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Democratization in Conflict Studies: How Conceptualization Affects Operationalization and Testing Outcomes

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Democratization in Conflict Studies:

How Conceptualization Affects

Operationalization and Testing Outcomes[*]

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Abstract

Using the debate over democratization and conflict, we demonstrate how the connection between conceptualization and operationalization can play a decisive role in the testing of falsifiable hypotheses. We discuss seven different operationalizations of regime change based on three different conceptualizations of democracy. Although we find high correlations between different measures of democracy, when they are used to capture regime change the correlations drop precipitously. In multivariate estimations of the effect of regime change on a range of conflict variables, we generate widely disparate results, providing no consistent support that democratization affects conflict. We thus demonstrate that decisions about conceptualization and subsequent operationalization have decisive impact on the inference we produce. In contrast, our controls for the effect of institutionalized democracy consistently show a negative relationship between joint democracy and conflict. Finally, autocratic regime change seems to be more robustly correlated with a range of conflict behaviors than heretofore recognized in this literature.

1. Introduction

Our ability to pursue the rigorous empirical study of conflict has increased markedly over the last few decades. The availability of data for large numbers of countries for long periods of time, the low cost of desktop computing power and statistical software, and consistent progress in the development of methods to address the use of large cross-sectional time series data have allowed us to address both new and old questions with rigor and new evidence. Not only do we have good coverage for conflict variables but also for a whole range of independent variables that capture macro-, meso- and micro-level factors indispensable to research.

However, given this abundance of data it is essential that in moving to test falsifiable hypotheses about conflict behavior we take particular care in modelling the processes which seem important to conflict outcomes. When we take the convenient road of using existing datasets, we need to be conscious that we are adopting the conceptual and operational choices of the authors, and that such choices have consequences. It is clear that with such modelling decisions, how we move from conceptualization to operationalization can have decisive ramifications for the results we obtain. Earlier work has highlighted how sampling decisions produce selection effects that bias the results of tests (Geddes 1990), and here we argue that it is also important to include more explicit consideration of conceptualization to guide how we test hypotheses so as to provide convincing answers to important questions.

Conflict studies have reflected seriously on how to sample to provide the most relevant tests for drawing well-founded conclusions. For instance, the question of what dyads to include in samples to test conflict behavior has received a great deal of attention in the literature, with the ramifications of the choices now well understood (for a summary see Goertz 2005, chapter 8). To illustrate the point that clear and explicit thinking about operationalization, as the way in which we move from conceptualization and theory to measurement and testing, as well as the assumptions imposed upon us when we use preexisting data, we will make use of a major line of research in conflict studies, the debate over democratization (or more broadly regime change) and conflict initiated by Mansfield and Snyder (1995, 2002a, 2002b). This choice is based on three important considerations. First, this is a highly influential line of research. It was one of the first to challenge the claims of the democratic peace in that it argued that the process of democratization itself was dangerous to peace.

Second, this contention has been subject to a great deal of debate. Ever since Mansfield and Snyder's first publication (1995), they have been challenged by a large number of authors who have criticized their results on the basis of model specification (Enterline 1996, Thompson

and Tucker 1997), omitted or misspecified variables (Ward and Gleditsch 1998, Daxecker 2007, Clare 2007), the operationalization of their theory (Boggards 2010, McFaul 2007) , and whether there is a real world referent behind their statistical results (Narang and Nelson 2009, Acharya 2010, Lind, 2011, Miller 2012). The critical responses have challenged the notion that democratization increases conflict and has even reported that it decreases violence (Ward and Gleditsch 1998). In the face of these challenges Mansfield and Snyder have been tenacious in the defense of their results, taking the concerns of their critics seriously and responding with new evidence (2005, 2009, 2012). Thus, because most conflict specialists, as well as many political scientists, will be aware of this line of research, our discussion will be more easily accessible to a large community of scholars. Here, however we move beyond the debate per se, and make use of this line of inquiry to illustrate the way in which choices about conceptualization frame the operationalization of tests, and influences results. We show how such conscious choices frame the literature in a particular fashion, close out other potential conceptualizations, and affect results.

Third, another interesting feature of this debate is that it is based on three different decisions on conceptualization. The first concerns how to understand "democracy" as the referent that frames how we understand other forms of regime. Second from there it is necessary to conceptualize and operationalize regime. And finally, once we have a notion of regime, we can then move to model democratization and other forms of regime change. Thus, in order to address the straightforward question of does democratization result in violence, one is compelled to make three different sets of conceptualization and operationalization choices! This makes this question particularly interesting from our perspective. Here we will present seven conceptualizations of regime change based on three different conceptualizations of democracy.[1]

Democracy and its relationship to other forms of regime can be seen as contradictories (bounded wholes) or contraries (a dimension that is graded in nature allowing for an assessment of the degree of its presence). This distinction is based on whether the researcher sees the concept under question as an "object" in itself, or as a "property" that can be more or less present. We also present a hybrid conceptualization, combining elements of both.

Depending on how we conceptualize democracy, as a bounded whole, a property, or a hybrid, has important ramifications for how we will then see the universe of regimes and the process of democratization. The first implies that a country must move from a bounded whole (defined by a set of mutually exclusive conditions) to another (most simply from democracy to non-democracy in the case of a binary measure), whereas the latter in its purest form implies

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[1] We operationalize nine different models but the conceptualizations for both Polity III and IV, and the UDS and V-Dem electoral democracy are conceptualized in similar ways. They differ in that they are operationalized with different measures.

that degree of the inherent property must exhibit directional change towards or away from democracy. However, as we shall see below, the way in which we conceptualize democracy (as an object or a property) does not mean that subsequent phases in the research design must inexorably follow the same ontological assumption.

An object conceptualization means that democracy will be operationalized typologically and that crossing the boundary of regime type is the quality of interest for understanding conflict. A property conceptualization will be operationalized as a scale. Regime change can either be operationalized as scalar movement, or the scale itself can be partitioned into different classes of regime depending on where they lie. And in hybrid conceptualization of regime change, there are elements of both scalar and typological movement.

These conceptual assumptions have important ramifications for the kinds of tests we design. In this paper we lay out six sets of competing assumptions about how democracy and democratization are conceptualized and then use them to operationalize different tests of whether democratization and other forms of regime change contribute to conflict behavior. Our results show important differences in the results depending on how they are conceptualized and operationalized. Our purpose here is not to explicitly enter into the debate on dangerous democratization but to use the debate to raise the conceptualization/operationalization nexus as an important part of the process by which we try to validate claims about political behavior. In this regard our findings provide further confirmation of Sartori's call for serious conceptual thinking as an indispensable antecedent to measurement and hypothesis testing (1970: 1038).

2. Ways of Conceptualizing Democracy

Antecedent to conceptualizing democratization, it is absolutely necessary to make conceptual choices about democracy. After all, democratization as regime change implies either moving from a state of non-democracy to democracy or moving from a less democratic status to one more so. The fact that this needs to be stated as an either/or proposition reinforces the fact that there is a fundamental choice between two different ways of conceptualizing democracy based on whether the researcher sees it as an object concept (a bounded whole) or a property concept (an attribute that can be more or less present). Both approaches are seen in comparative politics as having relative advantages and disadvantages depending on the nature of the research question and the conceptual assumptions that authors hold about democracy itself (Collier and Adcock 1999, Gerschewski and Schmotz 2011). Within comparative politics the litera-

ture has generally followed the advice of Collier and Adcock and remained pluralist and pragmatic in its orientation to such questions.[2]

We begin with an **object conceptualization**. The assumptions of such an approach is that democracy has a set of minimal defining conditions. At any given observation in time, a state either meets those conditions or it does not. It is either a democracy or a non-democracy. Those two categories are mutually exclusive and exhaustive. Such a typological approach has been passionately argued as a best practice by both Giovanni Sartori (1987) and the group of researchers around Adam Przeworski (Alvarez et al. 1996). While this may seem to some as a narrow way to approach the subject, it can be used flexibly. Often critics of such an approach argue that such a conceptualization omits important differences of degree among democracies or omits regimes that fall in the so-called grey zone, that resemble democracies but do not meet minimal conditions. However, an object conceptualization does not preclude the creation of more flexible and comprehensive regime typologies, but these still maintain an absolute demarcation of democracy from non-democratic regimes. The types remain mutually exclusive and exhaustive as a whole.

Our most developed taxonomies of authoritarian regimes take this boundary as hard and fixed and then distinguish between additional non-democratic regime types that do not meet the minimal conditions for democracy. For instance, Linz and Stepan (1996) distinguish democracy from non-democracy, but then distinguish between totalitarian, post-totalitarian, authoritarian, and sultanistic forms of dictatorship. Similarly Geddes, Wright, and Franz (2014), as well as Wahman, Teorell and Hadenius (2013), have demarcated the non-democratic side of the divide with monarchic, military, one-party, and personalistic regimes. Weeks (2008) has relied upon a similar approach to show foreign policy differences among non-democracies. The political regimes dataset that we use in the paper to model our tests distinguishes between democracy, semi-democracy, and authoritarianism as exhaustive and mutually exclusive categories (Gasiorowski 1996, Reich 2002). The defining characteristics of each type are multidimensional and mutually exclusive, and thus by their very nature are not necessarily amenable to scaling on a single dimension. In operationalization they are demarcated by mutually exclusive binary values.

Property conceptualizations see democracy as an attribute that can be more or less present. This has been forcefully advocated by Bollen who argued that dichotomization is a

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[2] For instance those who use event history modelling of regime change tend to rely on binaries or scalar measures converted into binaries. Those interested in the study the level, degree, or quality of democracy are better served by scalar measures. There also seems to be a proclivity to use scalar measures to control for when the outcome variable is expected to vary depending on level of democracy.

fundamental error because he believes that democracy is inherently continuous (Bollen and Jackman 1989, Bollen 1990). To this way of thinking, all countries are more or less democratic. As there is no one observable that we can measure and deem a country more or less democratic, such conceptualizations are based on multiple attributes but they too are seen as properties that are more or less present. These properties are then aggregated into a single scale that arrays each observation in relative position to all others. The aggregation process is also a conceptualization procedure fraught with a range of pitfalls which has received a large degree of critical attention in the literature (Gleditsch and Ward 1997, Munck and Verkuilan 2002; Goertz 2005; Trier and Jackman, 2008, Vreeland, 2008). Should aggregation be additive, multiplicative, and how should different components be weighted? These are not easy questions.

Polity divides the world into democracies, anocracies, and autocracies (Gurr 1974), whereas democracies are generally seen as those regimes that are high on the scale. And the most commonly used datasets which utilize a property conceptualization sometimes provide discreet cut points to talk about differences in kind between states. It is important to note that by doing so they are converting their scalar understanding of democracy into an object operationalization of regime type. Freedom House demarcates the free, the partly free, and the unfree (2015). The conceptualization of regime change using such measures can either use the scale to demarcate classes and look at movement between them or can use directional change or other properties on the scale to represent regime change. The former is the path that Mansfield and Snyder have chosen in their research, and some notable work on regime change has also used this approach (Epstein et al., 2006; Jaggers and Gurr 1995, Gates et al. 1996). Teorell (2010) has taken the more directionally scalar approach in his recent work and has looked at directional movement along the scale of sufficient magnitude to demarcate regime change. More recent scalar variables such as the Unified Democracy Scores (UDS) (Pemstein et al. 2010) or the Varieties of Democracy (V-Dem) (Coppedge et al. 2016) abstain from demarcation due to their latent nature and thus are probably better utilized in this fashion.

A third logical possibility is **hybrid conceptualization** that combines elements of both object and property conceptualization. Such a strategy for thinking about democracy is evolutionary in nature. This corresponds to the notion of democratization inherent in the historical approach by Capoccia and Ziblatt (2010). In thinking about patterns of democratization in Western Europe over the long term, they argue that democracy was created in a piecemeal fashion whereby essential components are adopted over time. While countries may not meet the minimal conditions for democracy, they may add institutional elements over time which bring them closer to democracy. The adding of new institutional features (e.g. direct competitive elec-

tions to legislatures, increments to suffrage, ministerial responsibility to parliament rather than monarch, election rather than appointment of executive) makes the system more democratic even if the whole package does not yet add up to democracy from a minimal condition perspective.

The new dataset by Skaaning, Gerring and Bartusevičius (2015), the Lexical Index of Electoral Democracy (LIED) relies on such a conceptualization. It demarcates several different institutional configurations that add elements which are identifiable as the components of full-blown electoral democracy in a modern sense:

L0: No elections.

L1: No-party or one-party elections.

L2: Multiparty elections for legislature.

L3: Multiparty elections for legislature and executive.

L4: Minimally competitive, multiparty elections for legislature and executive.

L5: Minimally competitive, multiparty elections with full male or female suffrage for legislature and executive.

L6: Minimally competitive, multiparty elections with universal suffrage for legislature and executive.

The hybrid nature of this measure lies in the fact that each step is exclusive of the others. Each level adds another condition that marks it as conceptually distinct from the others based on several criteria (elections, offices chosen by elections, level of competition, and level of suffrage). Further, it is exhaustive. Yet simultaneously, it has a property dimension. Each subsequent step is closer to democracy than the previous, thus it is amenable to scaling.

3. From Conceptions about Democracy to the Operationalization of Regime Change

To demonstrate how important the conceptual antecedents to measurement and hypothesis testing are, we deploy varieties of these conceptual packages and the corresponding operationalization strategy to a well-known research question, whether democratization poses a threat to peace. Here we rely on the prize winning work of Mansfield of Snyder. All of these variants in the operationalization of democratization are perfectly legitimate ways to test propositions about it. However, we also want to emphasize, as we demonstrate here, that the model-

ling and measurement strategies used to test hypotheses strongly affect the results yielded by testing.

Two decades ago, Mansfield and Snyder (1995) first elaborated their argument that democratizing countries are more prone to conflict. This influential line of research culminated in the prize-winning book *Electing to Fight* (Mansfield and Snyder, 2005). Their argument, echoing Huntington on political development and stability (1968), claims that transitions to democracy increase political participation before the necessary institutions of democratic control are fully in place. Under such circumstances, elites use populist and nationalist rhetoric which stigmatizes "enemies of the nation" to maintain popular control by diversionary means (Mansfield and Snyder, 2002b: 531–532). Like the wider conflict literature they accept that democracies that have consolidated rule of law and representative institutions are less prone to fight each other (Mansfield and Snyder, 2002b).

We begin with how Mansfield and Snyder use a property conceptualization of democracy to capture democratization and other forms of regime change. Though they start with a property operationalization of democracy, they then switch to an object conceptualization of regime and use it to capture regime change. Mansfield and Snyder (2002b; 2005) construct four different regime change variables by demarcating three value zones on the Polity scale into regime types. The three demarcations are autocracy (polity < -7), anocracy (-6 ≤ polity < 6), and democracy (polity ≥6). Regime change is coded as "complete democratization" if it is a democracy in year t is an autocracy or anocracy in year t_{-5} and "complete autocratization" if a state is a democracy or an anocracy in year t_{-5} and an autocracy in year t. "Incomplete democratization" applies to states if they are an autocracy in year t_{-5} and an anocracy in year t and "incomplete autocratization" to states that are a democracy in year t_{-5} and an anocracy in year t.

We also operationalize another notion of regime change using an alternative property conceptualization/operationalization of democracy. Gates et al. (2006) create a three dimensional conceptual mapping of regimes based on the executive recruitment and constraint subcomponents of Polity, and Vanhannen's (2000) measure of participation.[3] The two corners of the three dimensional space where the three dimensions reach their maximum and minimum are seen as democratic and autocratic ideal points. Distance from these points in space is then used to determine whether a regime is democratic, autocratic or inconsistent. We operationalize an alternative coding of regime change using their three types and the coding rules used by Mansfield and Snyder on the three polity types. Like Mansfield and Snyder this approach uses a

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[3] We find Vanhannen's usage of electoral turnout to capture a measure of participation to be problematic: well-established democracies that have lower turnout in routine elections are considered less democratic on this dimension than authoritarian regimes that coerce electoral turnout or falsify it.

zonal demarcation (though in a three dimensional space) to create an object measure of regime and regime change.

Cederman, Hug, and Krebs (2010) offer a third variation using a property conceptualization/operationalization of democracy to create object operationalizations of both regime and regime change. The innovative features of their treatment include using a modified version of Polity to distinguish between periods of regime stability and regime change. Movement of ±10 percent over time characterizes regime change. In this way they distinguish inconsequential nominal change from periods of real change. They abstain from characterizing periods of stability explicitly as democratic or autocratic and focus on upward versus downward movement to characterize democratization or autocratization.

Whereas the Mansfield and Snyder polity-based coding and the regime types generated by Gates et al. use property-type conceptualizations of democracy to generate object conceptualizations of regime change, these would not be considered hybrid because at the level of regime change they do not combine the properties of mutually exclusivity and scalability. We explore more purely property type operationalizations as well. One such operationalization was employed by Ward and Gleditsch (1998), who looked at two different scalar variations over ten year periods – magnitude of change, and variation of change – compiled on a rolling basis. To make our results more compatible with Mansfield and Snyder's conceptualization we examine these on a five year basis. They find that movement towards democracy is pacifying, whereas great variation promotes conflict. The one limitation with their variation measurement is that high values capture both large upward and downward movements, and periods of intense fluctuation in scores. They interpret this to mean that evolutionary movement in the direction of democracy helps to avoid conflict, whereas regime instability in general as captured by variation promotes conflict. Because they do not distinguish between regime types, we cannot model the four forms of regime change inherent in Mansfield and Snyder's theory. This is one of the most purely scalar approaches among the operationalizations available in the existing regime change and conflict literature.

We also model our own property conceptualizations of regime change using newer indices mentioned above that make use of advances in measurement theory -- the UDS and V-Dem. Both use Bayesian Item Response Theory (IRT) in innovative ways. An IRT approach assumes that the underlying concept is latent, that it cannot be truly pinpointed, but expert opinion can both generate a point estimate and measure the uncertainty around that estimate. UDS treats ten extant democracy datasets as expert opinion on a latent democracy concept and

extracts both scalar point estimates and provides full posteriors from the Bayesian IRT model to measure the corresponding uncertainty (Pemstein et al. 2010).

We also use the V-Dem measure of electoral democracy (v2x_polyarchy), the project's most basic conceptualization of democracy. This variable also uses Bayesian IRT theory to compile responses by multiple coders to questions about democracy subcomponents which are then aggregated into a scalar measure (Coppedge et al. 2016, Pemstein et al. 2015). As latent variables neither UDS nor the V-Dem electoral democracy scale have obvious cut points. We use them both to model a purely property conceptualization of regime change. Following Cederman, Hug, and Krebs (2010) we treat a movement of +10 percent on the scale as democratizing and -10 percent as autocratizing regime change. Of course, in this fashion we cannot model concrete regime types. We also use the posterior distributions from the Bayesian measurement models generated by both UDS and V-Dem to account for the full range of uncertainty around their point estimates.

To implement a more purely object conceptualization of regime change, we make use of the one event history binary dataset that includes semi-democracy as an intermediate, exclusive category in addition to democracy and dictatorship – the Political Regime Change (PRC) Dataset (Reich, 2002). PRC updates and expands the geographic coverage of the original dataset designed by Gasiorowski (1996), which led to a sustained line of event history research on regime change in comparative politics (Gasiorowski 1995, Power and Gasiorowski 1997; Gasiorowski and Power 1998). The great advantage of the PRC over competing event history regime change datasets for our purposes, is that it is the only one that explicitly models three regime types that roughly correspond to the tripartite coding of regimes adopted in Mansfield and Snyder in their work. Thus it is the most amenable to testing their hypotheses.

The PRC Dataset defines a regime as a democracy if it has meaningful and extensive contestation, high levels of inclusiveness in selection of leaders and policies, and high levels of civil and political liberties. It defines a regime as a semi-democracy if any of the following conditions are met: presence of substantial degree of political contestation where the power of elected officials is limited or contestation is limited or elections are not free and fair, and/or civil and political liberties are limited. A regime is coded as authoritarian if no meaningful contestation or freedom of expression exists. Reich's update provides us with an extensive alternative object operationalization of the tripartite regime structure used in the dangerous democratization literature.

In adapting the PRC to our task we use the same four transition types proposed by Mansfield and Snyder in the same five year window. Thus a shift from either dictatorship or

semidemocracy to democracy is coded as complete democratization. A transition from dictatorship to semidemocracy is partial democratization, whereas a change from democracy to semidemocracy is coded as partial autocratization. Finally, a change from either democracy or semidemocracy to dictatorship is coded as full autocratization.

Finally, we implement a hybrid conceptualization strategy using the Lexical Index of Electoral Democracy (LIED) (Skaaning et al. 2015). Because of the mutually exclusive character of its scaling, it allows to operationalize the three regime types, and four operationalization of regime change common to this literature. We do so by partitioning the LIED into three ranges. The first, democracy, is composed the top categories (5 and 6) -- minimally competitive, multiparty elections with either full male or female suffrage, or full suffrage. Semi-democracy includes the middle the three middle categories (2, 3, and 4) -- multiparty elections for legislature, multiparty elections for legislature and executive, minimally competitive elections for legislature and executive. Dictatorship corresponds to the bottom two categories (0 and 1) -- no elections, no-party or one-party elections. With these demarcations of the LIED scale we also implement the quadripartite coding of regime change in emulation of Mansfield and Snyder. However, we add additional ways in which there can be regime change in the semi-democratic zone with directional movement, upward or downward, coded as partial democratization or partial autocratization as well.

Table 1 below summarizes the modelling strategies we employ to test the relationship between regime change and conflict in the paper. Using these three different conceptualizations of democracy – as an object, as a property, and as a hybrid – we have operationalized seven different measurement strategies for capturing the notions of regime and regime change. The operationalizations based on Ward and Gleditsch, UDS, and V-Dem use a purely property concept approach. Because of this, it cannot generate regime types in the conventional sense, but instead relies purely on directional movement (though Ward and Gleditsch add a variation component). The other property based conceptualizations of democracy, Mansfield and Snyder's original, our adaption of the three dimensional modelling of Gates et al., and the stability based modelling of Cederman et al. use zonal demarcations to produce object conceptualizations of regime amenable to generating the varieties of regime change used to examine the dangerous democratization thesis. However, the Cederman et al. operationalization produce a bipartite rather than a quadripartite operationalization of regime change. The operationalization using PRC proceeds from an object conceptualization of democracy and maintains that in its understanding of regime types. These last four treat the process of regime change as movement across object categories. They only differ on how they generate regimes. The property concept

approach chooses cut points on its scalar operationalization whereas the object concept approach groups observations into different regimes based on mutually exclusive minimal condition definitions. Finally, the hybrid concept approach groups observations according to a set of mutually exclusive minimum condition definitions which are scaled according to how democratic they are. It then combines both zonal demarcation and scalar movement that allow us to model different forms of regime change.

Table 1: From Conceptualization to Operationalization

Modeling Strategy	Democracy Conceptualization and Operationalization	Regime Type Conceptualization and Operationalization	Regime Change Conceptualization and Operationalization
Mansfield and Snyder	Property, scaled by additive aggregation via Polity	Object, trichotomized by scalar placement into types	Object, movement across types, four varieties (partial and complete democratization and autocratization)
Gates et al.	Property, arrayed in three dimensional property space (executive recruitment, executive constraint, and participation), scaled by distance from ideal points	Object, trichotomized by spatial placement into types	Object, movement across types, four varieties (partial and complete democratization and autocratization)
Ward and Gleditsch	Property, Scaled by additive aggregation via Polity	None	Properties, magnitude of change and variation of change
UDS and V-Dem	Property, estimates of latent variables using Bayesian IRT models.	None	Property, magnitude of change
Cederman et al.	Property, scaled by additive aggregation of modified Polity	Object, dichotomized into periods of stability and change on the basis of low/high variation in the scalar measure	Object, dichotomous (democratization, autocratization), direction of movement from one episode of stability to a new episode of stability
Reich (PRC)	Object, minimal conditions, typological	Object, trichotomized by minimal condition sets into types	Object, movement across types, four varieties (partial and complete democratization and autocratization)
Skaaning et al. (LIED)	Lexical Index, object/property hybrid, minimal conditions, seven scaled steps	Object, seven distinct types, trichotimized by scalar partition	Hybrid, movement across types, four varieties (partial and complete democratization and autocratization), plus scalar movement within semidemocratic category

Ultimately, the mechanics by which regime change is conceptualized and measured in three of the seven modeling strategies we examine – Mansfield and Snyder, Gates et al. and Reich – are very similar. All rely on the movement from one defined form of regime to another.

What differs is the underlying conceptualization of democracy used to operationalize the different forms of regime pertinent to the theory. The demarcations that use a property concept of democracy accomplish the task by demarcating zones on a scale or within a property space as regime types. Use of an object concept of democracy accomplishes the same thing on the basis of minimal condition defining characteristics.

Curiously, in reviewing these three modelling strategies, we find one of the persistent critiques of the use of object conceptualization based measures no longer holds. Despite proceeding from property conceptualizations, that their advocates contend do not sacrifice as much information as object conceptualizations, all three of these operationalizations of regime and regime change assemble different sets of conditions into a typological organization of the universe of regimes. Even those which proceed from a property based conceptualization of democracy sacrifice differences of degree in kind by typologizing. They only differ in whether they start by using minimal conditions or scaling by additive aggregation to partition the sample into regimes. The Cederman et al. operationalization defines regime change as a binary, upward or downward movement away from regime stability is bifurcated into democratizing and autocratizing episodes.

The purely property approaches – Ward and Gleditsch, V-Dem, and UDS – avoid such partitioning strategies. They use all the information embedded in a scalar measure of democracy conceptualized as a property. Unfortunately, since they rely on movement along the scale itself to capture regime change, they cannot capture the differences between full and partial notions of democratization and autocratization.[4] The hybrid conceptualization relying on Skaaning et al. is unique in that it combines both forms of information – typological change and scalar movement.

Having now prepared the groundwork, the next task we turn to is to utilize these conceptual/packages to test hypotheses on the effect of forms of regime change on conflict behavior. We also look at autocratization, including both full and partial if the operationalization is amenable, because if they are more powerful correlates of conflict that is important in understanding if democratization is truly dangerous.

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[4] Magnitude of movement in itself cannot do this because it ignores the start and end points of the observation. For example if we considered movements of five or more as full regime change, and less than as partial, we would conflate a movement from 0 to 5 and 16 to 20 on Polity as the same form of regime change. This simply lacks face credibility from the standpoint of the literature on regime change.

4. Research Design

4.1. Sample

We test the various operationalizations of regime change across a range of different samples. We begin with a shorter duration (1952-1985) to duplicate Mansfield and Snyder's original sample (presented in Table 2). Given that they found the original evidence for their thesis with this set up, we consider this a conducive test for replicating their findings. We then run additional models for a range of conflict outcomes for the maximum sample possible with the various democracy indicators we use. The maximum sample runs from 1816-2001. We present the findings for MIDS and Crises in the paper (Figures 1 and 2) and all models for these and a range of other dependent conflict variables in the on-line appendix (including fatal MIDs, use of force MIDs, and War). Our unit of observation is the non-directed dyad year. Following Mansfield and Snyder, we only include politically relevant dyads, those in which the two states are contiguous or where at least one of the states is a major power. We also examined the instances of where both sides of a dyad might be undergoing some form of regime change but we find that there are too few instances to analyze statistically (e.g., the highest instance in Polity III is dyads where one side is undergoing full democratization whereas the other side is experiencing incomplete democratization constituting only 0.18 percent of the entire politically relevant sample, hence, only 4.8 percent of the complete democratization cases in one state matches with an incomplete democratization in another state).

4.2. Methods of Estimation

We estimate the onset of conflict using logistic regression with cubic splines following Beck, Katz and Tucker (1998). For the V-Dem electoral democracy and the UDS models we make full use of the posterior density samples posted by their creators. We sample from the posterior distributions using Monte Carlo procedures and then use the values generated by the posterior draws as the independent variable in iterated estimations. We then report the means of the coefficients generated by the posteriors as point estimates and report the standard errors as well as the significance levels by constructing Bayesian credible intervals.

4.3. Dependent Variables

We utilize five different measures of conflict onset as the dependent variable in our estimations. From the Correlates of War project we use Militarized International Disputes (MIDs), Fatal MIDs (MIDs that produce at least one battle-related death), Use of Force MIDs

(in which there is an actual use of force), Wars (MIDs that produce at least one thousand battle-related deaths) and the International Crisis Behavior (ICB) project's crisis events (Hewitt, 2003).[5]

4.4. Independent Variables

The different operationalizations of the independent variables we use in our estimations are discussed in detail in the previous section. Here we explore what the differences in operationalizations mean in terms of the correlations between the democracy measures and the regime change measures in anticipation of testing. The full results are in the on-line appendix (Section A.1). There we examine the pairwise correlations between our democracy indicators; they are all very strongly correlated. The lowest correlation is 0.866 between the LIED and Gates', et al. three dimensional ideal-point partitioning of the regime property space. Ignoring the correlations between Polity III and IV, the highest is between the Gates, et al. measure and Polity IV at 0.944. This not surprising given the use of elements of Polity IV in the former. After that it is the UDS and V-Dem democracy scores (0.94). So we begin operationalization with a group of measures that are highly correlated.

However, as one moves to operationalize regime change the picture changes radically. Among the five operationalizations we use to model four forms of regime change, there is not much difference between Polity III and IV. For the other pairs complete democratization and autocratization the pairwise correlations are moderate, most falling somewhere between 0.3 and 0.5. However, the picture for incomplete democratization and autocratization is quite startling. The average correlation (omitting that between Polity III and IV) is 0.215 for incomplete democratization and 0.245 for incomplete autocratization. For these operationalizations in particular, despite very similar starting points, the variables generated are quite different.

If we look at the variables that take a directional (property-based) approach to regime change, we also see moderate to weak correlations. The correlations between V-Dem and UDS are in the 0.5 range, whereas with Cederman's et al. operationalization they cluster around 0.2. Thus we can see that the movement from democracy measures to regime change measures has important ramifications for nature of the data on which testing will occur.

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[5] Following Bennett and Stam (2004) we drop ongoing disputes and joining instances from our analyses.

4.5. Control Variables

Mansfield and Snyder (2002b: 538) relied on the conflict data-set developed by Oneal and Russett (1997) and since we examine their findings from this piece, we use the same battery of control variables they drew from there. These include: the capability ratio of the two states in the dyad, alliances, peace years, three splines, economic interdependence, contiguity, and the lower rate of GDP growth in dyads of states over the three previous years. We include various measures to capture democracy in part because Mansfield and Snyder also include them. We estimated models with low and high democracy scores where the base democracy indicator is continuous. When it is dichotomous we include a variable for joint democracy, as well as democracy on only one side.

In the more extensive tests we run later in the paper, we only use a limited battery of controls, including capability ratio, distance, peace years, splines, and the democracy variables. Control variables (except the democracy variables) are not reported in the table in the article to save space. All of the dependent and control variables, as well as the Polity variables, were generated using the EUGene Software 3.204 (Bennet and Stam, 2000).

5. Results

The tests that examine the impact of regime change on MID onset, presented in Table 2, replicate the sample (relevant dyads from 1952-1985) and controls (not reported) used by Mansfield and Snyder (2002b). In columns one and two we replicate Mansfield and Snyder using the contemporary versions of Polity III and Polity IV. Our results closely parallel their original findings. Both complete autocratization and partial democratization are significant and positively correlated with MID onset. The second finding supports the essence of their theoretical claim.

Table 2: Regime Transitions and Interstate Conflict, Non-directed Dyads, 1952-1985

	(1) Polity III	(2) Polity IV	(3) Reich	(4) Lexical	(5) Gates Et al.	(6) Cederman et al.	(8) Ward/ Gleditsch	(8) UDS	(9) V-DEM
Complete Democratization	-0.33	-0.27	0.11	0.27	-0.53**				
	(0.25)	(0.24)	(0.30)	(0.20)	(0.22)				
Complete Autocratization	0.31**	0.33***	-0.15	0.09	-0.06				
	(0.13)	(0.13)	(0.19)	(0.12)	(0.13)				
Incomplete Democratization	0.43**	0.46**	-0.34	-0.12	0.26				
	(0.18)	(0.19)	(0.33)	(0.17)	(0.17)				
Incomplete Autocratization	-0.33	-0.30	0.54	0.58*	-0.12				
	(0.27)	(0.28)	(0.57)	(0.32)	(0.20)				
Democratization						-0.34		0.00	-0.22
						(0.34)		(0.21)	(0.17)
Autocratization						-0.02		0.03	0.04
						(0.30)		(0.18)	(0.16)
Democracy Low	-0.04***	-0.05***				-0.05***	-0.05***	-0.37***	-1.68***
	(0.01)	(0.01)				(0.01)	(0.01)	(0.09)	(0.35)
Democracy High	0.02***	0.02***				0.02***	0.00	0.12**	0.44**
	(0.01)	(0.01)				(0.01)	(0.01)	(0.06)	(0.17)
Joint Democracy			-1.12***	-0.68***	-0.60***				
			(0.22)	(0.20)	(0.19)				
One Side Democracy			0.17*	0.05	0.20**				
			(0.10)	(0.10)	(0.10)				
Variance Low							0.01		
							(0.02)		
Variance High							0.01		
							(0.01)		
Direction Low							-0.22		
							(0.14)		
Direction High							0.15		
							(0.14)		
Change Low							0.01		
							(0.03)		
Change High							-0.01		
							(0.03)		
Constant	-0.53***	-0.58***	-0.09	-0.12	-0.18	-0.52***	-0.62***	-0.02***	-0.09
	(0.13)	(0.13)	(0.13)	(0.12)	(0.12)	(0.13)	(0.16)	(0.00)	(0.14)
Observations	18055	17998	16699	18055	17884	17998	16558	17984	17378
Pseudo R^2	0.392	0.395	0.396	0.389	0.392	0.393	0.401	-	-
Log lik.	-1992.43	-1974.07	-1817.52	-2001.54	-1964.94	-1980.44	-1743.59	-	-

Notes: Standard errors corrected for clustering by dyads are in parentheses. For UDS and V-Dem are based on Bayesian credible intervals. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Two-tailed tests.

The results for the other operationalizations that use quadripartite model of regime change do not generate similar results (models 3, 4, 5). The Reich measure (based on an object conceptualization of democracy), the Gates et al. measure (which proceeds from a different property conception of regime change), and the Lexical Index (LIED) measure (a hybrid measure) only show two significant regime change variables. The Gates et al. measure shows complete democratization to have a negative association with mid-onset. The LEID measure shows a significant positive correlation with complete autocratization.

The results for the four operationalizations that look at regime change in fashions that depart from quadripartite modeling do not provide any confirmation whatsoever that regime change affects conflict behavior. For the Cederman et al. operationalization which looks at the directionality of non-trivial change in a scalar framework, neither democratization nor autocratization is significant. Similarly, the change variables from the UDS and V-Dem do not attain significance (based on Bayesian credible intervals). Finally, the three variables taken from Gleditsch and Ward (direction, change, and variance) are also all insignificant.

Finally, it is important to note that the coefficients for the democracy score of the less democratic country in the dyad and the joint democracy variables are all negative and significant. This is consistent with the democratic peace thesis and it holds up no matter what the operationalization. The patterns with regime change exhibit no such consistency. The extensive past debate over incomplete democratization was based almost entirely on Mansfield and Snyder's conceptualization/operationalization of regime change. Our analysis reveals that varying the conceptualization/operationalization of democracy and regime change in other logical ways, does not lead to similar findings. Specifically, we find only inconsistent instances of a connection between different forms of regime change and conflict, but only with the object conceptualizations, and mostly with the Polity-based ones.

We next turn to the analysis of samples in which we maximize temporal coverage to the extent possible with each regime change operationalization. We examine MID onset for these samples, but also other more narrow forms of conflict including use of force MIDs, fatal MIDs, ICB Crises, and War. We estimated models for all five dependent variables for all nine operationalizations of regime change. Reporting of the full results would be too expansive to include in the main text, but they are reported in detail in section A.2 of the on-line appendix. The overall picture they generate is substantively similar to what we see in Table 2. While different forms of regime change do register as significant, no consistent picture emerges across the five varieties of conflict and within them different operationalizations show very different results in terms of significance and direction of coefficient. Again the most consistent findings are for the

general democratic peace, with either the lower democracy score (for scalar measures) or joint democracy scores (for regime binaries) are consistently significant and signed negative in all models estimated but one.

Figure 1 reports a selection of the important findings to emerge from that analysis. It comparatively reports coefficient magnitude and significance across a range of estimations that are generated by quadripartite operationalizations of regime change. Here we concentrate on MIDs and ICB Crises. We choose the former as the most expansive definition of conflict and the second because ICB crises highlight the role of the leader in initiating crises and thus better models leadership intentionality.

Figure 1: Coefficient Plots for MIDs and ICB Crises Outcomes for Complete and Incomplete Democratization using Quadripartite Operationalizations
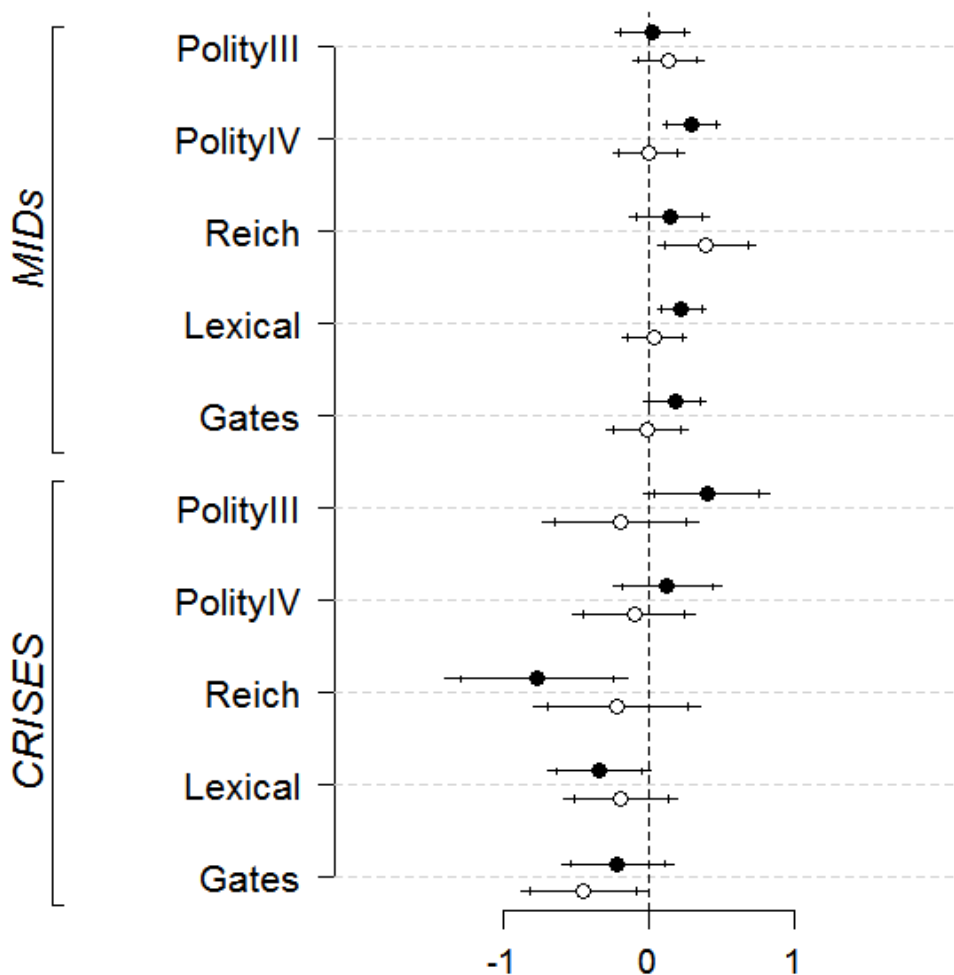
Key:
95 and 99 percent confidence intervals displayed
Black dots: Incomplete Democratization
White Dots: Complete Democratization

The top half of the figure plots the coefficients for incomplete and full democratization for MIDS for operationalizations which allow us to capture the four-fold operationalizations of regime change (Polity III, Polity IV, Reich, Gates, and LIED). The vast majority of tests we ran with the expanded samples returned null results (7 of 10) for the impact of either democratization variable on MID conflict. There were three exceptions. For Polity IV and the LEID incomplete democratization is significant and positive. For Reich complete democratization transition is significant and positive.

The bottom half of the figure shows the results for ICB Crises. Once again the vast majority of coefficients are insignificant on the democratization variables. The results are even less coherent for crisis. Again the dominant finding is a null result (6 of 10). For incomplete democratization and crisis only Polity 3 shows a significant positive finding, whereas the operationalizations based on the LIED and the PRC are significant and negative. The operationalization for Gates, et al. for complete democratic transition is also negative and significant as well.

Given that both the PRC and Polity 3 based models both use an object conceptualization of regime change, the contradictory results reveal that caution is warranted in generalizing about the relationship between incomplete democratization and conflict. It should be added that when we analyzed wars (see the online appendix), only the LIED indicator for incomplete democratization reached statistical significance and it had a negative effect on war onset. In addition, the change of sign for LIED when MIDs or ICB are used shows that greater sensitivity about conceptualization and operationalization is necessary not only for regime change variables but for the conflict variables as well.

Overall, looking at these five different operationalizations over five different conflict outcome variables the results are much stronger for authoritarian regime change. The coefficients for complete authoritarian transition are significant and positive for 18 of 25 tests for operationalizations based on both object and hybrid concepts of regime change. Incomplete authoritarian transition is significant only eight times, six positive and two negative. Complete democratization is significant eight times, seven positive and one negative, and incomplete democratization is significant ten times, seven positive and three negative (see Tables A.2.a to A.2.e in the online-appendix for the complete estimations). The overall picture that this presents makes it hard to generalize in any way about the relationship between regime change and conflict, except to say that authoritarian regime change seems more dangerous than democratic.

Figure 2 then examines the results for both democratization and autocratization for MIDs and ICB crises using the directional operationalizations of regime change using property

concept based measures (Cederman, et al., UDS, and V-Dem).[6] Comparison of the estimations for this type of operationalization do however, show somewhat different results from the universal null results for these types of operationalizations that we reported for the time-constrained sample in Table 2.

Figure 2: Coefficient Plots for MIDs and ICB Crises Outcomes for Democratization and Autocratization using Directional Operationalizations
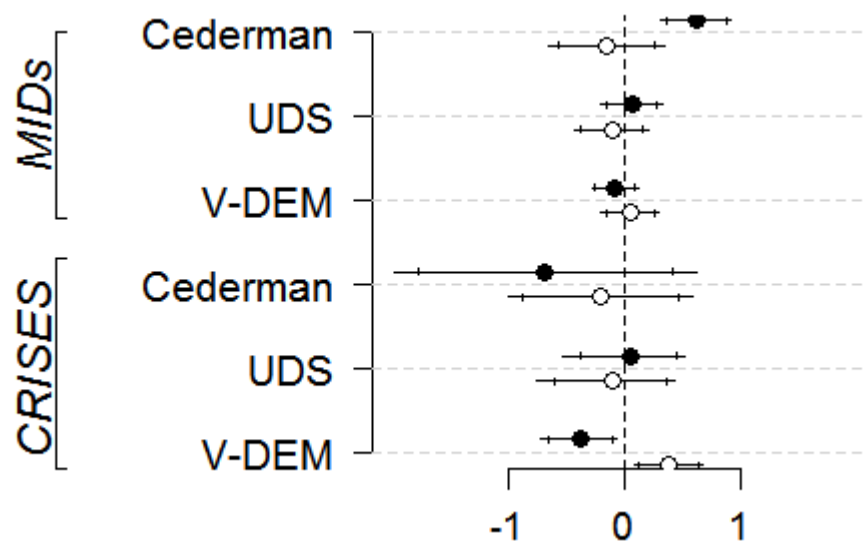
Key:
95 and 99 percent confidence intervals displayed
Black dots: Democratization
White Dots: Autocratization

For the Cederman, et al. operationalization democratization is positive and significant for MIDs but negative and insignificant for crisis. For autocratization it is insignificant for both. For UDS it remains insignificant in all four estimation and for V-Dem democratization is insignificant for MIDs and significant and negative for crisis, whereas autocratization is insignificant for MIDs but positive and significant for crisis. While these estimations are not directly comparable to the quadripartite models of regime change, they are substantively similar in that it is hard to come to strong definitive conclusions on the impact of regime change on the different conflict variables. The vast majority of tests are insignificant. Democratization is significant in

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[6] We do not include the Ward and Gleditsch estimations in the figure because their tripartite operationalization (direction, movement, and variance) is not readily comparable to the others. See Table A.2.g. in the online appendix. The strongest finding here is that change (low) is always significant and negative, meaning that regime stability on one side of the dyad deters conflict.

five of the 15 tests, four positive and one negative coefficient. Autocratization is significant twice, promoting conflict for the V-Dem models (for full estimations see Tables A.2.f., A.2.h., ad A.2.i. in the supplementary appendix). Finally, it is worth bearing in mind that while lower levels of interstate violence might on occasion have a statistically significant relationship with democratization in some form, this is not the case for war as we find that it is not associated with democratization. The only significant finding (LIED) is negative.

6. Conclusions

Our exercise in comparative theory testing with alternate conceptualizations and measures of both democracy and democratization makes several contributions to the literature on conflict and regime change and at the same time raises important methodological considerations. We found that major measures of democracy were highly correlated with each other, but this was not the case when they were deployed to operationalize democratization and other forms of regime change.

Further, across the various operationalizations we tested and the conflict variables that served as outcome variables, we found only a modicum of inconsistent support that democratization or, both full and partial, affected conflict. There is, if anything, more consistent support that authoritarian regime change (particularly full) is more dangerous than democratic. More importantly, the results we produce are for all intents and purposes unique to the operationalization of regime change in each instance.

This lends support to our main argument that much more thought has to be given to the conceptualization and the subsequent operationalization of the key variables of interest. Whether we think of democracy as an object, a property or a hybrid makes clear substantial differences when we use democracy measures as the basis for operationalizing regime change. As we pointed out above, it is not possible to say that one approach to the conceptualization of democracy is superior to others, but the choices that are made have substantial ramifications for capturing how regime change affects conflict. In cases where the authors, somehow, are agnostic about their conceptualization of democracy, we believe that it is better to test arguments with several different measures, based on more than one different underlying conceptualization of democracy. And above all, data used to test theoretical propositions should not be chosen for convenience, or because it is more amenable to confirming hypotheses.

Contrast the inconsistent and sometime contradictory results for regime change we produced here, with the results for the democratic peace whose correlates were controlled for in every model we ran. No matter what conceptualization and operationalization of democracy we

used, the results for joint democracy (or some other variant) barring one instance were significant and negative. When both states are democratic, the prospects for an interstate conflict are reduced. The one consistent finding that we have about democratization emerges at the highest level of interstate conflict, war, where we find no indication that democratization increases its risk. We do not find consistent support that incomplete democratization, i.e., the dangerous democratization thesis, leads to a consistently higher risk of conflict even with Polity-based variables, let alone others. Moreover in the models with the expanded samples, complete autocratization is the form of regime change that most consistently increases the risk of conflict.

More basically and, perhaps more importantly, our results highlight the importance of care in matching measures to the concepts embedded in theories (Sartori 1970, Munck 2009, Goertz 2005, Collier and Adcock 1999). The issues we raise concerning the operationalization of regime change is not an isolated problem. Sambanis (2004) has raised similar concerns about differences in civil war data and how they affect results. The key point is that the use of data without careful consideration of the concept-measure nexus can lead to the presentation of findings that are unique to a single operationalization of the key concepts embedded in the variables. When different operationalizations lead to divergent findings, researchers need to carefully reconsider the extent to which their measures truly capture the concepts embedded in their theories. Such reconsiderations hold the potential to rethink fundamental questions and can lead to knowledge accumulation. When such concerns remain unaddressed, it becomes an impediment to the credible confirmation of theoretical propositions.

Our study has implications for the study of democratization and regimes in conflict studies and more generally with conceptualization and measurement issues in political science. If nothing else, the first step is to cross-check findings with alternate operationalizations where the data resources are available. Such practices would help to increase confidence that the findings presented are conceptually sound and based on valid and robust inference.

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Appendix

A1. Pairwise Correlations of Democracy Variables and Regime Change Variables

A.1.a Democracy Indicators

	Polity III	Polity IV	Reich	Lexical	Gates	UDS	VDEM
Polity III	1.000						
Polity IV	0.991	1.000					
Reich	0.913	0.914	1.000				
Lexical	0.879	0.885	0.870	1.000			
Gates	0.939	0.944	0.885	0.866	1.000		
UDS	0.928	0.935	0.907	0.889	0.893	1.000	
VDEM	0.892	0.897	0.907	0.878	0.870	0.940	1.000

A.1.b. Complete Democratization

	Polity III	Polity IV	Reich	Lexical	Gates
Polity III	1.000				
Polity IV	0.805	1.000			
Reich	0.391	0.406	1.000		
Lexical	0.406	0.470	0.489	1.000	
Gates	0.461	0.495	0.409	0.376	1.000

A.1.c. Complete Autocratization

	Polity III	Polity IV	Reich	Lexical	Gates
Polity III	1.000				
Polity IV	0.856	1.000			
Reich	0.397	0.374	1.000		
Lexical	0.289	0.305	0.384	1.000	
Gates	0.506	0.486	0.459	0.394	1.000

A.1.d Incomplete Democratization

	Polity III	Polity IV	Reich	Lexical	Gates
Polity III	1.000				
Polity IV	0.707	1.000			
Reich	0.111	0.180	1.000		
Lexical	0.161	0.217	0.155	1.000	
Gates	0.272	0.316	0.197	0.327	1.000

A.1.e. Incomplete Autocratization.

	Polity III	Polity IV	Reich	Lexical	Gates
Polity III	1.000				
Polity IV	0.715	1.000			
Reich	0.184	0.434	1.000		
Lexical	0.165	0.152	0.181	1.000	
Gates	0.374	0.332	0.198	0.186	1.000

A.1.f. Democratization (directional).

	Cederman	UDS	VDEM
Cederman	1.000		
UDS	0.241	1.000	
VDEM	0.221	0.549	1.000

A.1.g. Autocratization (directional).

	Cederman	UDS	VDEM
Cederman	1.000		
UDS	0.237	1.000	
VDEM	0.152	0.530	1.000

Section A.2. Broader Sample Estimations for a Wider Range of Conflict Variables

For several models, we have quasi-complete separation for a variable or two, meaning that the variable perfectly predicts the absence of conflict, and hence, it is dropped from the model with the associated observations.

Table A.2.a: Polity III (1816-1995)

	(1) MIDS$_{t+1}$	(2) FMIDS$_{t+1}$	(3) FORCE$_{t+1}$	(4) CRISIS$_{t+1}$	(5) WAR$_{t+1}$
Complete Democratic Transition	0.13	0.67***	0.14	-0.20	0.29
	(0.12)	(0.24)	(0.14)	(0.27)	(0.63)
Complete Authoritarian Transition	0.43***	1.01***	0.55***	0.62***	-0.21
	(0.12)	(0.20)	(0.13)	(0.12)	(0.50)
Incomplete Democratic Transition	0.02	0.34	0.08	0.40*	0.10
	(0.13)	(0.28)	(0.16)	(0.22)	(0.61)
Incomplete Authoritarian Transition	-0.08	0.83**	0.09	-0.10	
	(0.26)	(0.33)	(0.25)	(0.31)	
Democracy (low)	-0.04***	-0.06**	-0.04***	-0.13***	-0.12***
	(0.01)	(0.02)	(0.01)	(0.02)	(0.03)
Democracy (high)	0.03***	0.02	0.02***	0.04***	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
Relative capability	-0.23***	-0.41***	-0.21***	-0.27***	-0.59***
	(0.03)	(0.06)	(0.04)	(0.04)	(0.11)
Distance	-0.20***	-0.39***	-0.20***	-0.17***	0.02
	(0.04)	(0.08)	(0.05)	(0.06)	(0.15)
Peace Years	-0.25***	-0.28***	-0.27***	-0.48***	0.05
	(0.02)	(0.05)	(0.03)	(0.03)	(0.10)
Spline 1	-0.00***	-0.00***	-0.00***	-0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 2	0.00***	0.00***	0.00***	0.00***	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 3	-0.00*	-0.00	-0.00	-0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	-0.38	-0.44	-0.64**	-1.05***	-6.61***
	(0.26)	(0.47)	(0.30)	(0.34)	(1.16)
Observations	64315	64315	64315	46562	63367
Pseudo R^2	0.127	0.156	0.123	0.204	0.090
Log lik.	-5598.93	-1215.69	-4169.90	-2346.54	-422.09

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Crisis models begin in 1917.

Table A.2.b: Polity IV (1816-2001)

	(1) MIDS$_{t+1}$	(2) FMIDS$_{t+1}$	(3) FORCE$_{t+1}$	(4) CRISIS$_{t+1}$	(5) WAR$_{t+1}$
Complete Democratic Transition	-0.01	0.56**	0.03	-0.11	0.15
	(0.12)	(0.23)	(0.14)	(0.21)	(0.61)
Complete Authoritarian Transition	0.34***	0.94***	0.44***	0.56***	-0.49
	(0.10)	(0.18)	(0.12)	(0.12)	(0.50)
Incomplete Democratic Transition	0.29***	0.60***	0.39***	0.12	-0.07
	(0.10)	(0.22)	(0.12)	(0.19)	(0.53)
Incomplete Authoritarian Transition	0.31*	0.85***	0.03	-0.18	
	(0.17)	(0.30)	(0.23)	(0.30)	
Democracy (low)	-0.04***	-0.06***	-0.05***	-0.13***	-0.12***
	(0.01)	(0.02)	(0.01)	(0.02)	(0.03)
Democracy (high)	0.03***	0.02	0.02***	0.04***	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
Relative capability	-0.24***	-0.43***	-0.22***	-0.28***	-0.59***
	(0.03)	(0.06)	(0.04)	(0.04)	(0.11)
Distance	-0.22***	-0.34***	-0.22***	-0.17***	0.04
	(0.04)	(0.07)	(0.05)	(0.05)	(0.14)
Peace Years	-0.25***	-0.29***	-0.27***	-0.50***	0.07
	(0.02)	(0.05)	(0.02)	(0.03)	(0.10)
Spline 1	-0.00***	-0.00***	-0.00***	-0.00***	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 2	0.00***	0.00***	0.00***	0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 3	-0.00*	-0.00*	-0.00	-0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	-0.24	-0.72	-0.52*	-1.12***	-6.79***
	(0.25)	(0.45)	(0.28)	(0.33)	(1.14)
Observations	73691	73691	73691	55414	72239
Pseudo R^2	0.135	0.155	0.128	0.202	0.086
Log lik.	-6283.50	-1358.75	-4629.62	-2564.06	-456.68

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Crisis models begin in 1917.

Table A.2.c: Reich PRC (1831-1998)

	(1) MIDS$_{t+1}$	(2) FMIDS$_{t+1}$	(3) FORCE$_{t+1}$	(4) CRISIS$_{t+1}$	(5) WAR$_{t+1}$
Complete Democratic Transition	0.39**	0.83**	0.42**	-0.22	1.31
	(0.17)	(0.40)	(0.20)	(0.29)	(0.88)
Complete Authoritarian Transition	0.10	0.66**	0.11	0.34*	-0.91
	(0.13)	(0.26)	(0.15)	(0.19)	(1.05)
Incomplete Democratic Transition	0.14	0.51**	0.12	-0.77**	-0.78
	(0.14)	(0.25)	(0.17)	(0.32)	(1.04)
Incomplete Authoritarian Transition	-0.16		-0.31	-0.64	
	(0.62)		(0.69)	(0.91)	
Joint Democracy	-1.31***	-3.71***	-1.38***	-1.52***	
	(0.22)	(0.98)	(0.27)	(0.35)	
One Sided Democracy	-0.10	-0.27	-0.20*	0.34**	-0.92*
	(0.10)	(0.19)	(0.11)	(0.13)	(0.51)
Relative capability	-0.20***	-0.31***	-0.20***	-0.32***	-0.40***
	(0.04)	(0.06)	(0.04)	(0.05)	(0.12)
Distance	-0.25***	-0.48***	-0.25***	-0.15**	-0.25
	(0.05)	(0.09)	(0.06)	(0.07)	(0.20)
Peace Years	-0.22***	-0.27***	-0.21***	-0.41***	-0.08
	(0.02)	(0.04)	(0.02)	(0.03)	(0.12)
Spline 1	-0.00***	-0.00***	-0.00***	-0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 2	0.00***	0.00***	0.00***	0.00***	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 3	-0.00	-0.00*	-0.00	-0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	0.23	0.51	0.01	-0.61*	-3.34**
	(0.27)	(0.53)	(0.32)	(0.36)	(1.51)
Observations	53078	52844	53078	46018	44746
Pseudo R^2	0.141	0.184	0.133	0.173	0.098
Log lik.	-4919.83	-1077.45	-3719.66	-2377.91	-224.75

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Crisis models begin in 1917.

Table A.2.d: Lexical Index of Electoral Democracy (1816-2001)

	(1) MIDS$_{t+1}$	(2) FMIDS$_{t+1}$	(3) FORCE$_{t+1}$	(4) CRISIS$_{t+1}$	(5) WAR$_{t+1}$
Complete Democratic Transition	0.03	0.73***	0.24*	-0.20	0.56
	(0.11)	(0.20)	(0.14)	(0.20)	(0.58)
Complete Authoritarian Transition	0.33***	0.70***	0.44***	0.53***	-0.48
	(0.09)	(0.17)	(0.10)	(0.11)	(0.46)
Incomplete Democratic Transition	0.22***	0.15	0.20**	-0.35*	-0.89*
	(0.08)	(0.20)	(0.09)	(0.18)	(0.52)
Incomplete Authoritarian Transition	0.16	0.58*	0.38*	0.14	0.20
	(0.17)	(0.32)	(0.20)	(0.25)	(0.72)
Joint Democracy	-0.54***	-1.11***	-0.80***	-1.15***	-2.83***
	(0.15)	(0.41)	(0.20)	(0.30)	(1.02)
One Sided Democracy	0.12	0.16	0.05	0.12	-0.63*
	(0.09)	(0.18)	(0.10)	(0.12)	(0.35)
Relative capability	-0.27***	-0.42***	-0.26***	-0.31***	-0.56***
	(0.03)	(0.05)	(0.03)	(0.04)	(0.09)
Distance	-0.18***	-0.34***	-0.18***	-0.15**	0.01
	(0.04)	(0.07)	(0.05)	(0.06)	(0.12)
Peace Years	-0.23***	-0.26***	-0.23***	-0.42***	-0.14*
	(0.02)	(0.04)	(0.02)	(0.03)	(0.08)
Spline 1	-0.00***	-0.00***	-0.00***	-0.00***	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 2	0.00***	0.00***	0.00***	0.00***	0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 3	-0.00	-0.00*	0.00	-0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	-0.33	-0.61	-0.65**	-0.60*	-4.31***
	(0.24)	(0.44)	(0.28)	(0.33)	(0.91)
Observations	81607	81607	81607	61245	81607
Pseudo R^2	0.134	0.150	0.125	0.173	0.094
Log lik.	-6837.40	-1524.60	-5027.60	-2845.09	-504.57

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Crisis models begin in 1917.

Table A.2.e: Gates et al. (1816-2001)

	(1) MIDS$_{t+1}$	(2) FMIDS$_{t+1}$	(3) FORCE$_{t+1}$	(4) CRISIS$_{t+1}$	(5) WAR$_{t+1}$
Complete Democratic Transition	-0.01	0.34	0.08	-0.45**	0.46
	(0.14)	(0.31)	(0.17)	(0.22)	(0.57)
Complete Authoritarian Transition	0.25**	0.56***	0.46***	0.81***	0.10
	(0.10)	(0.18)	(0.11)	(0.13)	(0.39)
Incomplete Democratic Transition	0.18	0.11	0.15	-0.22	-0.20
	(0.11)	(0.22)	(0.11)	(0.20)	(0.41)
Incomplete Authoritarian Transition	-0.48**	0.07	-0.34	0.03	
	(0.24)	(0.44)	(0.26)	(0.22)	
Joint Democracy	-0.82***	-1.37***	-0.86***	-0.89***	-2.51**
	(0.19)	(0.41)	(0.22)	(0.33)	(1.02)
One Sided Democracy	0.14	0.11	0.04	0.45***	-0.38
	(0.09)	(0.19)	(0.11)	(0.13)	(0.33)
Relative capability	-0.23***	-0.35***	-0.21***	-0.30***	-0.50***
	(0.03)	(0.06)	(0.04)	(0.04)	(0.10)
Distance	-0.24***	-0.45***	-0.25***	-0.16***	-0.05
	(0.05)	(0.08)	(0.05)	(0.06)	(0.14)
Peace Years	-0.23***	-0.26***	-0.23***	-0.44***	-0.16*
	(0.02)	(0.04)	(0.02)	(0.03)	(0.09)
Spline 1	-0.00***	-0.00***	-0.00***	-0.00***	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 2	0.00***	0.00***	0.00***	0.00***	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 3	-0.00*	-0.00	-0.00	-0.00***	-0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	0.07	0.22	-0.19	-0.69**	-3.90***
	(0.27)	(0.50)	(0.31)	(0.32)	(0.98)
Observations	69565	69565	69565	54214	67989
Pseudo R^2	0.136	0.157	0.125	0.177	0.087
Log lik.	-6025.24	-1339.56	-4446.47	-2595.85	-484.74

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Crisis models begin in 1917.

Table A.2.f: Cederman, et al. (1946-2000)

	(1) MIDS$_{t+1}$	(2) FMIDS$_{t+1}$	(3) FORCE$_{t+1}$	(4) CRISIS$_{t+1}$	(5) WAR$_{t+1}$
Democratization	0.62***	0.77**	0.65***	-0.68	
	(0.15)	(0.34)	(0.19)	(0.66)	
Autocratization	-0.15	-0.31	-0.03	-0.20	
	(0.25)	(0.60)	(0.27)	(0.41)	
Democracy (low)	-0.05***	-0.07***	-0.06***	-0.10***	-0.08
	(0.01)	(0.02)	(0.01)	(0.02)	(0.06)
Democracy (high)	0.03***	0.01	0.02***	0.05***	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.05)
Relative capability	-0.29***	-0.36***	-0.27***	-0.36***	-0.41***
	(0.04)	(0.06)	(0.05)	(0.05)	(0.15)
Distance	-0.26***	-0.46***	-0.29***	-0.13*	-0.13
	(0.05)	(0.07)	(0.06)	(0.07)	(0.25)
Peace Years	-0.28***	-0.30***	-0.27***	-0.39***	0.27
	(0.03)	(0.06)	(0.03)	(0.04)	(0.32)
Spline 1	-0.00***	-0.00***	-0.00***	-0.00***	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 2	0.00***	0.00**	0.00***	0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 3	-0.00	-0.00	0.00	-0.00***	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	0.34	0.34	0.19	-1.20***	-7.75***
	(0.30)	(0.51)	(0.35)	(0.41)	(2.87)
Observations	42882	42882	42882	43951	40789
Pseudo R^2	0.207	0.197	0.202	0.214	0.054
Log lik.	-3327.41	-833.18	-2505.72	-1603.89	-111.25

Standard errors in parentheses

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

Crisis models begin in 1917.

Table A.2.g: Ward and Gleditsch, 5 Year Lag (1816-2001)

	(1) MIDS$_{t+1}$	(2) FMIDS$_{t+1}$	(3) FORCE$_{t+1}$	(4) CRISIS$_{t+1}$	(5) WAR$_{t+1}$
Democracy (low)	-0.03***	-0.05**	-0.04***	-0.12***	-0.11***
	(0.01)	(0.02)	(0.01)	(0.02)	(0.04)
Democracy (high)	0.02***	0.01	0.02**	0.03***	-0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
Direction (low)	0.05	-0.10	0.24*	0.06	0.27
	(0.10)	(0.22)	(0.12)	(0.18)	(0.43)
Direction (high)	-0.03	-0.47**	-0.19*	-0.17	-0.41
	(0.09)	(0.21)	(0.11)	(0.15)	(0.45)
Change (low)	-0.04**	-0.08**	-0.06***	-0.06*	-0.13*
	(0.02)	(0.04)	(0.02)	(0.03)	(0.07)
Change (high)	0.02	0.13***	0.04*	0.02	0.14**
	(0.02)	(0.03)	(0.02)	(0.03)	(0.07)
Variance (low)	-0.02	0.01	-0.02	0.01	-0.06
	(0.02)	(0.02)	(0.02)	(0.01)	(0.09)
Variance (high)	-0.00	-0.01	-0.00	-0.00	-0.04**
	(0.00)	(0.01)	(0.00)	(0.01)	(0.02)
Relative capability	-0.19***	-0.40***	-0.16***	-0.22***	-0.59***
	(0.03)	(0.06)	(0.03)	(0.04)	(0.12)
Distance	-0.20***	-0.30***	-0.20***	-0.18***	0.07
	(0.04)	(0.07)	(0.05)	(0.05)	(0.15)
Peace Years	-0.28***	-0.38***	-0.30***	-0.51***	-0.08
	(0.02)	(0.05)	(0.02)	(0.03)	(0.15)
Spline 1	-0.00***	-0.00***	-0.00***	-0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 2	0.00***	0.00***	0.00***	0.00***	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 3	-0.00	-0.00*	0.00	-0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	0.00	-0.14	-0.11	-0.67*	-5.72***
	(0.25)	(0.45)	(0.29)	(0.35)	(1.58)
Observations	65870	65870	65870	49394	65870
Pseudo R^2	0.150	0.175	0.148	0.223	0.093
Log lik.	-5455.38	-1116.44	-3982.98	-2215.96	-422.76

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Crisis models begin in 1917.

Table A.2.h: Unified Democracy Scores (1951-2000)

	(1) MIDS$_{t+1}$	(2) FMIDS$_{t+1}$	(3) FORCE$_{t+1}$	(4) CRISIS$_{t+1}$	(5) WAR$_{t+1}$
Democratization	0.07	0.53*	0.11	0.06	0.04
	(0.14)	(0.26)	(0.16)	(0.26)	(0.89)
Autocratization	-0.11	0.15	-0.12	-0.10	0.17
	(0.17)	(0.32)	(0.18)	(0.30)	(0.89)
Democracy Low	-0.32***	-0.41**	-0.37***	-0.56***	-0.99**
	(0.08)	(0.18)	(0.10)	(0.13)	(0.48)
Democracy High	0.15**	-0.02	0.10	0.23***	0.27
	(0.07)	(0.12)	(0.08)	(0.08)	(0.36)
Relative capability	-0.27***	-0.33***	-0.24***	-0.29***	-0.42***
	(0.03)	(0.06)	(0.04)	(0.05)	(0.15)
Distance	-0.21***	-0.41***	-0.24***	-0.13*	-0.15
	(0.05)	(0.07)	(0.06)	(0.07)	(0.07)
Peace Years	-0.29***	-0.37***	-0.28***	-0.40***	1.12
	(0.02)	(0.05)	(0.03)	(0.04)	(0.87)
Spline 1	-0.00***	-0.00***	-0.00***	-0.00***	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 2	0.00***	0.00***	0.00***	0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 3	-0.00	-0.00	0.00	-0.00*	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	0.33	0.54	0.23	-0.79**	-14.98**
	(0.31)	(0.47)	(0.33)	(0.39)	(6.67)
Observations	42253	42253	42253	43274	42253
Pseudo R^2	-	-	-	-	-
Log lik.	-	-	-	-	-

Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ at Bayesian credible intervals.

Table A.2.i: Varieties of Democracy, Electoral Democracy (1905-2000)

	(1) MIDS$_{t+1}$ 1905-2000	(2) FMIDS$_{t+1}$ 1905-2000	(3) FORCE$_{t+1}$ 1905-2000	(4) CRISIS$_{t+1}$ 1917-2000	(5) WAR$_{t+1}$ 1905-2000
Democratization	-0.08	0.26	-0.08	-0.37**	0.43
	(0.11)	(0.20)	(0.11)	(0.16)	(0.63)
Autocratization	0.05	0.53**	0.07	0.38**	0.05
	(0.13)	(0.22)	(0.14)	(0.15)	(0.63)
Democracy Low	-1.87***	-3.15***	-2.13***	-4.41***	-7.94***
	(0.29)	(0.76)	(0.39)	(0.70)	(2.87)
Democracy High	0.19	0.12	0.05	1.01***	-0.03
	(0.20)	(0.39)	(0.23)	(0.23)	(0.73)
Relative capability	-0.22***	-0.34***	-0.21***	-0.28***	-0.42***
	(0.03)	(0.06)	(0.04)	(0.04)	(0.14)
Distance	-0.32***	-0.51***	-0.32***	-0.25***	-0.22
	(0.06)	(0.09)	(0.06)	(0.06)	(0.20)
Peace Years	-0.26***	-0.31***	-0.27***	-0.45***	0.01
	(0.02)	(0.05)	(0.02)	(0.03)	(0.16)
Spline 1	-0.00***	-0.00***	-0.00***	-0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 2	0.00***	0.00***	0.00***	0.00***	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Spline 3	-0.00**	-0.00	-0.00	-0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	1.17***	1.37**	1.06***	0.65*	-3.82**
	(0.31)	(0.56)	(0.36)	(0.34)	(1.77)
Observations	54487	54487	54487	53387	54487
Pseudo R^2	-	-	-	-	-
Log lik.	-	-	-	-	-

Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ at Bayesian credible intervals.
Crisis models begin in 1917.