent's regime type makes conflict initiation and escalation less likely in disputes, and dyads with more uncertainty are less likely to experience conflict onset.

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Introduction

Numerous theories of international conflict posit that regime type is an important determinant in states' crisis behavior. Prominent debates in security studies have addressed a variety of mechanisms through which regime type can be relevant for states' foreign policy choices. Some argue that regime type serves an informational role in crises, allowing democracies to send more credible signals during crisis bargaining, thanks to the existence of opposition parties or free media (Schultz, 1998). Others propose that institutional differences in countries such as the size of leaders' winning coalition (Bueno De Mesquita et al., 1999), or the type of punishment leaders might expect after losing a war result in different behavior in crises and conflicts (Goemans, 2000). Another group of scholars emphasize normative differences across regimes resulting in different behavior (Maoz and Russett, 1993). This vast literature, however, predominantly assumes that states in crises know each other's regime characteristics, and so far has not considered the potential effect of uncertainty about regime type on conflict. This is despite numerous anecdotal evidence suggesting that such uncertainty exists in interstate relationships. Some scholars note a rise in authoritarian values in several democratic societies in recent years; and the rise of populist parties and charismatic politicians to power in many traditionally democratic countries, favoring authoritarian policies such as systematically weakening the opposition, holding unfair elections, and exerting control over the judiciary (Levitsky and Loxton, 2018). Accordingly, there seems to exist a debate and uncertainty among the scholarly community, practitioners as well as the public over to what extent, for instance, countries like Hungary or Poland can be considered liberal democracies. In this paper, one of our goals is to fill this gap in the literature and theorize the effect of uncertainty about regime type on the likelihood of conflict between states.

As a theoretical concept, uncertainty is prevalent in international politics. In its various forms, it has been proposed in the literature as an important determinant of conflict and peace among states. Scholars have focused on uncertainty about opponent capabilities (Morrow, 1989); resolve (Fearon, 1995); intentions (Jervis, 1976); war outcomes (Bas and Schub, 2016*a*); and exogenous stochastic processes that affect state power in international politics (Bas and Schub, 2017*a*). This literature shows that depending on its type, uncertainty can be conflictual or pacifying (Bas and Schub, 2017*b*). Compared to the voluminous theoretical literature on various forms of uncertainty, empirical analyses focusing on measuring uncertainty and testing its effects on conflict tend to lag behind mainly due to measurement difficulties. That being said, there is an emerging literature in recent years with new measures being proposed for various forms of uncertainty (Bas and Schub, 2017*b*).

In this paper, we propose that uncertainty about regime type should be considered as a theoretically distinct and important type of uncertainty in the study of conflict. What does regime uncertainty mean from a conceptual perspective? When faced with an opponent in a dispute, we argue that decision-makers consider the domestic political landscape of their opponents to try to gauge how the adversary will behave during the crisis. From their past experiences or observations of other crises, leaders identify regime classes that are tied to distinct foreign policy behavior in interstate crises. In other words, leaders mainly care about their opponent's regime to the extent that it is relevant to the adversary's crisis behavior, rather than a normative interest in the exact domestic rules and procedures within a country. In this sense, the exact labels of different regime types such as "Democracy," or "Autocracy" are less important than the existence of a group of countries with similar regime characteristics that tend to behave in certain ways in similar crisis contexts. In judging the opponent's regime, the leaders rely on various observable factors such as important political events like elections or coups, institutional characteristics, leader behavior, as well as expert and adviser opinions to compare their opponents with known examples through analogies. In a given crisis, if they are able to match an adversary to a known regime class with distinct crisis behavior with certainty, this indicates a scenario with no regime uncertainty. If the adversary's domestic regime seems consistent with multiple distinct such regime types, then this is a case of regime uncertainty.

We theorize that, due to the multitude of mechanisms through which regime type can be relevant for a state's conflict behavior, the strategic picture facing a decision-maker gets significantly more complex when there is uncertainty about an adversary's regime type. More specifically, uncertainty implies a wider range of potential outcomes, expected costs, conflict duration or third-party involvement related to the conflict, scenarios some of which might be severe enough to threaten the leader's or the regime's survival. The possibility of unsuited policy choices due to misjudging the adversary's regime type under uncertainty could imply high costs from escalation. Thus, compared to the certainty case, states are less likely to initiate and escalate crises when there exists uncertainty about an opponent's regime type. To test our hypotheses and contribute to the empirical literature on uncertainty, we propose a novel measure for regime uncertainty, and test this type of uncertainty's effects on international conflict. We find evidence supportive of our hypothesis that regime uncertainty is a source of caution and peace among adversaries.

Providing a valid measure of regime uncertainty is ultimately dependent on accurately measuring regime type itself. Despite its significant relevance for foreign policy choices, there is no consensus in the literature on how regime type should be defined and consequently measured, resulting in a plethora of empirical measures of democracy (e.g., Marshall and Jaggers, 2007; Coppedge

et al., 2017). How can one conceptualize regime uncertainty, differentiate it from measurement uncertainty and take into account disagreements among multiple existing measures? Our measure of regime uncertainty builds upon the assumption that a state's assessment of an opponent's regime in international crises is ultimately a classification problem, where decision-makers identify different classes of regimes that tend to behave similarly in crises, such as democracies, autocracies and semi-democracies, and evaluate the relative likelihood that the opponent falls into these different categories. The uncertainty is then about how precise this classification is, or how confidently a given state can be allocated to a regime category. After demonstrating that the measure of regime uncertainty based on this classification approach has desirable properties, we study its effects on interstate conflict by testing the hypothesized relationships in multiple levels of escalation in crisis bargaining and across different data sets.

In the next section, we provide a theory of regime uncertainty's effects on states' crisis behavior and derive testable hypotheses. We then describe our measurement approach that captures uncertainty about regime type and discuss the properties of the resulting measure. The next section provides an empirical analysis of the relationship between uncertainty about regime type and various levels of conflict. We then trace the role of regime uncertainty in a crisis between the United States (US) and Peru during the Nixon administration. We conclude with a discussion of broader implications of our results.

Regime Uncertainty and Conflict

Despite regime type's strong prevalence in major theories of conflict behavior, scholars have not theorized the potential role its uncertainty might play in inter-state crisis interactions. In this section, we argue that uncertainty about regime type is a source of caution and peace in international crises. First, we build on the existing literature to delineate different mechanisms through which regime type can affect crisis choices. Second, we assume that leaders are rational actors whose ultimate goal is to stay in power, and their choices in crises take into account how various outcomes, choices by their adversaries and their potential allies, as well as incurred costs from the interaction alter the likelihood that the leader maintains its power. Finally, we argue that uncertainty about regime type significantly increases the complexity of the decision-making process as it relates to leader's survival by increasing the range of potential outcomes, the number of conflict participants, conflict duration, and expected costs from conflict, and results in cautious behavior by leaders in disputes.

In what ways does regime type affect states' crisis behavior? According to the standard crisis bargaining models in the international relations literature, actors' choices and the likelihood of peace and conflict in a given crisis interaction depend on a variety of factors such as the range of possible outcomes and actors' outcome utilities, the existence and levels of uncertainty, and the direct and indirect costs from conflict. The literature on the subject has argued that regime type is relevant for many of these factors, and provided empirical evidence showing associations between regime measures and actor choices in crises.

First, regime type is relevant for conflict outcomes and preferences over them. Scholars have found that democracies tend to win the wars they fight (Bueno De Mesquita et al., 1999; Reiter and Stam, 2003). War aims and the type of settlements that are desirable to actors may also depend on regime type. Private goods and territory may appeal more to autocracies, whereas non-territorial public goods such as policy may appeal more to democracies (Bueno De Mesquita et al., 1999). In addition, leaders of mixed regimes – regimes that are semi-repressive and moderately exclusionary to fall somewhere between democracies and autocracies – prefer not to settle on moderately losing terms and instead have incentives to continue war and gamble for their resurrection (Goemans, 2000). Durability of certain outcomes may also vary with regime type. Dyads that include a democracy are less likely to reach an agreement following a conflict and tend to fight again due to audience costs (Bayer, 2010). In terms of risk attitudes, democracies might be more risk averse and authoritarian regimes more risk-acceptant in crises (Reiter and Stam, 1998). How other leader characteristics may influence crisis preferences might differ as well: for instance, Horowitz, McDermott and Stam (2005) find that effect of age on conflict initiation and escalation is different across regime types.

Beyond outcomes and preferences, the literature suggests that different regimes might face varying costs from international crises. First, leaders in democracies are more likely to be removed from office if they back down after a crisis they initiate (Fearon, 1994). Similar costs exist for certain types of autocracies (Weeks, 2008, 2012; Weiss, 2013, 2014). War costs might also differ: wars initiated by non-democracies are more lethal (Siverson, 1995). States that fight mixed regimes may suffer higher costs of war as leaders of mixed regimes prefer not to settle on losing terms due to fear of severe punishment, and the expected duration of war increases (Goemans, 2000).

Another relevant dynamic for costs of conflict is the behavior of joiners, and the potential spread of conflict. Democratic states tend to go to war to defend their allies (Signorino and Tarar, 2006). Democracies fight alongside larger coalitions and states fighting alongside larger coalitions are more likely to win wars (Graham, Gartzke and Fariss, 2017). Democracies tend to join a democratic initiator and autocracies tend to join an autocratic initiator (Joyce, Ghosn and Bayer,

2014). Compared to democracies, authoritarian regimes are more likely to provide active support to non-state actors (San-Akca, 2014).

Why should the above variations in costs, outcomes, or choices as a function of regime type be relevant for leaders' decision-making in crises? Consistent with much of the above literature, we assume that leaders ultimately care about staying in power, and their choices in crises aim to maximize the likelihood of achieving that goal. When faced with an adversary, leaders assess how the regime type of an opponent influences outcomes that are likely to emerge from various choices the leader considers during the crisis. The regime type of the opponent and the uncertainty surrounding it change which of the variety of mechanisms that we listed above are relevant for the leader to consider when gauging the range of outcomes and the expected costs that may arise from each choice.

What does this uncertainty look like in reality? As an example, consider the US Carter Administration's assessment of Iran during the Iran Hostage Crisis that started in 1979 when protesters occupied the US embassy and held US diplomats and citizens hostage. The Carter administration faced significant uncertainty when trying to determine the best course of action during this crisis that lasted 444 days. Cyrus Vance, the Secretary of State at the time, describes the new regime in terms of a power struggle between "pro-democratic" and "theocratic, authoritarian" elements (Vance, 1983, 168). A CIA report predicts six possible regime trajectories, each with their own variations: (1) the survival of Khomeini's regime, where regime grows (1.1) strong, or (1.2) weaker; the regime is replaced by (2) a radical-nationalist regime or (3) a communist regime; (4) disintegration of Iran into smaller entities, where (4.1) non-communist elements are supported by the US, hence are strong or (4.2) not; (5) civil war that is (5.1) protracted or (5.2) short-lived; or (6) a right-wing regime that may transition into something else. The report also indicates that Iran with the outcome (2) would resemble Iraq and the outcome (3) and (5.2), Afghanistan (Lehman, 1979).

As the uncertainty about an opponent's regime type increases as in the above example, it gets harder for leaders to come up with precise estimates on how long a given conflict may last, what effort level and resources are necessary to prevail in conflict, what potential joiners might emerge, and how costly each choice might be. As the number of regime scenarios increases, it becomes more likely that optimal policy responses to the adversary in the crisis will differ depending on the regime type of the opponent. In addition, potential mismatches between the policy choices and the adversary's regime could have costly consequences. In other words, the strategic picture and the decision-making calculus get significantly more complex with uncertainty, and with enough costs, introducing scenarios that might risk the leader's political survival as the crisis escalates

further. For instance, the above cited CIA report links the regime uncertainty in Iran to a wide range of potential outcomes that different US responses might elicit: "any of these [six regime] outcomes could lead to any other" and "uncertainties are so great that there seems little purpose in speculating on the likely sequence of events ..." (Lehman, 1979, 10). Facing such uncertainties, and heightened costs due to potentially mismatched policy responses, leaders are more likely to be cautious when they consider taking escalatory steps in crises. Thus, increased levels of regime uncertainty should make peace more likely.

How does our concept of regime uncertainty compare with other commonly studied types of uncertainty in the literature, such as uncertainty about capabilities or resolve? The bargaining literature on conflict argues that such sources of uncertainty should increase the risk of conflict, due to the risk-return trade-off they induce (Fearon, 1995). More specifically, when facing such uncertainty, states prefer making bargaining offers that can satisfy weaker or less resolved possible types of the opponent while leading the stronger or more resolved types to decline and fight instead, rather than making more generous offers that would eliminate the risk of conflict all together by satisfying all types of the opponent.[1]

We argued, on the other hand, that regime uncertainty should lead to the opposite behavior, by making states more cautious and less likely to take steps that would escalate a crisis to war. To explain the discrepancy, what distinguishes our conceptualization from the aforementioned variants is that, in those two types of uncertainty, implications are single dimensional and easily calculable. If the opponent is stronger than expected, it is more likely to win the war. Alternatively, if the opponent has more resolve than anticipated, it faces lower costs from fighting, hence its leaders will reject the bargaining offer and the states will fight the costly war, the expected utility of which can again be accurately quantified. The regime uncertainty as we describe it, on the other hand, is multi-dimensional, and does not only affect the likelihood of winning or the costs from a military engagement. It can affect the range of outcomes as well, and the relevance of third parties.[2] Combined together, these increase the likelihood of having distinct optimal policy responses to different regime possibilities of the opponent, and high costs for ill-suited policy

[1]Uncertainty about factors like capabilities, intentions, or resolve can also increase the range of outcomes in a crisis. Given the difficulty scholars noted about measuring some of these types of uncertainty (Bas and Schub, 2016*b*), at a minimum, one can consider our regime uncertainty concept as a parsimonious proxy for multiple relevant factors rather than studying these factors separately. On the other hand, as we detail above, regime type is also linked to many other distinct outcome relevant dynamics besides capabilities or resolve, such as the behavior and preferences of the third parties (e.g., Signorino and Tarar, 2006). Therefore, we propose regime uncertainty not just as a parsimonious proxy but a concept that can provide a more complete picture of the role of uncertainty in foreign policy behavior.

[2]For instance, given the difficulty in assessing the Iranian regime's trajectory with certainty, there was a concern among the US administration that a military option could "drive Iran into the arms of the Soviet Union" (Vance, 1983, 398).

choices that misjudge the opponent's regime type. Thus, we expect that such complexities in the strategic picture stemming from regime uncertainty should discourage the risk-return trade-off reasoning and lead states to a more cautious behavior instead.

What are the empirical implications of our theoretical argument? There is no consensus in the literature on whether directed or non-directed dyads should be the focus for testing theories about inter-state conflict. Directed dyadic designs allow for the study of behavioral choices such as conflict initiation (Bennett and Stam, 2000). On the other hand, there is a debate in the literature over the reliability of the data on initiation (e.g., Gibler, Miller and Little, 2016). A case for a non-directed analysis even when studying such behavior is that, due to states' preemptive motives for conflict, a state that had the motives to initiate an attack may not be coded as doing so if it is preempted by the target (Levy, 1987). Hence, in generating our hypotheses, instead of taking a side on this issue, we study both non-directed and directed variants for robustness.

Thus, our theory has at least three observable implications. First, we expect that as the overall uncertainty about regime types in a dyad increases, which we can capture by the higher uncertainty in the dyad, it becomes more likely for either country to face more uncertainty about the other side. Thus, on average, countries in such dyads should be more cautious and avoid taking steps that increase the risk of conflict, compared to dyads with countries that face less uncertainty:[3]

> **Hypothesis 1**: Higher uncertainty about regime types in a dyad makes conflict onset less likely.

Second, our theory has implications for crisis initiation behavior: we expect that a state that is more uncertain about an opponent's regime type should be more cautious and less likely to adopt policies that increase the overall likelihood of conflict. Thus, we test the following hypothesis:

> **Hypothesis 2**: Increased uncertainty about the opponent's regime type makes conflict initiation less likely.

Finally, as a robustness check, we study the implications of our theory for cases when a state is challenged and threatened in a given dispute, and considers resisting or acquiescing to demands. In such an analysis, the amount of uncertainty about the challenger's regime becomes important, and

[3]Regime uncertainty is at the country level and our dependent variable, conflict, is a dyadic phenomenon. In addition, the theorized effect of regime uncertainty is asymmetrical, i.e., A's uncertainty about B's regime is not the same as B's uncertainty about A's regime. Moreover, we assume that either A or B has no uncertainty about its own regime and own behavior in crisis.

depending on the level of uncertainty, the targeted state may become more cautious in its response. More specifically, we expect that the target should be more willing to give in to the demands of the challenger if the challenger's regime is more uncertain:

> **Hypothesis 3**: Facing more uncertainty about a challenger's regime type, a target state is more likely to acquiesce to demands, making compellent threat success more likely.

In the next section, building on the theoretical discussion above, we present our new measure of regime uncertainty. We describe its properties, compare it with existing measures, and evaluate its validity before we move on to our empirical analyses.

A Measure of Regime Uncertainty

To test our hypotheses from the previous section, the first step is to develop a measure of uncertainty about regime type. In this section, we talk about how we conceptualize regime type, which then informs us about measuring its uncertainty. First, we discuss if regime type should be measured continuously, or as a categorical variable. This choice will determine how its uncertainty can then be captured. We argue that an approach that treats regime type as categorical is the right choice to better approximate the decisions leaders face during crises. We then frame the measurement problem as one of classification, where leaders assess the likelihood that a given state falls into different categories of regimes. The relative probabilities of assignment into various categories will form the basis of our uncertainty measure.

The Measurement Approach

Scholars of regime type face a fundamental choice between conceptualizing regime type as a categorical variable or regime types as attributes that are more or less present. The first approach assumes that a regime either satisfies the minimal conditions to be regarded as democracy or it fails to do so. The second approach sees democracy as an inherently continuous variable (Bollen and Jackman, 1989). The proponents of the latter approach underscore that the categorical conceptualization cannot account for regimes that fall in the gray zone, for instance regimes that are similar to democracies but do not meet the minimal conditions.[4]

[4]For a detailed overview of the literature, see Bernhard, Örsün and Bayer (2017).

Our approach in this paper treats regime type as a categorical variable. Most of the theories focusing on the link between regime type and conflict discuss different behavior by distinct regime categories, rather than talking about variations in an underlying continuous dimension of democracy. For instance, Goemans (2000)'s account on the fate of defeated leaders in an inter-state war is typological, where three distinct regime categories – democracies, autocracies and mixed regimes produce differing fates after a defeat: losing power; staying in power; and losing power with additional punishment. Likewise, Reiter and Stam (1998)'s account of democratic triumphalism underscores differing risk attitudes of democratic, autocratic and mixed regimes.

Our measure extracts information from a list of extant political regime indicators commonly used in the literature, such as the Polity IV and V-Dem data sets.[5] In doing so, we do not assume that these regime data sets are deterministic or error-free in measuring regime types. Given that we cannot know the amount of noise in each data set ex ante, combining information from these imperfect sources in a latent variable framework is a better approach than the separate use of individual data sets (Boeschoten, Oberski and Waal, 2017).

How many different categories of regime type should one account for? One approach is to treat regime type as a dichotomous variable based on the democracy-autocracy distinction (Sartori, 1970). Another common approach is to add semi-democracies to the above list as a third category (Diamond, Linz and Lipset, 1990).[6] At the other extreme is a data-driven approach to estimate the number of regime classes based on a metric like the Bayesian Information Criterion. In practice, the democracy-autocracy dichotomy leads to a classification that pools diverse groups of regimes into a single category. The data-driven approach, on the other hand, in many cases results in too many classes that are difficult to interpret in a meaningful way, and are unlikely to approximate regime assessment and uncertainty by decision-makers in crises.[7] Therefore, we adopt the middle strategy by introducing semi-democracies as a third type to focus on three classes of regimes and estimating the likelihood of democracy, semi-democracy, and autocracy. This choice transforms the measurement strategy from one of uni-dimensional to multi-dimensional. It avoids the limitations of the binary classification discussed above, as well as the less theoretical, data driven approach that raises validity concerns.[8]

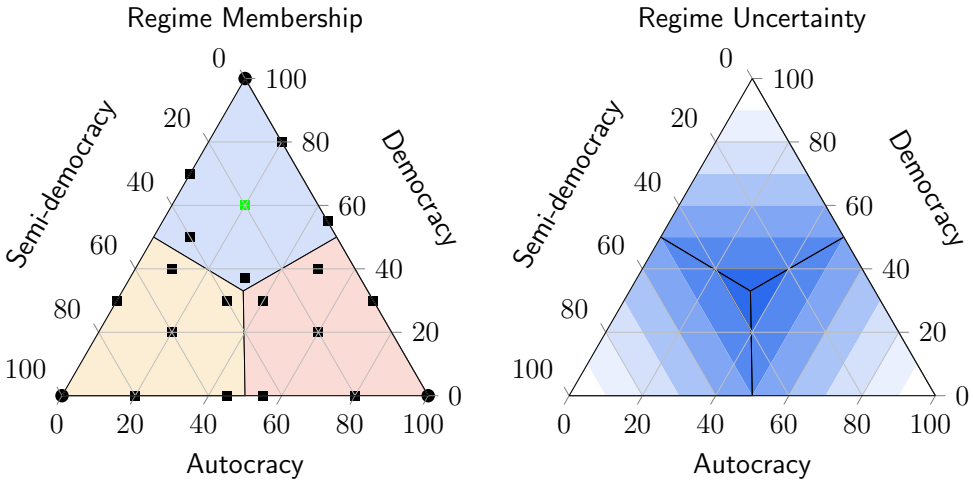
[5]The complete list of data sources and the summary statistics of each measure are presented in the Online Appendix Table A1. The country-year coverage of our combined regime data set is presented in Table A2.

[6]The literature produced a wide variety of labels for regimes falling into this third category, e.g., hybrid regimes, gray zones, intermediate regimes, anocracies, illiberal democracies, competitive authoritarianism, or electoral authoritarianism.

[7]Figure A1 in the Online Appendix illustrates the limitations of these approaches.

[8]In the empirical section, we offer robustness checks considering various alternative classification choices.

Figure 1: Three Regime Categories and Regime Uncertainty



Our measure of regime uncertainty then captures the precision and confidence in this classification problem. A given country is predicted as democracy, for instance, if it is classified as one with higher probability than the other two regime classes. Consider Figure 1. The sub-figure on the left shows three-dimensional assignment of regime types based on estimated class probabilities, where the blue, yellow, and red shaded areas represent probability combinations that result in a country being predicted as democratic, semi-democratic, and autocratic, respectively. For a predicted democracy, for instance, the assignment could be more or less precise. A hypothetical country *X* could be predicted as a democracy with .4 probability, a semi-democracy with .3, and an autocracy with .3 probability, and would lie on the blue shaded area. Consider another country *Y*, where the probabilities are (1, 0, 0), respectively, and the classification is again democratic. Our uncertainty measure aims to differentiate countries *X* and *Y* in terms of the uncertainty in their regime assignment. We define uncertainty as the residual probability for other regime classes once a country is assigned to the most likely regime category. Black circles in the figure represent cases when there is no uncertainty about regime type. The black squares, on the other hand, represent cases where there are non-zero probabilities for multiple regime classes and varying levels of regime uncertainty exist across cases. More generally, the figure on the right shows the variations in uncertainty as a function of any assignment probability combination. The darker (lighter) shades of blue on the figure represents cases with higher (lower) levels of uncertainty over regime type.

Why is this measurement approach a good approximation for leaders' uncertainty about their adversaries' regime types? The underlying assumption in our measurement strategy is that the existing indices of regime type we use, listed in the Online Appendix Table A1, attempt to concep-

tualize an underlying multifaceted trait of regime type and try to approximate it based on a variety of observable factors, including but not limited to institutional characteristics, leader behavior and practices, expert opinions, or media coverage. We assume that decision-makers in crises also rely on a subset of these observable characteristics when they try to assess their opponents' regimes.[9] Thus, we use these indices of regime type to approximate the classification problem leaders face, and extract the uncertainty in this assessment process as our measurement for regime uncertainty.[10]

In practice, our measure of regime uncertainty is a function of (i) disagreements among existing measures; and (ii) agreements over grey zones between the three assumed regime types. Thus, the challenge is to quantify disagreements among the various nominal, ordinal, and interval-level measures of regime type, and capture the distance of each country-year from certain democracy, certain autocracy and certain semi-democracy classifications to measure the amount of uncertainty. The inductive nature of this classification approach aims to approximate the cognitive processes of political actors involved in crises. Rather than conducting this classification based on arbitrary thresholds on a single existing measure like the Polity score, our approach groups similar states into various regime categories based on a variety of existing measures. Before labeling country *X* as a democracy, an autocracy, or a semi-democracy, the relevant question we ask boils down to: is *X* similar to countries like Libya and Iran; the UK and Canada; or Russia, and Jordan? For some countries, this assignment is straightforward and there is no uncertainty about regime type. For others, multiple categories remain as plausible answers to the question posed, and the classification contains more uncertainty. In the Online Appendix, we describe the inductive algorithm that aims to perform this classification by maximizing the similarity of countries within each regime class and minimizing it across different categories.

[9]The ideal way to test our theory would be to come up with accurate measures of key decision-makers' perceptions, and use them to gauge the level of uncertainty they had about an adversary's regime. While perhaps some of this information can be gathered from memoirs, internal deliberations, declassified documents, or interviews about a small number of well-known crises involving major powers, a direct measure of perceptions is not feasible for a large-N analysis like ours. Thus, we view our measurement approach as a second-best alternative to provide evidence of associations consistent with our main hypotheses.

[10]One potential alternative to our conceptualization of uncertainty is using estimation uncertainty from some of existing democracy estimates (e.g., Pemstein, Meserve and Melton, 2010; Coppedge et al., 2017) as a proxy for regime uncertainty. Such an approach would have a few limitations. First, it confounds estimation uncertainty with theoretical uncertainty. Second, such scores based on continuous underlying measures would not be compatible with our categorical conceptualization of regimes. Finally, countries with extremely high or low estimated levels of democracy tend to have substantively larger levels of uncertainty in these approaches, mainly due to the nature of the underlying item response theory modeling approach, which makes it difficult to attribute a theoretical meaning to them. That being said, in the Online Appendix, we contrast our regime uncertainty measure with the rater-level confidence information available in the V-Dem data set.

Patterns of Regime Uncertainty

We generate regime uncertainty for nearly all countries in the world from 1800 to 2016. The summary statistics for the latent class model's mixing probabilities, posterior probabilities, regime type assignments as well as regime uncertainty are presented in the Online Appendix Table A3.

As we describe in Figure 1, regime uncertainty is higher in the grey zones and lower as an observation can easily be assigned to one of the three types. Thus, assessing the validity of our regime uncertainty measure necessitates first evaluating the accuracy of regime classification into these three types based on the latent class analysis. To accomplish this, in Figure 2, we plot the estimated posterior probabilities of the three regime types and regime uncertainty against two of the commonly used regime measures that we included in the latent class analysis, namely the Polity IV score and V-Dem's Additive Polyarchy Index.[11] The red, yellow, and blue lines represent the estimated probabilities of autocracy, semi-democracy, and democracy, respectively. Similarly, the dashed black line represents our regime uncertainty measure based on the estimated posterior probabilities.[12]

Overall, the estimated posterior probabilities show expected associations with the underlying regime data sets: the probability of democracy (autocracy) in our classification increases (decreases) as the democracy (autocracy) score gets higher (lower) in the underlying regime indices. Similarly, the probability of semi-democracy reaches its maximum around the middle range of values of the underlying regime measures. Regime uncertainty is maximized in the grey zones between the three types where the classification algorithm assigns close probabilities to multiple regime types. For example, V-Dem's Additive Polyarchy Index shows that Regime Uncertainty has a bimodal distribution. The first peak in uncertainty occurs in the region where probability of autocracy and semi-democracy both approach 0.5, and the second peak in the region where the probabilities of semi-democracy and democracy are approximately 0.5 each.[13]

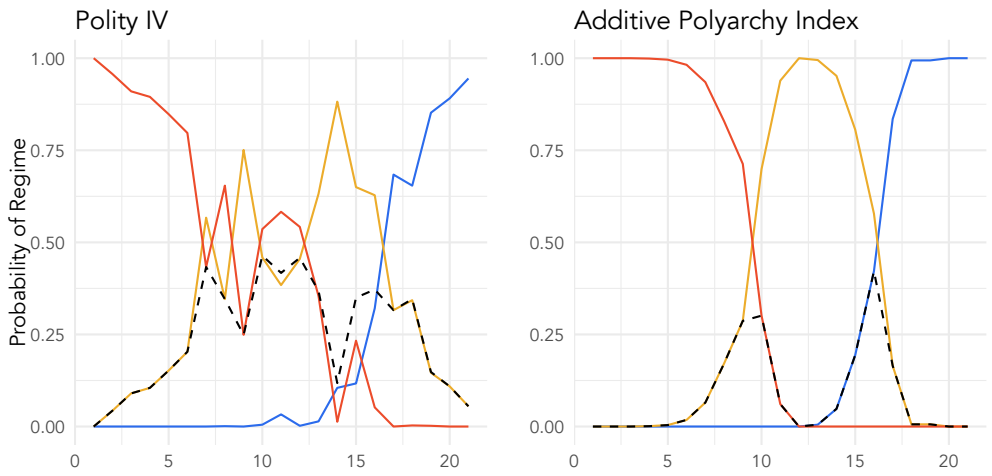
Interestingly, we can see notable limitations in the widely used Polity IV measure compared to some of the other measures like V-Dem. Polity performs better in measuring democracy, where our estimated democracy score monotonically increases in the Polity score. However, its performance

[11] Figure A3 in the Online Appendix includes the same figure with all democracy indices included.

[12] Our approach estimates latent regime types by minimizing dependence among the manifest variables, and assumes that the manifest variables are independent conditional on the latent regime types.

[13] One might be concerned that regime uncertainty is a result of regime transitions. However, we find that the correlation between regime uncertainty and regime transition, democratic transition, and autocratic transition, are as low as 0.09, 0.09, and 0.05, respectively. Moreover, semi-democracies are not substantively more uncertain than democracies and autocracies. We find that average uncertainty in semi-democracies is only 0.027 more than the average in democracies or autocracies, with a 95 percent confidence interval of (0.023, 0.031).

Figure 2: Regime Type Probabilities $\hat{Pr}(t|Y_i)$ and Regime Uncertainty $\hat{U}_i$ Plotted against Polity IV and V-Dem Additive Polyarchy Index



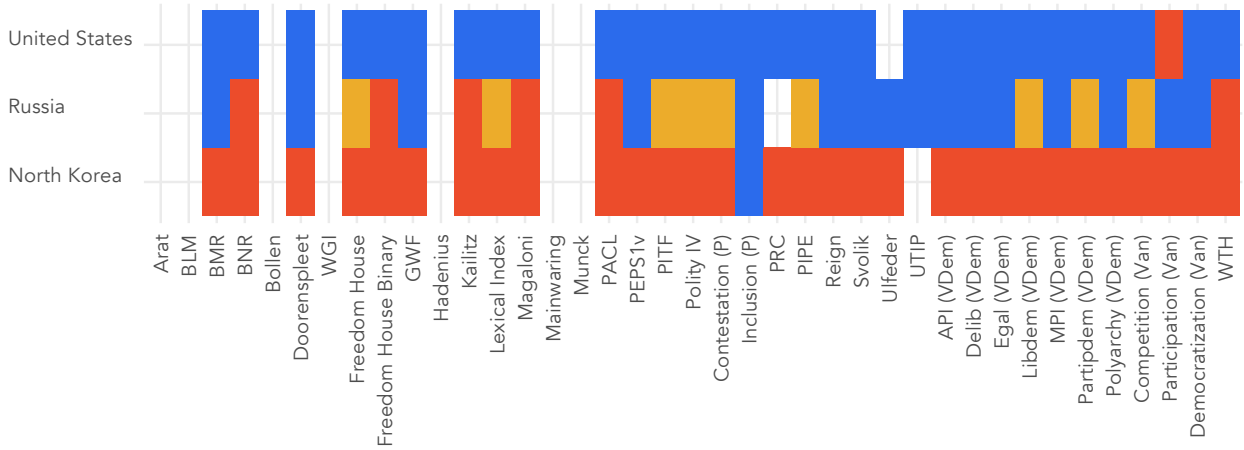
Notes: The posterior probabilities of three regime types for Polity IV and V-Dem Additive Polyarchy Index. Red, yellow, blue, and black lines represent autocracy, semi-democracy, democracy, and regime uncertainty, respectively.

in capturing semi-democracy and autocracy — as our algorithm estimates them — is less clear. While the overall trends of a decrease in the probability of autocracy with an increase in Polity, and the inverse-U shaped semi-democracy probability as a function of Polity are as expected, each probability displays significant fluctuations that are difficult to explain substantively. As a result, regime uncertainty in the Polity IV figure is also highly jagged.

To further illustrate the convergent validity of our measure (Adcock and Collier, 2001, 540), we excluded two of the main regime indices from our classification analysis, namely Polity IV and V-Dem Electoral Democracy Index. We then compared the resulting three-type classification with the excluded indices. If our measure has high convergent validity, we would expect the autocracy class to have lower Polity IV and V-Dem scores, the democracy class to be associated with higher scores from either measure and semi-democracy to be in the middle when compared against the two excluded indices. This expectation is confirmed in Figure A4, where red dots are countries that are classified as autocracies, yellow dots are semi-democracies, and blue dots are democracies according to our algorithm that did not use Polity IV or V-Dem Electoral Democracy measures.

As an illustration of our uncertainty measure, consider three countries in 1992 shown in Figure 3: Russia, North Korea and the US. First, for Russia in 1992, around 30 different measures provide information on regime type. For instance, Polity IV assigns a score of 5 from the [-10, 10] range. Using the information from Figure A3, 9 manifest indicators imply a coding of semi-democracy, 6 codes it as autocracy and 16 as a democracy as the most likely regime category. Our algorithm esti-

Figure 3: The US, North Korea, and Russia in 1992



Notes: Red, yellow, and blue represent autocracy, semi-democracy and democracy, respectively.

mates a semi-democracy classification for Russia in 1992 with a probability of 0.57 and democracy with a probability 0.43, leading to an uncertainty score of 0.43 out of the theoretical maximum of around 0.66. However, disagreement is not a necessary condition for a high regime uncertainty score. For example, there are no disagreements about Antigua and Barbuda in 1980 in our sample but the estimated regime uncertainty score is 0.54. In contrast, for the US and North Korea in 1992, the data sets almost unanimously agree on the regime type, resulting in democracy and autocracy with zero uncertainty respectively.

Empirical Analysis: Regime Uncertainty and Interstate Conflict

In this section, we test our hypotheses regarding the relationship between regime uncertainty and interstate conflict behavior. We focus on the potential effect of dyadic uncertainty on conflict onset, the effect of target's regime uncertainty on conflict initiation, and the effect of initiator's regime uncertainty on the effectiveness of militarized threats. For the first two tests, we use as our dependent variables four different operationalizations of conflict onset and initiation commonly employed in the literature as binary variables: the occurrence of (i) Militarized International Disputes (MIDs) from Maoz (2005); (ii) Use of Force (MIDs in which there is an actual use of force); (iii) Fatal MIDs (MIDs that produce at least one battle-related death); and (iv) Wars (MIDs that produce at least one-thousand battle-related deaths). Among appropriate methods available for binary depen-

dent variables, we estimate logistic regression models to test each hypothesis.

Our main independent variable is *Regime Uncertainty* as discussed in the previous section. In our non-directed dyadic analyses to test Hypothesis 1, we construct *Uncertainty*$_H$ to capture the higher regime uncertainty in a given dyad to include in our regressions. A negative and significant coefficient estimate for this variable would imply a pacifying effect of uncertainty, which would be consistent with our hypothesis. If, instead, the estimated coefficients are insignificant or positive, this would lead us to reject our hypothesis. Our second hypothesis focuses on the effect of an initiator's uncertainty about the opponent's regime type on conflict initiation. Accordingly, in our conflict initiation models, *Uncertainty*$_T$ measures the potential initiator's uncertainty about the target's regime. Our third hypothesis focuses on a target state's behavior given a threat issued by a challenger state. Thus, for these analyses, *Uncertainty*$_I$ measures the target's uncertainty about the challenger state's regime type. Based on our hypotheses, we expect *Uncertainty*$_T$ and *Uncertainty*$_I$ to have negative coefficient estimates.

The remaining independent variables in the conflict onset and initiation models are a set of standard control variables in the conflict literature: the dummy variables *Democracy*$_I$, *Democracy*$_T$, *Joint Democracy* and *One-side Democracy* capture whether the initiator state, the target state, both states, or one state in the dyad, respectively, is classified as democratic based on our latent class analysis. *Capability ratio*$_{I,T}$ is defined as the natural logarithm of the ratio of the weaker state's capabilities to the stronger state's capabilities in the dyad and *Capability Ratio* $_{\frac{I}{I+T}}$ is defined as the initiator's capability share as a fraction of the total capability in a given dyad. We also include *Distance*, measuring the inter-capitol distance. *Contiguity* equals 1 if the two states in the dyad are directly contiguous by land. *Major Power* is a binary variable coded as 1 if a dyad includes at least one great power.

Results

First, Table 1 presents regression results on the link between regime uncertainty and the probability of MIDs, Fatal MIDs, Use of Force, and War Onset in a non-directed dyad to test Hypothesis 1. Models 1, 3, 5, 7 in Table 1 uses all dyads in the sample while Models 2, 4, 6, 8 focus on the politically relevant dyads – dyads that are either contiguous by land or includes at least one major power.

Model 1 and 2 in Table 1 present results on the relationship between higher regime uncertainty score in a dyad and MIDs onset. MIDs may involve explicit threats, displays or actual uses of

Table 1: Conflict Onset and Regime Uncertainty, 1816-2001

	MID		Fatal MID		Use of Force		War	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Uncertainty$_H$	-1.15***	-0.86**	-2.69***	-3.08***	-1.62***	-1.52***	-2.25**	-2.61*
	(0.43)	(0.39)	(0.90)	(1.00)	(0.51)	(0.46)	(1.05)	(1.46)
Joint Democracy	-1.02***	-0.93***	-2.11***	-1.97***	-1.09***	-1.12***	0	0
	(0.16)	(0.15)	(0.45)	(0.46)	(0.19)	(0.21)	(.)	(.)
One-side Democracy	0.20**	0.16*	0.20	0.16	0.14	0.073	-0.30	-0.24
	(0.09)	(0.09)	(0.19)	(0.19)	(0.11)	(0.10)	(0.28)	(0.30)
Capability Ratio$_{A,B}$	-0.16***	-0.27***	-0.22***	-0.42***	-0.13***	-0.25***	-0.45***	-0.53***
	(0.03)	(0.03)	(0.05)	(0.05)	(0.04)	(0.03)	(0.09)	(0.09)
Distance	-0.45***	-0.21***	-0.49***	-0.38***	-0.44***	-0.22***	-0.53***	-0.024
	(0.05)	(0.04)	(0.09)	(0.07)	(0.05)	(0.05)	(0.14)	(0.13)
Major Power	2.02***		1.37***		1.95***		3.07***	
	(0.14)		(0.24)		(0.15)		(0.33)	
Contiguity	2.09***		2.98***		2.18***		1.38***	
	(0.16)		(0.34)		(0.18)		(0.36)	
Constant	-1.40***	-0.049	-3.06***	-0.14	-1.87***	-0.30	-4.13***	-4.28***
	(0.37)	(0.24)	(0.78)	(0.46)	(0.43)	(0.29)	(1.28)	(0.93)
Observations	651047	81948	651047	81948	651047	81948	568857	68842
Pseudo R^2	0.2525	0.1310	0.2537	0.1456	0.2363	0.1221	0.1886	0.0705

Clustered standard errors are reported in parentheses

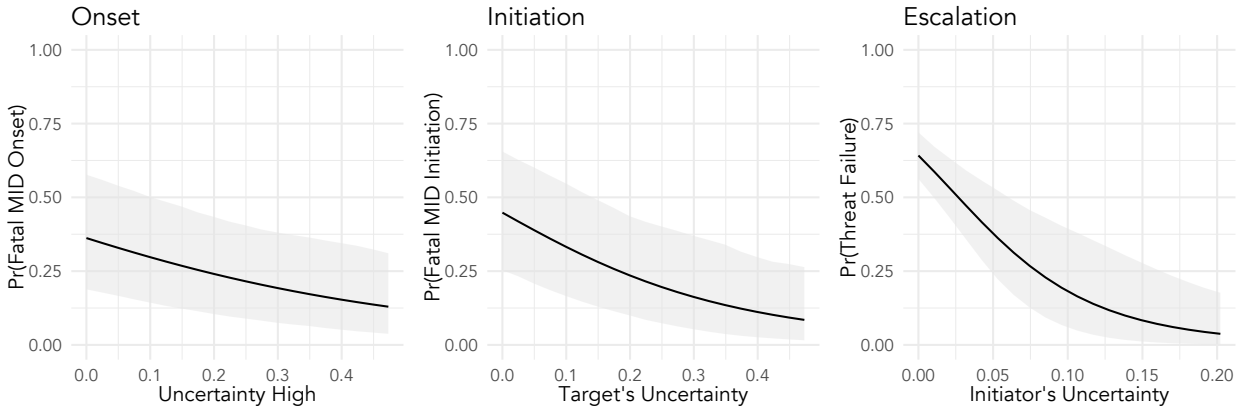
Peace years and cubic splines are not presented to save space.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

military force (Jones, Bremer and Singer, 1996, 163). As expected, $Uncertainty_H$ has a negative coefficient that is significant at conventional levels, indicating that increasing the regime uncertainty of at least one state in a given dyad is pacifying on average. Substantively, based on Model 2, increasing $Uncertainty_H$ from its minimum to maximum level reduces the probability of a MID onset from the baseline probability of 0.44 to 0.34, translating into a 0.1 reduction in probability with a 95-percent confidence interval of (-0.19, -0.01).[14]

Next, we focus on Fatal MIDs to assess whether our hypotheses are also supported in conflicts that have at least one battle-related death. The coefficients of $Uncertainty_H$ in Models 3 and 4 are negative and significant ($p<0.01$), as expected. Figure 4 (a) illustrates the estimated effect of $Uncertainty_H$ on Fatal MID onset for a conflict-prone dyad. As can be seen, increasing dyadic regime uncertainty from its minimum to maximum value in the sample results in a 0.24 decrease in the probability of a Fatal MID onset with a 95-percent confidence interval of (-0.37, -0.10) from the baseline probability of 0.36 to 0.12. Moreover, in Model 5-8, we focus on the onset of higher levels of hostility and War as our dependent variables. The results again provide further support for our hypothesis: the effect of $Uncertainty_H$ is negative and significant in all these models.[15]

Figure 4: Substantive Effect of Uncertainty on Conflict Onset, Initiation, and Escalation



Notes: The figure presents (a) the effect of $Uncertainty_H$ on Conflict Onset estimated from Table 1, Model 4, (b) the effect of $Uncertainty_T$ on Conflict Initiation estimated from Table 2, Model 3, (c) the effect of $Uncertainty_I$ on Threat Failure is estimated from Table 3, Model 2.

In addition to regime uncertainty, our control variables affect the likelihood of conflict onset in expected ways: *Joint Democracy*, in line with the democratic peace literature, has a negative and

[14] We set all the other variables to represent a dispute-prone dyad.

[15] As a robustness check, we use the average regime uncertainty in the dyad as an alternative to $Uncertainty_H$. The results remain substantively the same for the various measures of conflict onset, as presented in Online Appendix, Table A4.

significant coefficient.[16] We also estimate that preponderance of power promotes peace, whereas equal power distribution has the opposite effect. Moreover, *Contiguity* increases the likelihood of conflict onset, and *Distance* has a pacifying effect, in line with results from the previous literature.

Next, we present our results on conflict initiation. We hypothesized that State A's uncertainty about the target's regime type (State B) makes A less likely to initiate conflict. To test this hypothesis directly, Table 2 changes the unit of analysis from non-directed dyads to directed-dyads and includes $Uncertainty_T$ as the main independent variable. Similar to our non-directed analyses, we focus on four different levels of conflict, using both the complete sample (odd-numbered models) and politically relevant dyads (even numbered models).

Model 1 and 2 in Table 2 estimate the effect of $Uncertainty_T$ – target's regime uncertainty score in a dyad – on MIDs with any intensity. As apparent from the table, the coefficients of $Uncertainty_T$ have a negative sign as predicted, and are significant at the .05 level. Based on Model 1, increasing $Uncertainty_T$ from its minimum to maximum level leads to a 0.08 reduction in the probability of a MID initiation with a 95-percent confidence interval of (-0.15, -0.01) from a baseline probability of 0.88 to 0.80, while setting all the other variables to their most-conflict prone values. Models 3 and 4 change the dependent variable from MIDs to Fatal MIDs initiation for the complete sample and the politically relevant sample, respectively. The coefficients of $Uncertainty_T$ are again negative and significant at conventional levels of significance. Figure 4(b) plots the effect of $Uncertainty_T$ on Fatal MID initiation: increasing target's regime uncertainty from its minimum to maximum value decreases the probability of a Fatal MID initiation by 0.37, with a 95-percent confidence interval of (-0.58.4, -0.17) from the baseline probability of 0.45 to 0.08. The results are similar for Use of Force and War initiation models as well: increasing uncertainty from minimum to maximum leads to 0.14 reduction (with a 95-percent confidence interval of -0.25 and -0.03) on Use of Force Initiation. Substantively, this would mean that the probability of Russian use of force in 1991 against Estonia would reduce from 0.20 to 0.11, translating into a 0.09 point decrease in probability with a 95 percent confidence interval of (0.02, 0.15). Finally, increasing uncertainty from its minimum to maximum leads to a 0.22 reduction with a 95-percent confidence interval of -0.47 and -0.06) on War Initiation.[17]

[16] Joint Democracy variable is dropped from the War Onset model due to quasi-complete separation. Table A5, A6, and A7 in our Online Appendix show that these results are robust to excluding all regime type variables from our main specifications.

[17] The included control variables have similar estimated effects on conflict initiation to those on conflict onset, as discussed previously.

Table 2: Conflict Initiation and Regime Uncertainty, 1816-2001

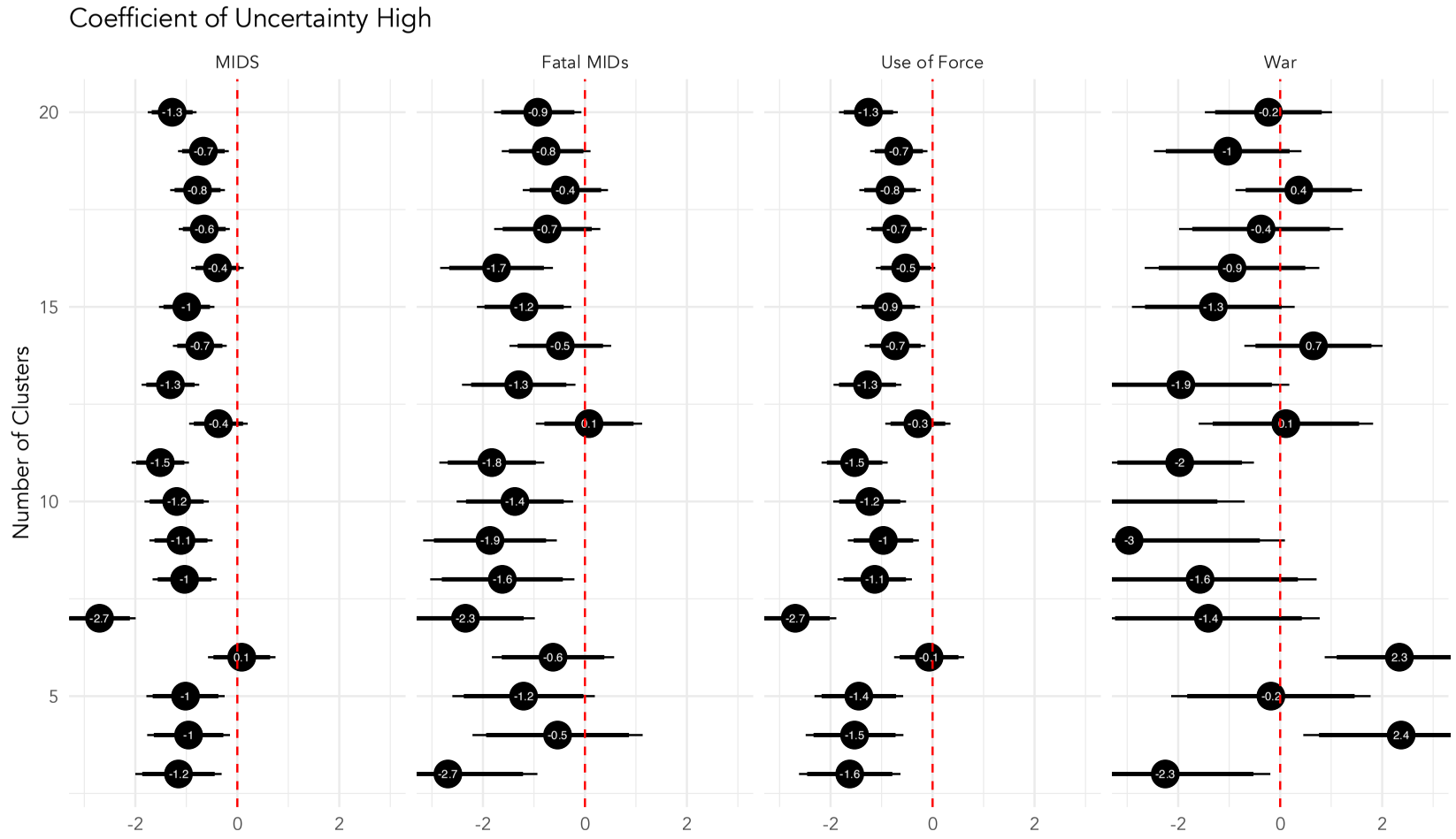
	MID		Fatal MID		Use of Force		War	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Uncertainty$_T$	-1.21**	-1.15**	-5.14***	-5.47***	-1.50***	-1.69***	-5.05***	-5.66**
	(0.50)	(0.49)	(1.62)	(1.80)	(0.56)	(0.55)	(1.80)	(2.53)
Democracy$_I$	0.16	-0.066	0.19	-0.097	-0.066	-0.27**	-0.12	-0.22
	(0.11)	(0.10)	(0.21)	(0.22)	(0.12)	(0.13)	(0.31)	(0.32)
Democracy$_T$	0.27**	0.33***	0.16	0.22	0.30**	0.31**	-0.69*	-0.41
	(0.12)	(0.12)	(0.26)	(0.26)	(0.13)	(0.13)	(0.37)	(0.38)
Joint Democracy	-1.18***	-1.09***	-2.21***	-2.02***	-1.10***	-1.13***		
	(0.18)	(0.18)	(0.56)	(0.58)	(0.22)	(0.23)		
Capability Ratio$_{\frac{I}{I+T}}$	0.085***	0.21***	0.078	0.24***	0.024	0.17***	0.052	0.34***
	(0.03)	(0.02)	(0.06)	(0.04)	(0.03)	(0.03)	(0.12)	(0.08)
Major Power$_I$	1.66***		1.26***		1.59***		2.63***	
	(0.13)		(0.23)		(0.15)		(0.33)	
Major Power$_T$	1.06***		0.24		1.03***		0.46	
	(0.17)		(0.26)		(0.17)		(0.42)	
Contiguity	2.22***		3.06***		2.31***		1.50***	
	(0.15)		(0.30)		(0.16)		(0.37)	
Distance	-0.46***	-0.38***	-0.52***	-0.60***	-0.44***	-0.38***	-0.62***	-0.35***
	(0.04)	(0.03)	(0.08)	(0.06)	(0.05)	(0.04)	(0.12)	(0.09)
Constant	-2.17***	0.081	-3.94***	-0.11	-2.78***	-0.32	-4.64***	-3.50***
	(0.34)	(0.20)	(0.69)	(0.42)	(0.40)	(0.24)	(1.12)	(0.78)
Observations	1294197	163627	1294197	163627	1294197	163627	1132209	138008
Pseudo R^2	0.2246	0.1044	0.2261	0.1050	0.2037	0.0884	0.1700	0.0430

Clustered standard errors are reported in parentheses.

Peace years and cubic splines are not presented to save space.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 5: Number of Regime Types, Regime Uncertainty, and Interstate Conflict Onset



Notes: The coefficients of Uncertainty$_H$ along with the 90-percent (thick) and 95-percent (thin) confidence intervals for MID, Fatal MID, Use of Force, and War Onset. The y-axis indicates the number of regime types chosen to estimate regime uncertainty and the x-axes indicate the coefficient estimate.

Robustness Checks

In this section, we report additional tests to assess robustness of our results. First, given that our conceptualization of regime uncertainty relies on a three-fold regime classification, a careful reader might wonder how important the choice of three classes is for our conclusions. Alternatively, one might want to account for the uncertainty resulting from potential variations within each of the three regime classes as well by allowing for sub-categories. For example, variations within authoritarian regimes might lead to differences in potential conflict outcomes (e.g., Weeks, 2008). To address these issues, as a robustness check, we replicated our analyses by increasing the number of regime classes from our choice of three categories to up to twenty classes and re-estimating regime uncertainty in each case for the non-directed dyadic analyses. Figure 5 presents the coefficients of these regime uncertainty measures and their confidence intervals for various regression specifications. Overall, the results remain consistent with the pacifying effect of uncertainty we reported in our main analyses. Figure 5 shows that the coefficient of *Uncertainty High* is negative and statistically significant ($p < 0.05$) in fifteen (out of eighteen) MID models, ten Fatal MID models, fifteen Use of Force Models, and three (five when $p < 0.1$) War models. In 7 specifications, the estimated negative effect for uncertainty is substantively stronger than the one we report in Table 1. Across the 72 models, the coefficient estimate is in the opposite direction (positive and significant) only in two models.[18] While our choice of three-fold classification is theoretically motivated, the robustness to alternative number of classes should increase the confidence in our results.

Next, as another robustness check for our analyses, we focus on the role of regime uncertainty in conflict escalation and the success or failure of compellent threats to test Hypothesis 3. In particular, we aim to test if uncertainty over the initiator state's regime type increases the effectiveness of its threats in compelling a target state to concede to its demands. For this purpose, we replicate Downes and Sechser (2012, 478) and introduce the initiator's regime uncertainty, $Uncertainty_I$, as an independent variable to their Table 4, Models 1 and 2 which use the failure of Militarized Compellent Threats (MCT) as the dependent variable. MCT data set defines a compellent threat as "an explicit demand by one state (the challenger) that another state (the target) alter the status quo in some material way, backed by a threat of military force if the target does not comply" (Sechser, 2011, 380). Downes and Sechser (2012)'s model focuses on the role of the regime type of the initiator and the target state, and joint democracy in the dyad as the main variables of interest. We use

[18] As presented in the Online Appendix, Figure A5, a similar pattern emerges for our directed dyadic analyses: the coefficient of Target's Uncertainty is negative and statistically significant ($p < 0.05$) for fifteen (out of eighteen) MID models, nine Fatal MID models, fifteen Use of Force models, six (nine for $p < 0.1$) War models. The effect is substantively stronger than the one we report in 18 specifications. In addition, none of the 72 models reports a positive and significant coefficient estimate for the target's regime uncertainty.

these as our control variables but measure them instead using regime types estimated based on our classification algorithm. In addition, Downes and Sechser (2012) include major power status of the initiator and the target, material capabilities of the initiator in comparison to the target, contiguity, foreign policy similarity of the initiator and the target with the system leader, as well as revision type. While our analysis also includes all fifteen control variables present in Downes and Sechser (2012)'s original regressions, we do not report them in Table 3 for space reasons.

Table 3: Effectiveness of Militarized Compellent Threats, 1918-2001

	(1)	(2)	(3)	(4)
Uncertainty$_I$	-23.29***	-21.88***	-17.91***	-15.77**
	(6.71)	(5.89)	(6.79)	(6.75)
Uncertainty$_T$	4.42	5.19	7.68	17.84
	(4.66)	(5.26)	(8.24)	(14.45)
Democracy$_I$			-0.07	-0.20
			(0.52)	(0.51)
Democracy$_T$			-0.57	-0.76
			(0.55)	(0.61)
Joint Democracy			1.25	1.31
			(0.92)	(0.94)
Constant	0.58***	0.57***	0.70	0.74
	(0.17)	(0.17)	(0.94)	(1.03)
Observations	231	199	230	198
Pseudo R^2	0.039	0.010	0.214	0.255
World Wars	Dummy	Excluded	Dummy	Excluded
Control Variables	No	No	Yes	Yes

Clustered standard errors are reported in parentheses.
Dependent variable is failure of threat effectiveness, hence, a negative (positive) coefficient indicates failure (success) of compellent threats.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 3 presents the main results for the effect of uncertainty about the initiator's regime type on the failure of its militarized compellent threats. Model 1 and Model 2 present the specifications with only the initiator's regime uncertainty and the target's regime uncertainty, while Model 3 and Model 4 report the models with all the controls included by Downes and Sechser (2012). In addition, Model 1 and 3 introduces World War dummies whereas Model 2 and Model 4 exclude World Wars from the sample. Across all models, we observe that *Uncertainty$_I$* has a negative and significant effect on the failure of compellent threats, confirming our third hypothesis that targets are more likely to concede to the initiator's demands and less likely to escalate the conflict when there is higher levels of uncertainty about the initiator's regime type. Figure 4(c) illustrates the sub-

stantive effect of $Uncertainty_I$ in this model: increasing the uncertainty about the initiator's regime type from its minimum to maximum in the sample translates into a 0.60 decrease in compellent threat failure probability (with a 95-percent confidence interval of (0.45, 0.70)), from the baseline probability of 0.64 to 0.03, when the rest of the values are set to represent a conflict-prone dyad. As a substantive example, the model estimates that increasing uncertainty from its minimum to maximum would lead to a 0.67 point (95 percent confidence interval of (-0.84 to -0.36)) increase in the effectiveness of threats issued by Iraq before the First Persian Gulf War from its baseline probability of 0.09.

In sum, our results provide consistent evidence for a pacifying effect of regime uncertainty on conflict behavior. This effect is apparent at various levels of violence and escalation in interstate crises. The reported effects remain robust under various alternative specifications. Next, we turn to a specific crisis that challenged the US during the Cold War. We argue that the uncertainty about the adversary's regime contributed to a cautious US response during the crisis.

The US Uncertainty about Peru

Beyond our statistical analyses that show significant negative associations between regime uncertainty and the onset of conflict, demonstrating that high uncertainty about an opponent's regime led to caution and contributed to peace in a specific interstate crisis is a challenge. This is because conflict between two states is rare in general, and there could be many other factors that have led to the continuation of peaceful relations between two countries. To show that regime uncertainty matters, it would be helpful to have examples with high regime uncertainty in which there is a crisis that remained peaceful but could have realistically escalated to higher hostility levels or conflict, based on the behavior in similar crises. In addition, we would need evidence of decision makers' uncertainty about their opponent's regime, contributing to their overall cautious behavior in the crisis.

The interaction between the US and Peru during late 1960s over the latter's expropriation of a US-owned company and the onset of a maritime territorial dispute between the two countries offer an opportunity to further support our theory's predictions. The nationalization of foreign-owned companies and assets was a frequent phenomenon in Latin America during the Cold War, which, in many cases, triggered a strong US response (Brands, 2007). General Juan Velasco Alverado seized power in Peru in 1968 through a coup fueled by his dissatisfaction with the Belaunde government's settlement with the US-owned International Petroleum Company (IPC) regarding the latter's tax

obligations. The left leaning, nationalist regime of General Velasco carried out nationalizations, including the expropriation of IPC without compensation. Within months, Velasco initiated diplomatic relations with Soviet Union, and explored similar openings with Cuba. After Velasco came to power, there also emerged a maritime border dispute between Peru and the US that resulted in the forceful seizure of multiple US fishing boats by the Peruvian forces.

Our measure records Peru during the first year of the Velasco regime to be a high uncertainty case (.48).[19] In contrast, we estimate very low regime uncertainty scores for the Castro regime in Cuba following the Cuban revolution, and the Allende regime in Chile in early 1970s, both of which implemented nationalization policies. Does our measure match the US decision-makers' assessments of Peru at the time? Secondly, has uncertainty lead to cautious US behavior towards Peru?

Based on the stronger US response to similar challenges during the Cold War against countries like Guatemala in 1950s, Cuba in early 1960s or Chile in early 1970s, there were a variety of overt or covert economic and military responses to the Velasco regime that could have been implemented.[20] These included imposing trade sanctions, preventing access to aid or loans through international institutions like the IMF or World Bank, stopping arms sales or transfers, and working with civilian or military opposition groups to undermine or topple the regime. Specifically, on the issue of nationalizations, the 1962 Hickenlooper Amendment required the US administration to terminate economic assistance to countries that nationalize US-owned asserts without speedy compensation. Despite examples of stronger response to uncompensated nationalizations in the past, and the preference for a tougher policy from the Congress and among some advisers, the US under the Nixon administration chose to show considerable restraint and caution towards Velasco:

> ...[T]he Nixon Administration stretched our legislation almost to the breaking point to reach an equitable settlement of the nationalization of the International Petroleum Company's mining operations without having to invoke restrictive legislation. We repeatedly sought pretexts to postpone application of the Hickenlooper Amendment and made clear that we were prepared to accept a compensatory payment for IPC of less than full value, so as to maintain friendly relations with an important country – even though Peru was governed by a left-wing military junta that was aggressively nation-

[19] This high score for Peru is not specific to the three-class version of the measure we used in our empirical analyses. The variants with more classes also predominantly suggest high uncertainty for Peru for the same period.

[20] In the case of Guatemala, a US-backed coup attempted to overthrow Jacobo Árbenz in 1954. In Cuba, various US efforts to undermine the Castro regime culminated in the Bay of Pigs operation in 1961. The Allende government in Chile from 1970-73 also experienced significant US economic pressure as well as covert attempts to undermine the regime, which finally ended with a coup in 1973.

alistic and leaning towards the more radical elements of the Third World (Kissinger, 2011, 824).

We argue that the uncertainty the US faced about the nature of the "left-wing military junta" that Kissinger talks about contributed to the its cautious behavior. How similar Peru under Velasco would become to communist countries like Cuba in its regional and international relations and how severely it would react to potential US economic responses to the nationalization issue formed the essence of this uncertainty. Nixon was concerned that Velasco would turn into another Nasser, or more worryingly, Peru would join the Soviet Bloc and become a second Cuba in the region (Brands, 2012, 136). The administration was overall "puzzled by the behavior of the Velasco government and often appeared somewhat unsure about how to respond to various twists and turns it took" (Walter, 2010). These initial worries were reinforced when Velasco initiated diplomatic and economic relations with the Soviet Union within months after coming to power and explored similar openings with Cuba, on top of the widespread nationalizations and agrarian reforms he implemented.

There is a stark contrast between the US uncertainty about Peru and the US views on Allende's Chile that adopted similar nationalization policies and faced a stronger response from the US. For instance, Kissinger notes that there was not much uncertainty regarding what Allende's regime stood for in terms of its international politics: "The US government was unanimous that he was tough, dedicated Marxist with a strong anti-American bias who would seek close relations with Cuba and Soviet Union, lead opposition to US influence in the hemisphere, and systematically promote policies hostile to ours" (Kissinger, 2011, 849). While these were among the realm of possibilities in terms of what the Peruvian regime could become, there remained significant uncertainty about its nature, and other, less worrying trajectories were deemed possible as well.

In the following years, the US uncertainty about the nature of the Velasco regime gradually diminished. In particular, Velasco's apparent dislike of the new Allende regime in Chile and presentation of Peru as a non-Marxist, non-communist alternative, independent from any foreign influences, made it unlikely in the eyes of the US decision-makers that the worst-case scenario of Peru turning into another Cuba would realize. Interestingly, this realization was followed by a tougher stance on the expropriation matters, when the Nixon administration finally adopted the policy of terminating economic aid and blocking loans to countries that expropriate US-owned assets in 1972 (Brands, 2007). Finally, an eventual settlement was reached on the expropriation issue in early 1974 (Hurtado-Torres and Fermandois, 2020).[21]

[21] While this example focuses on the US uncertainty about Peru, similar dynamics were present in other countries.

Conclusion

Despite regime type's theoretical prominence in the international relations literature, uncertainty about regime type has not received much scholarly attention. More specifically, how leaders' uncertainty about their adversaries' regime characteristics may influence their conflict behavior remains understudied in the literature. In this study, we offered the first analysis of such a relationship. Given the existence of multiple potential mechanisms through which a state's regime characteristics can affect its crisis behavior by altering costs, preferred outcomes, effort levels, or attitude towards risk or uncertainty, when there is uncertainty about a given state's regime characteristics, it becomes harder to predict its behavior in crises. When a leader faces an opponent state with an uncertain regime in a crisis, there is an increased range of potential outcomes and costs that might arise from conflict, some of which might threaten the leader's office prospects. Hence, we theorized that uncertainty about a state's regime type will result in cautious behavior by its adversaries, ultimately increasing the likelihood of peace prevailing in crises. To test this hypothesis, we developed a novel measure of uncertainty about regime type using a variety of existing regime indicators. Extensive empirical tests looking at conflict behavior at different levels of escalation and violence suggest that regime uncertainty is indeed a source of caution and peace.

Our results on regime uncertainty contributes to the broader literature on the link between uncertainty and conflict. Scholars have recognized that not all forms of uncertainty are conflictual: while uncertainty about capabilities and resolve could increase risk of conflict (Fearon, 1995), uncertainty about outcomes, or the durability of power shifts can be a source of peace (Bas and Schub, 2016*a*, 2017*a*). With this study, we add regime uncertainty to the list of peaceful forms of uncertainty and hope that our results motivate further theoretical and empirical research on different forms of uncertainty in international relations.

Our measure could be utilized in a few important substantive research areas. For instance, regime uncertainty may interact with other systemic, state or leader-level factors in shaping the dynamics of nuclear assistance and cooperation (Gheorghe, 2019; Way and Weeks, 2014); it may exacerbate or reduce conflictual effects of disasters (Brancati, 2007) or future disaster risks (Bas

One example is the interaction between the USSR and Romania during late 1960s. After the Warsaw Pact invasion of Czechoslovakia in 1968, there were rumors about a possible invasion of Romania, reflecting Moscow's attempt to punish its leadership for following a more independent foreign policy. To Moscow's dislike, Ceausescu's Romania established diplomatic relations with West Germany, remained neutral in the USSR - China dispute, and openly condemned the Warsaw Pact invasion in Czechoslovakia (Stanciu, 2013, 354). The Soviets seemed to be uncertain about Romania's commitment to the overall Communist cause, given perceived nationalist tendencies in the country and its leadership. In the end, the Soviets proceeded with caution against Romania and chose to deal with Ceausescu through diplomacy and negotiations (Gheorghe, 2015).

and McLean, 2021); or influence the patterns of state support for non-state actors (San-Akca, 2009, 2016). Beyond the literature on interstate security, the literature on the rational design of international institutions focuses on how uncertainty about behavior, preferences, or the state of the world affect the depth of institutionalized cooperation (Koremenos, Lipson and Snidal, 2001). Focusing on trade agreements, Rosendorff and Milner (2001) argue that escape clauses are an efficient outcome under greater domestic uncertainty. Scholars can use our measure to test similar hypotheses about the link between regime uncertainty and the structure and content of international agreements. Similarly, regime uncertainty has implications for the study of cooperation in other areas, such as the credibility of long-term commitments in climate negotiations (Böhmelt, Böker and Ward, 2016). Finally, to the extent that alliance formation behavior is related to regime type and similarity (Werner and Lemke, 1997), our measure would be helpful for studies on alliance formation, or economic and military assistance more generally.

References

Adcock, Robert and David Collier. 2001. "Measurement Validity: A Shared Standard for Qualitative and Quantitative Research." *American Political Science Review* 95(3):529–546.

Bas, Muhammet A. and Elena V. McLean. 2021. "Expecting the Unexpected: Disaster Risks and Conflict." *Political Research Quarterly* 74(2):421–433.

Bas, Muhammet A. and Robert J. Schub. 2016*a*. "How Uncertainty about War Outcomes Affects War Onset." *Journal of Conflict Resolution* 60(6):1099–1128.

Bas, Muhammet A. and Robert Schub. 2017*a*. "Peaceful Uncertainty: When Power Shocks Do Not Create Commitment Problems." *International Studies Quarterly* 61(4):850–866.

Bas, Muhammet A. and Robert Schub. 2017*b*. "Theoretical and Empirical Approaches to Uncertainty and Conflict in International Relations." *Oxford Research Encyclopedia of Politics* .

Bas, Muhammet and Robert Schub. 2016*b*. "Mutual Optimism as a Cause of Conflict: Secret Alliances and Conflict Onset." *International Studies Quarterly* 60(3):552–564.

Bayer, Reşat. 2010. "Peaceful Transitions and Democracy." *Journal of Peace Research* 47(5):535–546.

Bennett, D. Scott and Allan C. Stam. 2000. "Research Design and Estimator Choices in the Analysis of Interstate Dyads: When Decisions Matter." *The Journal of Conflict Resolution* 44(5):653–685.

Bernhard, Michael, Ömer Faruk Örsün and Reşat Bayer. 2017. "Democratization in Conflict Research: How Conceptualization Affects Operationalization and Testing Outcomes." *International Interactions* 43(6):941–966.

Boeschoten, Laura, Daniel Oberski and Ton de Waal. 2017. "Estimating Classification Errors Under Edit Restrictions in Composite Survey-Register Data Using Multiple Imputation Latent Class Modelling (MILC)." *Journal of Official Statistics* 33(4):921–962.

Bollen, Kenneth A. and Robert W. Jackman. 1989. "Democracy, Stability, and Dichotomies." *American Sociological Review* pp. 612–621.

Brancati, Dawn. 2007. "Political Aftershocks: The Impact of Earthquakes on Intrastate Conflict." *Journal of Conflict Resolution* 51(5):715–743.

Brands, Hal. 2007. "Richard Nixon and Economic Nationalism in Latin America: The Problem of Expropriations, 1969–1974." *Diplomacy and Statecraft* 18(1):215–235.

Brands, Hal. 2012. *Latin America's Cold War*. Harvard University Press.

Bueno De Mesquita, Bruce, James D. Morrow, Randolph M. Siverson and Alastair Smith. 1999. "An Institutional Explanation of the Democratic Peace." *American Political Science Review* 93(4):791–807.

Böhmelt, Tobias, Marit Böker and Hugh Ward. 2016. "Democratic Inclusiveness, Climate Policy Outputs, and Climate Policy Outcomes." *Democratization* 23(7):1272–1291.

Coppedge, Michael, John Gerring, Staffan I. Lindberg, Svend-Erik Skaaning and Jan Teorell et al. 2017. "V-Dem [Country-Year/Country-Date] Dataset, version 8.".

Diamond, Larry, Juan J. Linz and Seymour Martin Lipset. 1990. *Democracy in Developing Countries*. Boulder, CO: Lynne Rienner Publishers.

Downes, Alexander B. and Todd S. Sechser. 2012. "The Illusion of Democratic Credibility." *International Organization* 66(3):457–489.

Fearon, James D. 1994. "Domestic Political Audiences and the Escalation of International Disputes." *American Political Science Review* 88(3):577–592.

Fearon, James D. 1995. "Rationalist Explanations for War." *International Organization* 49(3):379–414.

Gheorghe, Eliza. 2015. Nicolae Ceauşescu. In *Mental Maps in the Era of Détente and the End of the Cold War 1968–91*, ed. Steven Casey and Jonathan Wright. Springer pp. 60–80.

Gheorghe, Eliza. 2019. "Proliferation and the Logic of the Nuclear Market." *International Security* 43(4):88–127.

Gibler, Douglas M., Steven V. Miller and Erin K. Little. 2016. "An Analysis of the Militarized Interstate Dispute (MID) Dataset, 1816–2001." *International Studies Quarterly* 60(4):719–730.

Goemans, H. E. 2000. "Fighting for Survival: The Fate of Leaders and the Duration of War." *The Journal of Conflict Resolution* 44(5):555–579.

Graham, Benjamin A. T., Erik Gartzke and Christopher J. Fariss. 2017. "The Bar Fight Theory of International Conflict: Regime Type, Coalition Size, and Victory*." *Political Science Research and Methods* 5(4):613–639.

Horowitz, Michael, Rose McDermott and Allan C. Stam. 2005. "Leader Age, Regime Type, and Violent International Relations." *Journal of Conflict Resolution* 49(5):661–685.

Hurtado-Torres, Sebastián and Joaquín Fermandois. 2020. "The War that Didn't Break Out: Military Rule and Regional Tensions in the Andes in the 1970s." *The International History Review* 42(5):967–986.

Jervis, Robert. 1976. "Perception and Misperception in International Politics." *Princeton University Press* 13.

Jones, Daniel M., Stuart A. Bremer and J. David Singer. 1996. "Militarized Interstate Disputes, 1816-1992: Rationale, Coding Rules and Empirical Patterns." *Conflict Management and Peace Science* 15(2):163–213.

Joyce, Kyle A., Faten Ghosn and Reşat Bayer. 2014. "When and Whom to Join: The Expansion of Ongoing Violent Interstate Conflicts." *British Journal of Political Science* 44(1):205–238.

Kissinger, Henry. 2011. *White House Years*. Simon and Schuster.

Koremenos, Barbara, Charles Lipson and Duncan Snidal. 2001. "The Rational Design of International Institutions." *International Organization* 55(4):761–799.

Lehman, Richard. 1979. "Office of the Chief of Staff Files. Hamilton Jordan's Confidential Files. Iran, 11/79, Container 34b.".
URL: *https://www.jimmycarterlibrary.gov/digital_library/cos/142099/34/cos_142099_34b_09-Iran_11-79.pdf*

Levitsky, Steven and James Loxton. 2018. "Populism and Competitive Authoritarianism in Latin America." *Routledge Handbook of Global Populism* pp. 348–364.

Levy, Jack S. 1987. "Declining Power and the Preventive Motivation for War." *World Politics* 40(1):82–107.

Maoz, Z. 2005. "Dyadic MID Dataset (version 2.0).".

Maoz, Zeev and Bruce Russett. 1993. "Normative and Structural Causes of Democratic Peace." *American Political Science Review* 87(3):624–38.

Marshall, Monty and Keith Jaggers. 2007. "Polity IV Project: Political Regime Characteristics and Transitions, 1800-2006." *Center for Systemic Peace Data Manual* .

Morrow, James D. 1989. "Capabilities, Uncertainty, and Resolve: A Limited Information Model of Crisis Bargaining." *American Journal of Political Science* pp. 941–972.

Pemstein, Daniel, Stephen A. Meserve and James Melton. 2010. "Democratic Compromise: A Latent Variable Analysis of Ten Measures of Regime Type." *Political Analysis* 18(4):426–449.

Reiter, Dan and Allan C. Stam. 1998. "Democracy, War Initiation, and Victory." *American Political Science Review* 92(2):377–389.

Reiter, Dan and Allan Stam. 2003. *Democracies at War*. Princeton University Press.

Rosendorff, B. Peter and Helen V. Milner. 2001. "The Optimal Design of International Trade Institutions: Uncertainty and Escape." *International Organization* 55(4):829–857.

San-Akca, Belgin. 2009. "Supporting Non-state Armed Groups: A Resort to Illegality?" *Journal of Strategic Studies* 32(4):589–613.

San-Akca, Belgin. 2014. "Democracy and Vulnerability: An Exploitation Theory of Democracies by Terrorists." *Journal of Conflict Resolution* 58(7):1285–1310.

San-Akca, Belgin. 2016. *States in Disguise: Causes of State Support for Rebel Groups*. Oxford University Press.

Sartori, Giovanni. 1970. "Concept Misformation in Comparative Politics." *American political science review* 64(4):1033–1053.

Schultz, Kenneth A. 1998. "Domestic Opposition and Signaling in International Crises." *American Political Science Review* 92(04):829–844.

Sechser, Todd S. 2011. "Militarized Compellent Threats, 1918–2001." *Conflict Management and Peace Science* 28(4):377–401.

Signorino, Curtis S. and Ahmer Tarar. 2006. "A Unified Theory and Test of Extended Immediate Deterrence." *American Journal of Political Science* 50(3):586–605.

Siverson, Randolph M. 1995. "Democracies and War Participation: In Defense of the Institutional Constraints Argument." *European Journal of International Relations* 1(4):481–489.

Stanciu, Cezar. 2013. "Crisis Management in the Communist Bloc: Romania's Policy towards the USSR in the Aftermath of the Prague Spring." *Cold War History* 13(3):353–372.

Vance, Cyrus Roberts. 1983. *Hard Choices: Four Critical Years in Managing America's Foreign Policy*. New York: Simon and Schuster.

Walter, Richard J. 2010. *Peru and the United States, 1960-1975: How Their Ambassadors Managed Foreign Relations in a Turbulent Era*. Penn State Press.

Way, Christopher and Jessica L. P. Weeks. 2014. "Making It Personal: Regime Type and Nuclear Proliferation." *American Journal of Political Science* 58(3):705–719.

Weeks, Jessica L. 2008. "Autocratic Audience Costs: Regime Type and Signaling Resolve." *International Organization* pp. 35–64.

Weeks, Jessica L. 2012. "Strongmen and Straw Men: Authoritarian Regimes and the Initiation of International Conflict." *The American Political Science Review* 106(2):326–347.

Weiss, Jessica Chen. 2013. "Authoritarian Signaling, Mass Audiences, and Nationalist Protest in China." *International Organization* pp. 1–35.

Weiss, Jessica Chen. 2014. *Powerful Patriots: Nationalist Protest in China's Foreign Relations*. Oxford University Press.

Werner, Suzanne and Douglas Lemke. 1997. "Opposites Do Not Attract: The Impact of Domestic Institutions, Power, and Prior Commitments on Alignment Choices." *International Studies Quarterly* 41(3):529–546.

A Online Appendix

Construction of the Measure

In assigning countries into three regime classes, our approach extracts both the regime category (democracy, semi-democracy, and autocracy) as well as regime type membership probabilities using latent class analysis. We then use these membership probabilities to construct our measure of uncertainty.

More specifically, let each of the $d \in \{1, .., D\}$ regime indicators place each of the country-years $i \in \{1, \ldots, N\}$ into mutually exclusive regime categories or levels $r \in \{1, \ldots, R_d\}$. R_d is indexed by d to allow for the possibility that different indices might use different number of categories. Denote the observed data Y_{idr} such that $Y_{idr} = 1$ if democracy indicator d assigns country-year i into regime category r and $Y_{idr} = 0$ otherwise. In addition, let $t \in \{1, \ldots, T\}$ denote the latent regime types. Similarly, p_t represent the mixing probabilities - the probability that a country is type t - and the probability that a country is assigned into regime category r by indicator d given it is type t, denoted π_{drt}. Hence, the probability of observing country i's assignment patterns given it is type t is

$$f(Y_i; \pi_t) = \prod_{r=1}^{R} \prod_{d=1}^{D} (\pi_{drt})^{Y_{idr}}$$

The probability mass function across all T latent classes is then

$$Pr(Y_i|\pi, p) = \sum_{t=1}^{T} p_t f(Y_i; \pi_t)$$

The parameters p_t and π_{drt} are estimated by maximizing the log-likelihood:

$$lnL = \sum_{i=1}^{N} ln \sum_{t=1}^{T} p_t \prod_{r=1}^{R} \prod_{d=1}^{D} (\pi_{drt})^{Y_{idr}}$$

The likelihood is maximized using the expectation-maximization (EM) algorithm, where regime type memberships are unknown and treated as missing, hence, $\hat{p}_t$ and $\hat{\pi}_{drt}$ are randomly initiated and updated through iterations. Given estimated $\hat{p}_t$ and $\hat{\pi}_{drt}$ from this procedure, the posterior probability that each country-year belongs to each class based on their scores in the manifest variables using modal assignment is

$$\hat{Pr}(t|Y_i) = \frac{\hat{p}_t f(Y_i; \hat{\pi}_t)}{\sum_{q=1}^{T} \hat{p}_q f(Y_i; \hat{\pi}_q)}$$

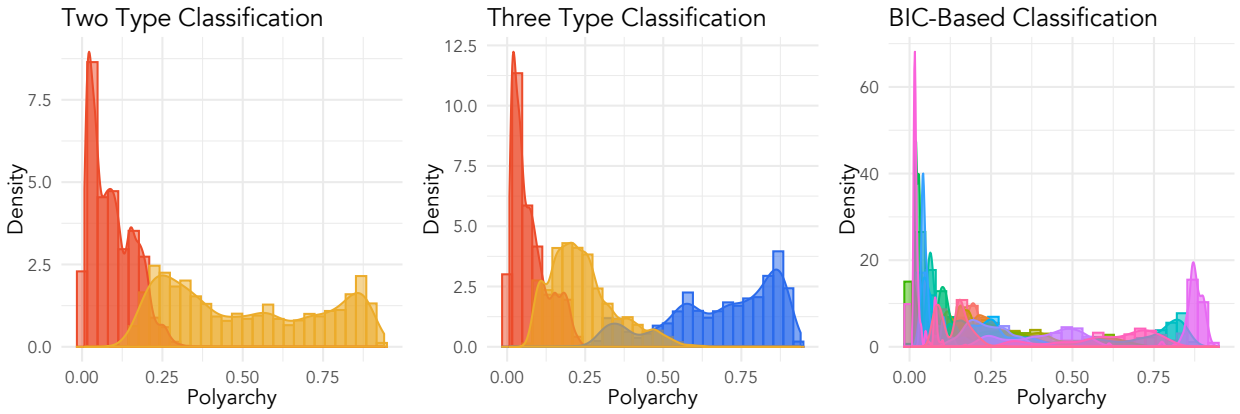
From this posterior probability, we extract both the latent regime type and our uncertainty estimate based on the agreement between the manifest regime indicators d: we assign a country-year to the

regime type t with the highest posterior probability $\hat{Pr}(t|Y_i)$. Besides their classification purposes, these posteriors allow us to estimate the uncertainty over a country's latent regime type in the following form

$$\hat{U}_i = 1 - \max_t \hat{Pr}(t|Y_i) \tag{1}$$

In other words, this approach extracts the uncertainty over belonging to the most likely regime type.[22] In the following section, we describe the resulting measure and evaluate its validity.

Figure A1: Classifying V-Dem Electoral Democracy Index: How Many Regime Categories?



Notes: The figure reconstructs V-Dem's electoral democracy, Polyarchy, index (Coppedge et al., 2017) from its underlying manifest variables using latent class analysis. Electoral democracy index measures the extent to which the ideal of electoral democracy is in its fullest sense achieved. The figure shows the distribution of the regimes types extracted from our algorithm over the electoral democracy index. The first, second, and third figures present the distribution of regime type based on two, three, and twenty classes resulting from a BIC-based selection, respectively. In comparison to the three-type classification, the two-type classification pools semi-democracies and democracies together and the BIC-based twenty-type classification is highly complex, without a substantively clear pattern.

A.1 Comparing Regime Uncertainty and Rater Uncertainty

The V–Dem project allows raters to rate their confidence for the specific scores they assign to a given country-year. For example, a rater may provide a score of 5 for a given country and indicate that her confidence is 0.90 for the assigned score. In the end, this confidence rating is used to calculate the uncertainty around the point estimate for that country-year for a given sub-level V-Dem indicator.

[22] Alternatively, *Entropy* can be used to capture the uncertainty over belonging to any type:

$$\hat{H}_i = -\sum_{t=1}^{T} \hat{Pr}(t|Y_i) \log \hat{Pr}(t|Y_i).$$

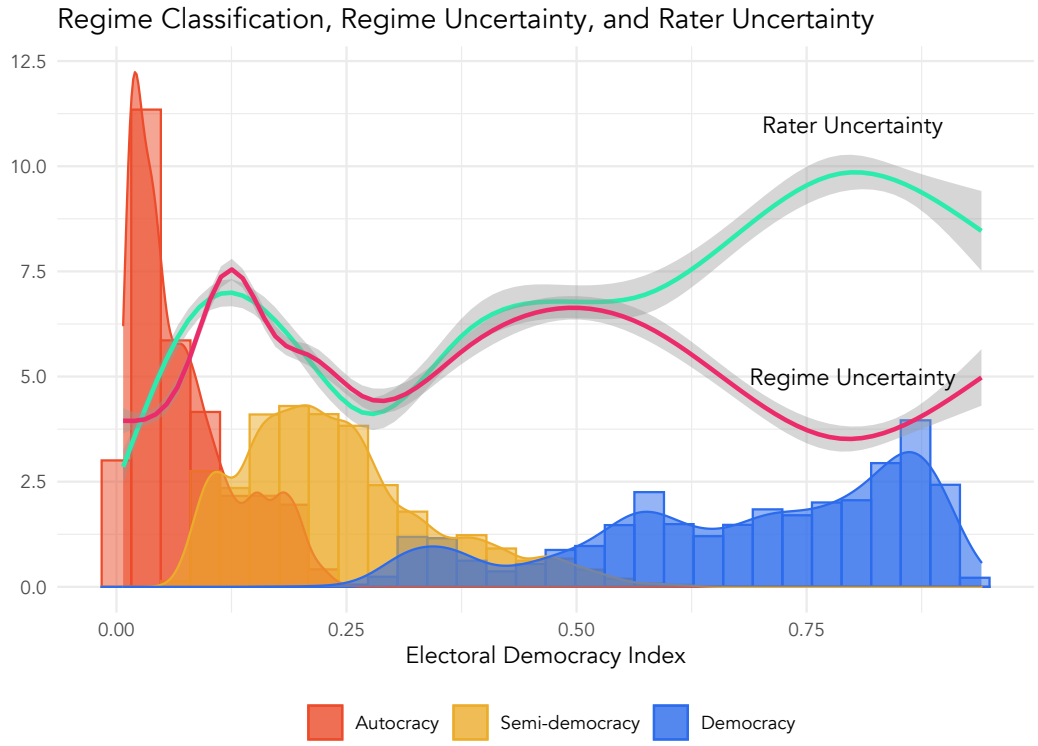
The resulting measure is highly correlated with the one we propose and thus we focus on our measure due to its simpler construct.

While this rater uncertainty approach focuses on uncertainty about a given continuous score in the form of a confidence level for the estimate, our measure of regime uncertainty focuses on the theoretical uncertainty over belonging to one of the three regime types. For this reason, we do not think V-Dem's expert confidence measures would be a good proxy for regime uncertainty that we theorize. As we argue in the manuscript, existing theories tend to talk about distinct regime classes as they are relevant to foreign policy behavior rather than an underlying continuous regime variable. That being said, we provide a comparison between these two measures of uncertainty by (1) applying our method to the sub-components of V-Dem's electoral democracy index (Polyarchy) to extract three regime types and calculate our regime uncertainty; and then (2) using the confidence ratings from each rater to calculate the average rater uncertainty for each country-year.

We present these results in Figure A2. The red, yellow, and blue colored bars respectively indicate a regime classification of autocracy, semi-democracy, and democracy based on our method, plotted against the electoral democracy index. Moreover, the smoothed red and green lines indicate our regime uncertainty measure and the rater uncertainty by the experts, respectively, put on the same scale for comparison. Our regime uncertainty (red smoothed line) measure has a bimodal distribution, where the peaks are concentrated around the overlapping densities of the three regime classes (first peak around 0.10-0.20 and the second peak around 0.5). This finding mirrors our discussion of the patterns of regime uncertainty in the manuscript. We also find that experts indicate higher uncertainty (lower levels of confidence) around these two peaks. Until 0.5, both our measure of regime uncertainty and V-Dem's rater uncertainty follow similar trends. As the regime becomes more democratic, average regime uncertainty as we measure decreases whereas V-Dem's rater uncertainty interestingly increases. While we do not have a clear answer for the divergence, we believe this is an interesting future avenue of research.[23]

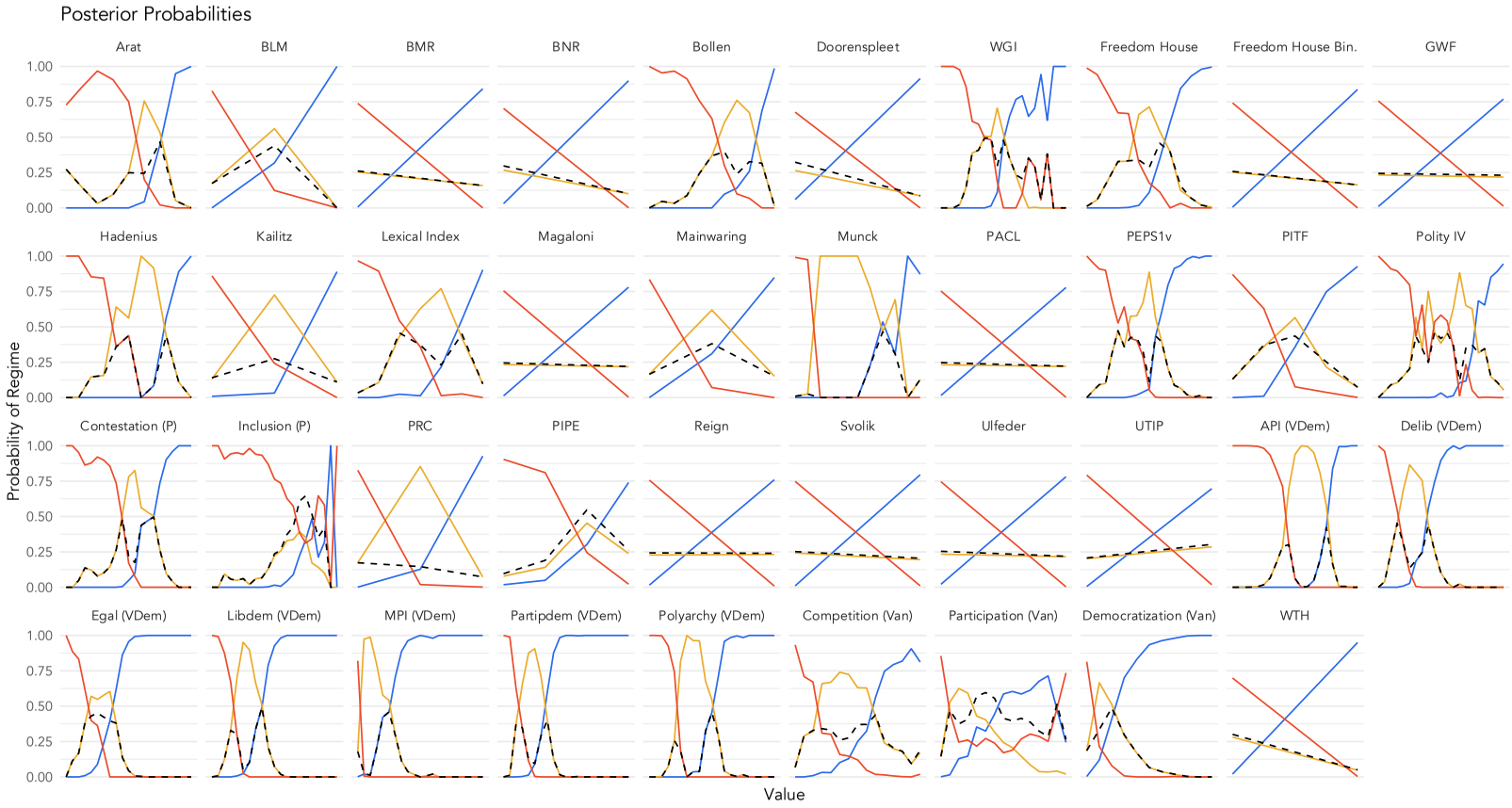
[23]To calculate the rater uncertainty score, we emulate the creation of the Electoral Democracy Index and use the relevant weights on the subcomponents. To create the subcomponents of the electoral democracy index, we use the inverse of normalized uniqueness scores on subsubcomponents.

Figure A2: Comparing Regime Uncertainty and Rater Uncertainty



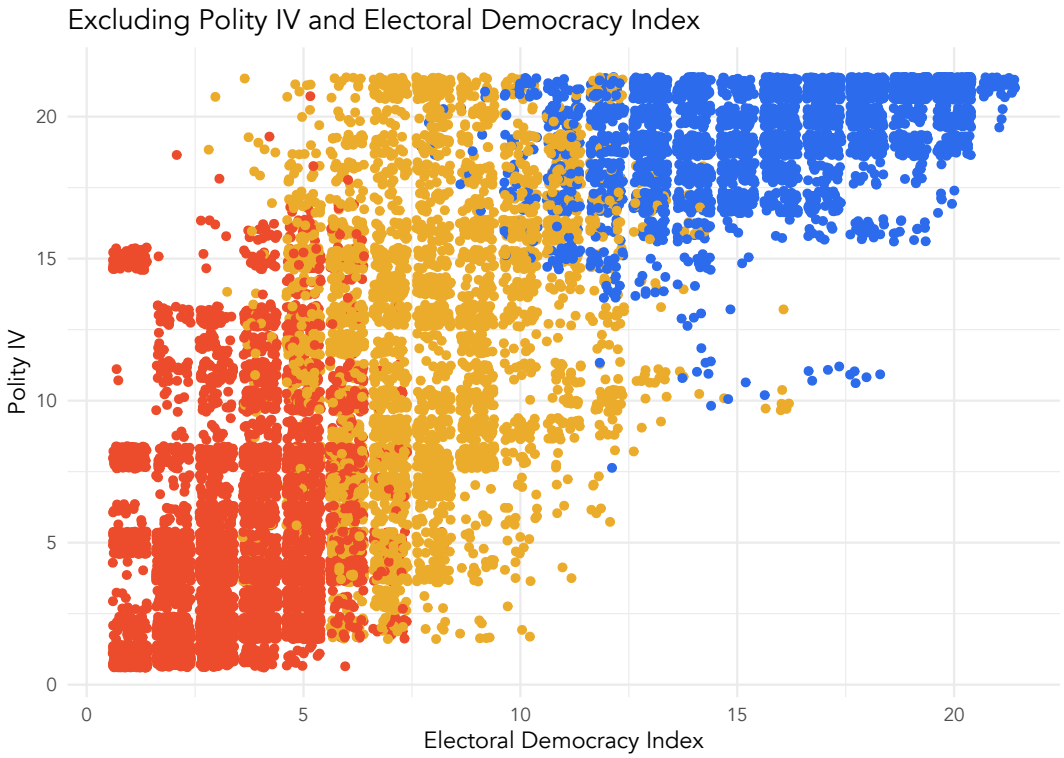
Notes: The figure reconstructs the second graph from Figure A1 and compares the average of our regime uncertainty score (red smoothed line) with V-Dem's average rater uncertainty (green smoothed line) at different values of electoral democracy index. Our regime uncertainty measure has a bimodal distribution, where the peaks are concentrated around the overlapping densities of different regime types (first peak around 0.10-0.20 and the second peak around 0.5). The graph indicates that experts also have higher uncertainty (lower levels of confidence) around these two peaks.

Figure A3: Regime Type Posterior Probabilities $\hat{Pr}(t|Y_i)$ and Regime Uncertainty $\hat{U}_i$ against Common Regime Indicators



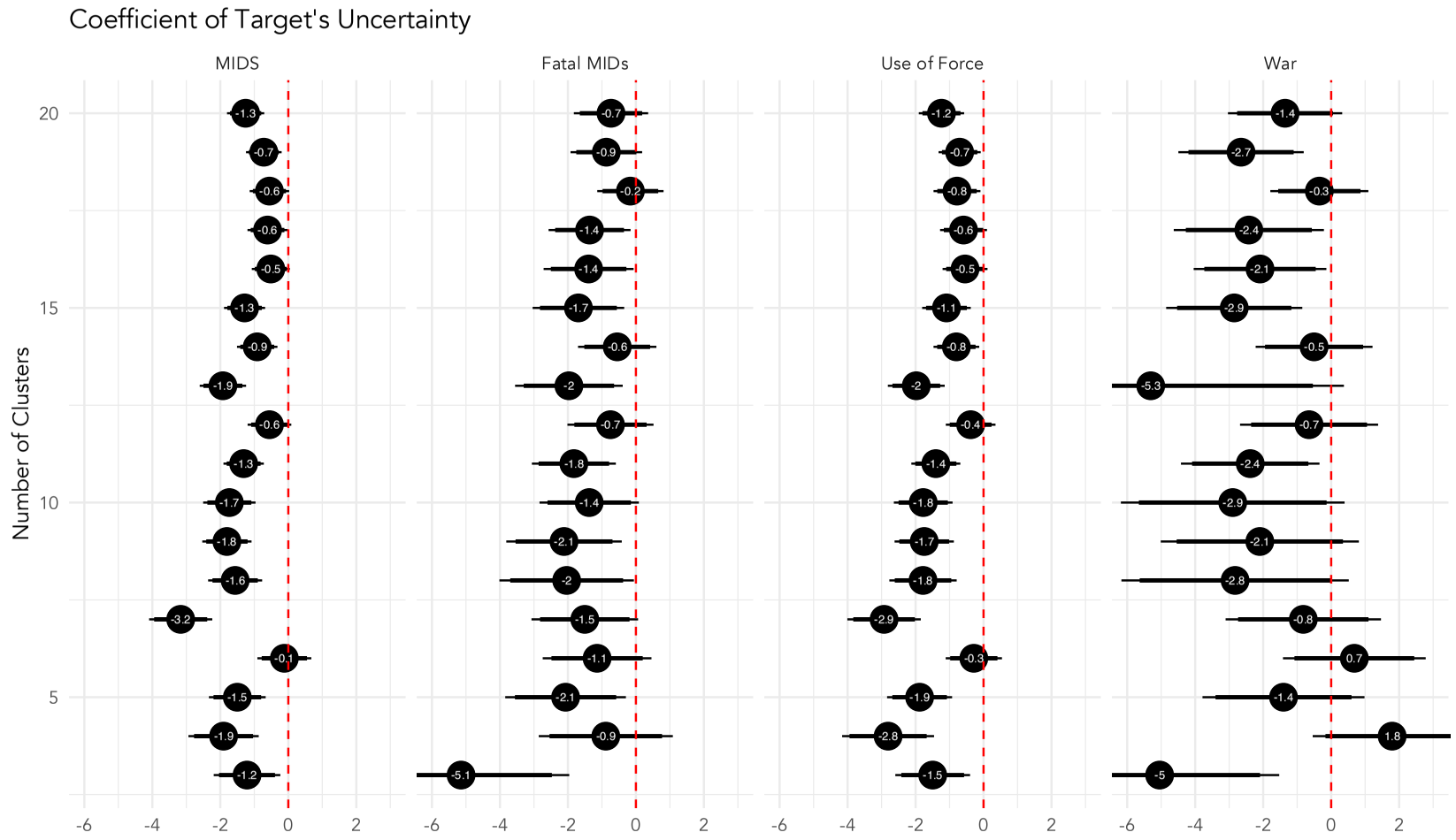
Notes: The figure plots the posterior probabilities of three regime types across common regime indicators used as manifest variables. Red, yellow, blue, and black lines represent autocracy, semi-democracy, democracy, and regime uncertainty, respectively.

Figure A4: Excluding Polity IV and Electoral Democracy Index



Notes: The figure illustrates the convergent validity of our measure by excluding Polity IV and V-Dem Electoral Democracy Index from our measurement model and comparing our new regime type variable with these two excluded datasets. The red, yellow, blue dots represent an assignment of autocracy, semi-democracy, and democracy in this new measure respectively.

Figure A5: Number of Regime Types, Regime Uncertainty, and Interstate Conflict Initiation



Notes: The figure plots the coefficients of target's regime uncertainty (Uncertainty$_T$) along with the 90 percent (thick intervals) and 95 percent (thin intervals) confidence intervals for MID, Fatal MID, Use of Force, War Initiation. The y-axis indicates the number of regime types chosen to estimate regime uncertainty and the x-axes indicate the coefficient estimate.

Table A1: Summary Statistics of the Regime Indices for Latent Class Analysis

Dataset	Source	Obser.	Mean	St.D.	Min	Max

Table A2: Coverage of Our Dataset

Abkhazia (1997,2016)
Afghanistan (1800,2016)
Albania (1870,2016)
Algeria (1816,2016)
American Samoa (2004,2013)
Andorra (1950,2016)
Angola (1900,2016)
Anguilla (2004,2013)
Antigua & Barbuda (1946,2016)
Argentina (1816,2016)
Armenia (1918,2016)
Aruba (2004,2016)
Australia (1820,2016)
Austria (1800,2016)
Austria-Hungary (1800,1917)
Azerbaijan (1973,2016)
Baden (1806,1871)
Bahamas (1946,2016)
Bahrain (1946,2016)
Bangladesh (1950,2016)
Barbados (1839,2016)
Bavaria (1800,1871)
Belarus (Byelorussia) (1973,2016)
Belgium (1820,2016)
Belize (1946,2016)
Benin (1900,2016)
Bermuda (1996,2013)
Bhutan (1900,2016)
Bolivia (1825,2016)
Bosnia-Herzegovina (1990,2016)
Botswana (1900,2016)
Brazil (1820,2016)
Brunei (1967,2016)
Bulgaria (1870,2016)
Burkina Faso (Upper Volta) (1919,2016)
Burundi (1916,2016)
Cambodia (Kampuchea) (1900,2016)
Cameroon (1946,2016)
Canada (1820,2016)
Cape Verde (1900,2016)
Cayman Islands (1996,2016)
Central African Republic (1920,2016)
Chad (1920,2016)
Chile (1818,2016)
China (1800,2016)
Colombia (1813,2016)
Comoros (1900,2016)
Congo (1903,2016)
Congo, Democratic Republic of (Zaire) (1900,2016)
Cook Islands (2009,2013)
Costa Rica (1824,2016)
Cote D'Ivoire (1900,2016)
Croatia (1830,2016)
Cuba (1900,2016)
Cyprus (1900,2016)
Czech Republic (1993,2016)
Czechoslovakia (1820,1994)
Denmark (1800,2016)
Djibouti (1900,2016)
Dominica (1925,2016)
Dominican Republic (1844,2016)
East Timor (1900,2016)
Ecuador (1830,2016)
Egypt (1811,2016)
El Salvador (1822,2016)
Equatorial Guinea (1900,2016)
Eritrea (1900,2016)
Estonia (1917,2016)
Ethiopia (1855,2016)
Federated States of Micronesia (1970,2016)
Fiji (1900,2016)
Finland (1820,2016)
France (1800,2016)
French Guiana (1996,2016)
Gabon (1910,2016)
Gambia (1900,2016)
Georgia (1973,2016)
German Democratic Republic (1945,1990)
German Federal Republic (1945,2016)
Germany (Prussia) (1800,1944)
Ghana (1870,2016)
Great Colombia (1819,1832)
Greece (1820,2016)
Greenland (2009,2016)
Grenada (1946,2016)
Guam (2004,2013)
Guatemala (1823,2016)
Guinea (1900,2016)
Guinea-Bissau (1900,2016)
Guyana (1891,2016)
Haiti (1804,2016)
Hanover (1816,1870)
Hesse-Darmstadt (Ducal) (1815,1870)
Hesse-Kassel (Electoral) (1813,1870)
Honduras (1830,2016)
Hong Kong (1963,2016)
Hungary (1867,2016)
Iceland (1900,2016)
India (1820,2016)
Indonesia (1820,2016)
Iran (Persia) (1800,2016)
Iraq (1820,2016)
Ireland (1820,2016)
Israel (1948,2016)
Israel, occupied territories only (1996,2009)
Italy/Sardinia (1815,2016)
Jamaica (1820,2016)
Japan (1800,2016)
Jersey (2011,2016)
Jordan (1820,2016)
Kazakhstan (1973,2016)
Kenya (1900,2016)
Kiribati (1978,2016)
Korea (1800,1910)
Korea, People's Republic of (1913,2016)
Korea, Republic of (1910,2016)
Kosovo (1993,2016)
Kuwait (1900,2016)
Kyrgyz Republic (1973,2016)
Laos (1900,2016)
Latvia (1918,2016)
Lebanon (1820,2016)
Lesotho (1900,2016)
Liberia (1847,2016)
Libya (1800,2016)
Liechtenstein (1921,2016)
Lithuania (1918,2016)
Luxembourg (1848,2016)
Macao (1963,2016)
Macedonia (Former Yugoslav Republic of) (1990,2016)
Madagascar (Malagasy) (1800,2016)
Malawi (1900,2016)
Malaysia (1820,2016)
Maldives (1900,2016)
Mali (1900,2016)
Malta (1923,2016)
Marshall Islands (1980,2016)
Martinique (1996,2013)
Mauritania (1904,2016)
Mauritius (1900,2016)
Mecklenburg-Schwerin (1815,1870)
Mexico (1820,2016)
Modena (1815,1860)
Moldova (1973,2016)
Monaco (1911,2016)
Mongolia (1911,2016)
Montenegro (1878,2016)
Morocco (1800,2016)
Mozambique (1900,2016)
Myanmar (Burma) (1800,2016)
Namibia (1900,2016)
Nauru (1968,2016)
Nepal (1800,2016)
Netherlands (1800,2016)
Netherlands Antilles (1963,2013)
New Zealand (1820,2016)
Nicaragua (1825,2016)
Niger (1922,2016)
Nigeria (1914,2016)
Niue (2009,2013)
Norway (1814,2016)
Oman (1800,2016)
Orange Free State (1854,1902)
Pakistan (1947,2016)
Palau (1981,2016)
Palestine, State of (1977,2016)
Panama (1903,2016)
Papal States (1815,1870)
Papua New Guinea (1900,2016)
Paraguay (1811,2016)
Parma (1815,1860)
Peru (1820,2016)
Philippines (1820,2016)
Poland (1870,2016)
Portugal (1800,2016)
Puerto Rico (1963,2016)
Qatar (1900,2016)
Reunion (2004,2013)
Romania (1859,2016)
Russia (Soviet Union) (1800,2016)
Rwanda (1916,2016)
Saint Kitts and Nevis (1946,2016)
Saint Lucia (1946,2016)
Saint Vincent and the Grenadines (1946,2016)
Samoa/Western Samoa (1962,2016)
San Marino (1800,2016)
Sao Tome and Principe (1900,2016)
Saudi Arabia (1926,2016)
Saxony (1806,1871)
Senegal (1904,2016)
Serbia (1830,2016)
Seychelles (1903,2016)
Sicily (Two Sicilies) (1800,1860)
Sierra Leone (1900,2016)
Singapore (1820,2016)
Slovakia (1990,2016)
Slovenia (1989,2016)
Solomon Islands (1900,2016)
Somalia (1900,2016)
Somaliland (2008,2016)
South Africa (1820,2016)
South Ossetia (2008,2016)
South Sudan (2011,2016)
Spain (1800,2016)
Sri Lanka (Ceylon) (1820,2016)
Sudan (1900,2016)
Surinam (1900,2016)
Swaziland (1900,2016)
Sweden (1800,2016)
Switzerland (1800,2016)
Syria (1820,2016)
Taiwan (1820,2016)
Tajikistan (1973,2016)
Tanzania/Tanganyika (1914,2016)
Thailand (1800,2016)
Tibet (1913,2016)
Togo (1916,2016)
Tonga (1963,2016)
Transvaal (1852,1901)
Trinidad and Tobago (1900,2016)
Tunisia (1800,2016)
Turkey (Ottoman Empire) (1800,2016)
Turkmenistan (1973,2016)
Tuscany (1815,1860)
Tuvalu (1977,2016)
Uganda (1900,2016)
Ukraine (1973,2016)
United Arab Emirates (1946,2016)
United Kingdom (1800,2016)
United Provinces of Central America (1821,1840)
United States of America (1800,2016)
Uruguay (1828,2016)
Uzbekistan (1973,2016)
Vanuatu (1906,2016)
Venezuela (1820,2016)
Vietnam (Annam/Cochin China/Tonkin) (1816,1892)
Vietnam, Democratic Republic of (1800,2016)
Vietnam, Republic of (1902,1975)
Virgin Islands, U.S. (2004,2013)
Western Sahara (1989,2016)
Wurttemberg (1800,1871)
Yemen (Arab Republic of Yemen) (1918,2016)
Yemen, People's Republic of (1900,1990)
Yugoslavia (1870,2006)
Zambia (1911,2016)
Zanzibar (1905,1964)
Zimbabwe (Rhodesia) (1902,2016)

Table A3: Summary of Posterior Probabilities and Uncertainty, 1800-2016

Statistic	N	Mean	St. Dev.	Min	Max
Mixing Probabilities					
$\hat{p}_{\text{Democracy}}$	25,568	0.23	0.00	0.23	0.23
$\hat{p}_{\text{Semi-democracy}}$	25,568	0.22	0.00	0.22	0.22
$\hat{p}_{\text{Autocracy}}$	25,568	0.55	0.00	0.55	0.55
Posterior Probabilities					
$\hat{Pr}(\text{Democracy}\|Y_{idr})$	25,568	0.23	0.41	0.00	1.00
$\hat{Pr}(\text{Semi-democracy}\|Y_{idr})$	25,568	0.23	0.40	0.00	1.00
$\hat{Pr}(\text{Autocracy}\|Y_{idr})$	25,568	0.54	0.48	0.00	1.00
Classifications					
Democracy	25,568	0.22	0.42	0	1
Semi-democracy	25,568	0.22	0.42	0	1
Autocracy	25,568	0.55	0.50	0	1
Uncertainty					
Regime Uncertainty $(\hat{U}_i)$	25,568	0.03	0.09	0.00	0.55

Table A4: Average Uncertainty and Conflict Onset, 1816-2001

	MID		Fatal MID		Use of Force		War	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Average Uncertainty	-2.26***	-1.77**	-5.23***	-6.06***	-3.24***	-3.07***	-4.26**	-5.22*
	(0.83)	(0.75)	(1.69)	(1.92)	(0.96)	(0.88)	(1.98)	(2.78)
Joint Democracy	-1.02***	-0.93***	-2.11***	-1.97***	-1.09***	-1.12***	0	0
	(0.16)	(0.15)	(0.45)	(0.46)	(0.19)	(0.21)	(.)	(.)
One-Side Democracy	0.20**	0.16*	0.20	0.16	0.14	0.072	-0.30	-0.24
	(0.09)	(0.09)	(0.19)	(0.19)	(0.11)	(0.10)	(0.28)	(0.30)
Capability Ratio$_{A,B}$	-0.16***	-0.27***	-0.22***	-0.42***	-0.13***	-0.25***	-0.45***	-0.53***
	(0.03)	(0.03)	(0.05)	(0.05)	(0.04)	(0.03)	(0.09)	(0.09)
Distance	-0.45***	-0.21***	-0.49***	-0.38***	-0.44***	-0.22***	-0.53***	-0.026
	(0.05)	(0.04)	(0.09)	(0.07)	(0.05)	(0.05)	(0.14)	(0.13)
Major Power	2.02***		1.37***		1.95***		3.07***	
	(0.14)		(0.24)		(0.15)		(0.33)	
Contiguity	2.09***		2.98***		2.18***		1.38***	
	(0.16)		(0.34)		(0.18)		(0.36)	
Constant	-1.40***	-0.043	-3.05***	-0.13	-1.86***	-0.29	-4.13***	-4.27***
	(0.37)	(0.24)	(0.78)	(0.46)	(0.43)	(0.29)	(1.28)	(0.93)
Observations	651047	81948	651047	81948	651047	81948	568857	68842
Pseudo R^2	0.2525	0.1310	0.2538	0.1458	0.2364	0.1223	0.1886	0.0707

Clustered standard errors are reported in parentheses.

Peace years and cubic splines are not presented to save space.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A5: Excluding Democracy Variables from Nondirected Conflict Onset Analyses

	MID		Fatal MID		Use of Force		War	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Uncertainty$_H$	-0.99**	-0.72*	-2.34***	-2.78***	-1.37***	-1.26***	-1.66	-2.12
	(0.42)	(0.39)	(0.87)	(0.97)	(0.49)	(0.45)	(1.02)	(1.40)
Capability Ratio$_{A,B}$	-0.16***	-0.27***	-0.23***	-0.43***	-0.14***	-0.26***	-0.46***	-0.55***
	(0.03)	(0.03)	(0.05)	(0.05)	(0.03)	(0.03)	(0.08)	(0.09)
Distance	-0.41***	-0.18***	-0.42***	-0.34***	-0.39***	-0.19***	-0.48***	-0.032
	(0.05)	(0.04)	(0.09)	(0.07)	(0.05)	(0.05)	(0.14)	(0.12)
Major Power	2.00***		1.32***		1.92***		3.05***	
	(0.14)		(0.24)		(0.15)		(0.33)	
Contiguity	2.09***		3.03***		2.20***		1.49***	
	(0.16)		(0.33)		(0.18)		(0.38)	
Constant	-1.68***	-0.25	-3.52***	-0.44	-2.20***	-0.51*	-4.72***	-4.40***
	(0.37)	(0.24)	(0.77)	(0.45)	(0.43)	(0.28)	(1.30)	(0.88)
Observations	651047	81948	651047	81948	651047	81948	651047	81948
Pseudo R^2	0.2478	0.1255	0.2434	0.1342	0.2311	0.1147	0.1834	0.0738

Clustered standard errors are reported in parentheses.

Peace years and cubic splines are not presented to save space.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A6: Excluding Democracy Variables from Directed Conflict Initiation Analyses

	MID		Fatal MID		Use of Force		War	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Uncertainty$_T$	-1.13**	-1.06**	-4.79***	-5.11***	-1.37**	-1.50***	-4.34***	-4.99**
	(0.49)	(0.49)	(1.54)	(1.70)	(0.55)	(0.55)	(1.66)	(2.31)
Capability Ratio $_{\frac{I}{I+T}}$	0.092***	0.19***	0.093	0.22***	0.036	0.14***	0.085	0.34***
	(0.03)	(0.02)	(0.06)	(0.04)	(0.03)	(0.02)	(0.11)	(0.07)
Major Power$_I$	1.64***		1.20***		1.54***		2.59***	
	(0.13)		(0.23)		(0.14)		(0.32)	
Major Power$_T$	1.09***		0.29		1.08***		0.61	
	(0.17)		(0.25)		(0.17)		(0.41)	
Contiguity	2.23***		3.11***		2.35***		1.59***	
	(0.14)		(0.30)		(0.16)		(0.38)	
Distance	-0.42***	-0.36***	-0.47***	-0.59***	-0.41***	-0.38***	-0.58***	-0.37***
	(0.04)	(0.03)	(0.08)	(0.05)	(0.05)	(0.03)	(0.13)	(0.09)
Constant	-2.40***	-0.048	-4.35***	-0.30	-3.06***	-0.43*	-5.17***	-3.63***
	(0.33)	(0.19)	(0.68)	(0.41)	(0.39)	(0.24)	(1.16)	(0.76)
Observations	1294197	163627	1294197	163627	1294197	163627	1294197	163627
Pseudo R^2	0.2205	0.0978	0.2171	0.0929	0.1990	0.0790	0.1626	0.0425

Clustered standard errors are reported in parentheses.

Peace years and cubic splines are not presented to save space.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A7: Excluding Democracy Variables from Militarized Compellent Threat Analyses

	(1)	(2)
Uncertainty$_I$	-21.6***	-19.9***
	(6.74)	(6.34)
Uncertainty$_T$	10.5	21.3
	(9.61)	(15.18)
Constant	0.46	0.35
	(0.90)	(0.99)
Observations	230	198
Pseudo R^2	0.2083	0.2482
World Wars	Dummy	Excluded
Control Variables	Yes	Yes

Clustered standard errors are reported in parentheses. Dependent variable is failure of threat effectiveness, hence, a negative (positive) coefficient indicates failure (success) of compellent threats.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A8: Dispute Escalation from Threat, Display of Force to High Levels of Conflict

	Fatal MIDs	Use of Force	War
Uncertainty$_T$	-3.97**	-1.14	-2.97*
	(1.71)	(0.71)	(1.80)
Democracy$_I$	0.079	-0.46***	-0.12
	(0.21)	(0.16)	(0.31)
Democracy$_T$	-0.10	0.055	-0.89**
	(0.23)	(0.14)	(0.39)
Joint Democracy	-0.93*	0.24	
	(0.50)	(0.28)	
Capability Ratio$_{\frac{I}{I+T}}$	-0.087	-0.33***	-0.0042
	(0.07)	(0.07)	(0.12)
Major Power$_I$	0.10	-0.022	1.09***
	(0.18)	(0.13)	(0.31)
Major Power$_T$	-0.30	-0.36*	0.22
	(0.26)	(0.20)	(0.42)
Contiguity	0.41**	-0.058	-0.36
	(0.18)	(0.13)	(0.29)
Distance	-0.18*	0.047	-0.20
	(0.10)	(0.05)	(0.12)
Constant	-0.018	0.82**	-1.29
	(0.71)	(0.42)	(1.02)
Observations	1980	1980	1843
Pseudo R^2	0.0615	0.0445	0.0554

Clustered standard errors are presented in parentheses

Peace years and cubic splines are not presented to save space.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$