Political Regime Type and Warfare

Evidence from 600 Years of European History*

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Abstract

This paper presents new evidence that, historically, the relationship between political regime type and warfare was different than it is today. Using a novel database of interstate conflict in Europe between 1200 and 1800, we perform the first quantitative analysis of domestic political institutions and warfare across the pre-modern era. We find that early parliamentary regimes – the institutional predecessors of modern democracies – were disproportionately more likely to experience armed conflict than their absolutist counterparts. Our empirical strategy makes use of two complementary approaches: a standard dyadic analysis of conflict initiation, and a dynamic network analysis that accounts for interdependence between dyads. These analyses show that early parliamentary regimes fought in significantly more wars than absolutist monarchies, both against one another and overall. Such regimes, we argue, had a relatively large capacity to make war, but, unlike modern democracies, not enough institutional constraints to prevent it.

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1 Introduction

Institutionally mature democracies rarely go to war against one other (Maoz and Russett, 1993, Dixon, 1994, Dafoe, Oneal and Russett, 2013). This result comes "as close as anything we have to an empirical law" in international relations (Levy, 1988, p. 88). Nearly all empirical evidence for the democratic peace, however, concerns warfare from the Congress of Vienna (1815) onward. Although institutionally mature democracies were virtually non-existent before the nineteenth century, polities with more representative and accountable institutions did in fact exist (Stasavage, 2010, van Zanden, Buringh and Bosker, 2012). Yet we know relatively little about the consequences of early parliamentary regimes for military conflict, and whether the democratic peace is a modern phenomenon or a continuation of previous historical trends.

This paper presents new evidence that, historically, the relationship between political regime type and warfare was different than it is today. We find that early parliamentary regimes – the institutional precursors to modern democracies – were significantly more likely than absolutist monarchies to go to war, both against each other and overall. By way of evidence, we analyze a new database of all major conflicts between sovereign polities in late medieval and early modern (henceforth "pre-modern") Europe, between 1200 and 1800. Overall, this database includes more than 900 conflicts and 80 sovereign polities. We employ two complementary empirical approaches: a standard dyadic analysis of interstate conflict, and temporal exponential random graph models, which account for the multilateral and interdependent nature of pre-modern warfare. To the best of our knowledge, our paper is the first to systematically evaluate the relationship between political regime type and warfare across the whole of pre-modern Europe.

Although Europe is the world region where evidence for the democratic peace is most abundant today, interstate warfare was a ubiquitous historical feature (Hoffman, 2015, pp. 21-3). Parker (1996, p. 1) writes that "Hardly a decade can be found before 1815 in which at least one battle did not take place." Similarly, Tilly (1992, p. 72) claims that major European powers were at war in roughly 80 to 90 percent of all years between 1500 and 1800. The general lack of representative government is one conventional explanation for the high prevalence of pre-modern warfare. Absolutist monarchs may have treated

warfare like a "royal sport" (Hale, 1985, pp. 29-30), sparking conflicts based on their whims. An alternative explanation, which this paper develops, is that the emergence of more representative and accountable institutions made warfare more affordable, and more likely to occur. To help finance warfare, monarchs exchanged (partial) political representation for new fiscal resources (Bates, 2010, p. 56). As the fiscal and military strength of early parliamentary regimes grew, however, the institutional constraints on the ruler's war-making ability did not appear to keep pace. As a result, pre-modern patterns of war participation were the opposite of what we might expect today: more representative and accountable governments went to war more frequently than did absolutist ones.

2 Regime Type and Warfare in Pre-Modern Europe

There were two basic models of domestic political organization in pre-modern Europe. The first was absolute monarchy, in which the sovereign ruler was not formally accountable to any political authority other than himself, and royal political power was not subject to institutionalized power sharing. The second was an early form of parliamentary governance, in which monarchs partially shared formal political authority – particularly over taxation – with a representative assembly of elites. These political systems had significant implications for states' opportunity and willingness to go to war.

2.1 "Absolutist Monarchs Caused War"

Scholars sometimes characterize warfare in pre-modern Europe as the "sport of kings" (Hale, 1985, pp. 29-30). Absolutist monarchs faced few formal political constraints and paid few political penalties for foreign policy adventures (Hoffman, 2015, pp. 26-7). Thus, they may have been more inclined to rush headlong into conflict. According to Thomas More, medieval commoners believed that they would be "driven and enforced to war against their wills by the furious madness of their princes and heads" (More, 1999, p. 180). This view of pre-modern warfare as the "sport of kings" calls to mind modern-day dictators who engage in "belligerence and incautious behavior" due to a combination of high personal ambitions and low domestic constraints (Weeks, 2014, p. 86).

2.2 "Parliamentary Governments Caused War"

In pre-modern parliamentary regimes, monarchs no longer enjoyed such unbridled political power. Executive authority was subject to consent by representative assemblies, particularly on fiscal matters (Stasavage, 2010, pp. 627-8). Contrary to the conventional wisdom, absolutist monarchs were often fiscally beholden to powerful regional interests, stifling their ability to accrue tax resources (Epstein, 2000, pp. 13-15). One way for rulers to secure new funds was to exchange partial political representation for new tax payments (Bates, 2010, pp. 56). Tilly (1994, p. 24) describes this process as follows:

> Why, despite obvious interests to the contrary, did rulers frequently accept the establishment of institutions representing the major classes within their jurisdictions? In fact, those institutions were the price and outcome of bargaining with different members of the subject population for the wherewithal of state activity, especially the means of war. Kings of England did not *want* a parliament to form and assume ever-greater power; they conceded power to barons and then to clergy, gentry, and bourgeois in the course of persuading them to raise the money for warfare.

Recent research has shown that the establishment of representative assemblies may indeed have enabled monarchs to better shoulder the costs of war. Scholars have highlighted increased warfare among parliamentary "first movers," such as twelfth-century Aragon (Møller, 2016) and thirteenth-century England (Boucoyannis, 2015). Similarly, Stasavage (2016, p. 155) finds a significant statistical relationship between warfare and parliamentary activity across pre-modern Europe.

The available evidence also suggests that early representative institutions did in fact enable pre-modern polities in Europe to gather greater fiscal resources for war. Take the ability to borrow, which allowed polities to respond to time-sensitive military demands. Schultz and Weingast (1998) find that better access to sovereign credit gave early parliamentary regimes a military edge over their absolutist counterparts, while Stasavage (2011, pp. 31-2, 39) finds that city-states – often characterized by representative assemblies – were the first polities to issue long-term public debt.

Although early parliamentary regimes were quite effective at raising new fiscal resources for war, they did not typically possess enough institutional constraints to reduce war's frequency. Regardless of regime type, rulers in pre-modern Europe had strong incentives to seek glory and spoils through warfare. Princes learned from a young age to focus much of their attention on military affairs (Hoffman, 2015, pp. 24-5). Machiavelli wrote that "a prince should have no other object, nor any other thought, not take anything else as his art but that of war and its orders and discipline" (Machiavelli, 2010, p. 58). Glory in warfare was non-divisible: to achieve it, rulers had to actually fight in battle and win (Hoffman, 2015, p. 28). Furthermore, while elites in parliament may have controlled taxation, the decision to go to war typically remained in the ruler's hands (Hale, 1985, p. 29). Cox (2011, p. 134) labels this problem "royal moral hazard in warfare."

In this regard, early parliamentary regimes in pre-modern Europe were a type of "transitional" autocracy, bridging the gap between the traditional absolutist model and institutionally mature modern democracies (Mansfield and Snyder, 2002). Such regimes were quite representative and accountable by historical standards (Stasavage, 2016, pp. 147-9). Still, early parliamentary regimes differed in important ways from modern democracies. Contemporary definitions of democracy often include open competition and contestation, the right to participate and vote in elections, and civil liberties (Lipset, 1959, Dahl, 1973, Jaggers and Gurr, 1995, Vanhanen, 2000). Pre-modern parliamentary regimes, however, generally lacked such democratic practices (Marongiu, 1968, p. 31). These differences may help explain why institutionally mature modern democracies can prevent the outbreak of wars in ways that early parliamentary regimes could not.[1]

2.3 Empirical Expectations

The above discussion yields two competing explanations for why some pre-modern European polities experienced more armed conflict than others. The first is that absolutist monarchies were more likely to go to war than early parliamentary regimes. According to this view, warfare was a "royal sport" brought about by the lack of formal political constraints on the ruler's war-making powers. The second, by contrast, portrays war

[1]Sobek (2005) highlights belligerence by "imperial" regimes in Renaissance Italy as a potential alternative explanation. He argues that powerful elite oligarchies dominated political decision-making in this context. Our empirical analysis will address the role of imperial ambitions.

participation as the product of a historical transformation toward more representative and accountable forms of government. This argument suggests that early parliamentary regimes should have experienced more armed conflict than absolutist monarchies due to a greater ability to harness fiscal resources for war, coupled with insufficient institutional constraints to prevent its outbreak. We will now evaluate which explanation most closely aligns with the empirical record.

3 Data

To analyze whether one historical regime type was more war-prone than the other, we construct a new database of interstate conflicts in pre-modern Europe that spans 600 years, from the establishment of the first medieval parliaments (Stasavage, 2010) to the advent of mass warfare, which fundamentally changed the international relations landscape (Onorato, Scheve and Stasavage, 2014). Two primary components comprise our historical database: war participation and political regime type.

3.1 Warfare

For data on pre-modern warfare, we made use of comprehensive military histories by Bradbury (2004) and Clodfelter (2002). Both sources are organized into chapters by time period and geographical area. Where they differ is in their temporal scope, with the Bradbury data ending in 1525, and the Clodfelter data beginning in 1500. We therefore use Bradbury for military conflicts over the late medieval era (1200-1499), and Clodfelter for the early modern era (1500-1800).[2]

At the atomic level, our data points are major conflict events such as land battles. Bradbury presents his material in this manner (i.e., as distinct major conflicts). Clodfelter, however, generally presents his material in terms of large-scale wars, each of which includes a paragraph or more describing its details. To make Clodfelter consistent with Bradbury, we broke down each war entry into the major conflict events that comprised it.

[2]Brecke (1999) is an alternative source for historical warfare data, spanning violent conflicts worldwide from 1400 onward. However, Brecke's conflict summaries are too vague for our purposes. For example, Brecke's entry number 1297 is "Emperor-Palatinate, 1618-20." Unlike Bradbury and Clodfelter, Brecke does not provide specific information about the number of conflict events for this entry, conflict locations, or belligerents.

For example, according to Clodfelter, the Thirty Years' War (1618-48) comprised 37 distinct major conflicts (see Appendix Table A.1). We then disaggregated each major conflict event in Bradbury and Clodfelter alike into unique dyadic interactions at the yearly level.

In total, we recorded 920 interstate conflicts between 1200 and 1800, with an average of 153 conflicts per century. The geographic scope of these data includes Europe, the Middle East and North Africa, but the vast majority of the conflicts took place within Europe – north of the Mediterranean and west of the Dardanelles Straits, Caucasus and Ural Mountains. For this reason, we restrict our main empirical analysis to conflicts within Europe, but provide robustness checks with the expanded sample.

For each conflict, we collected information on its start and end dates, location, and belligerents. Appendix Table A.2 reports the descriptive statistics. We estimated the locations of land conflicts (over 90 percent of our sample) through the geographic coordinates of the settlements or towns nearest to each conflict site. For the locations of naval encounters, we used an approximation based on the nearest coastal city or region (if more precise coordinates were not available). To determine which participating polity acted as attacker and defender, we relied on Bradbury and Clodfelter.[3] These historical accounts identify conflict initiators with terms such "attacked," "invaded," "initiated," or "assaulted" for battles and "besieged" for sieges.[4] Since the identity of the instigator was ambiguous in some cases, we coded both the "directed" and "undirected" occurrence of dyadic conflict (i.e., respective and irrespective of initiator), and analyze each separately below.

3.2 Regime Type

To identify the complete universe of polities and potential belligerents in pre-modern Europe, we made use of the historical atlases of McEvedy (1972, 1992), which provide the names, locations, and borders of historical polities over time.[5] We geo-referenced the available maps for each century over 1200-1800, and generated data on changes in territorial holdings and the approximate start or end dates of polities that did not ex-

[3]The accounts in Bradbury and Clodfelter refer to certain polities by multiple names. Appendix Table A.3 provides our coding guidelines for such cases.

[4]For example, according to Bradbury (2004, p. 165), the Teutonic Knights "crossed and *initiated* battle despite having the smaller force..."

[5]While Bradbury and Clodfelter provide information on belligerents, they do not discuss the many polities in pre-modern Europe that did not go to war in any given year.

ist throughout the entire pre-modern era. Using these atlases, we developed a list of 83 unique sovereign polities in pre-modern Europe, 45 of which went to war at least once. We also coded whether and when these polities established permanent colonial settlements overseas.[6]

Following Stasavage (2010, p. 631), we coded polities as parliamentary depending on the presence of a representative assembly with control over taxation.[7] To determine which polities had parliamentary systems and when, we began with previously established samples of parliaments (Stasavage, 2010, p. 631) and supplemented these records with parliamentary meeting data from van Zanden, Buringh and Bosker (2012, app. S1), along with three further historical sources – Marongiu (1968), Myers (1975), and Graves (2014) (see Appendix Table A.4). In total, we identified 22 parliamentary regimes across the full population of European polities between 1200 and 1800. Figure 1 shows regime types and years of transition for all polities in our database. Appendix Table A.5 reports this information in tabular form.

4 Descriptive Evidence

Figure 2 shows the geographic and temporal distribution of the historical conflicts in our database, organized by the political regime type of the belligerents involved.[8] Even a brief glance at these data suggests that parliamentary regimes in pre-modern Europe were more warlike than their absolutist ("non-parliamentary") counterparts. The vast majority of conflicts in Europe between 1200 and 1800 (689, or 79 percent) involved at least one parliamentary belligerent. A quarter of all conflicts (230) involved two parliamentary regimes. By contrast, absolutist dyads – where neither member was parliamentary – accounted for the smallest share of conflicts (182, or 21 percent). This pattern continues to hold if we expand the sample to include conflicts involving European polities in

[6]We identified polities that possessed permanent overseas colonial settlements in the Americas or Asia between 1200 and 1800, according to Canny (2001), Hart (2003), and Lehning (2013). This coding resulted in five such "colonizer" polities: England (1625-1800), France (1608-1800), Holland (1615-1800), Portugal (1520-1800), and Spain (1535-1800).

[7]Note that early parliaments rarely held control over spending (Stasavage, 2010, pp. 630-1).

[8]Since some conflicts involved mixed alliances of parliamentary and absolutist regimes, we disaggregated all conflicts into individual dyads. For example, we treat a conflict between one absolutist polity and a two-polity parliamentary-absolutist alliance as three dyads – one absolutist-parliamentary dyad in conflict, one absolutist-absolutist dyad in conflict, and one absolutist-parliamentary dyad at peace.

the Middle East and North Africa, with 78 percent of all conflicts involving at least one parliamentary regime.

The high level of conflict participation by parliamentary regimes is even more striking when one considers that such dyads were relatively uncommon in pre-modern Europe. Table 1 shows contingency tables for the relative distribution of parliamentary regimes in the dyadic data, and the relative conflict propensity of each dyad type. Although parliamentary-parliamentary dyads represented just 7 percent of all historical dyads, they accounted for 34 percent of all conflicts. At the opposite end of the political spectrum, absolutist dyads were by far the most common, representing 59 percent of all dyads, but the least prone to conflict, at 16 percent. Just over one-tenth of one percent of absolutist dyads experienced conflict in an average decade, compared to almost two percent of mutually parliamentary dyads – a 17-fold difference in conflict risk. Mixed dyads, in which one participant was parliamentary and the other was not, fell between these two extremes.

Global comparisons of dyads, however, can be misleading. Parliamentary regimes were not uniformly distributed across Europe, and the high rate of joint conflict participation of such polities may have simply reflected a lack of opportunity for faraway absolutist regimes to fight their parliamentary counterparts. Indeed, Figure 2 suggests that most parliamentary-parliamentary conflicts occurred in Western Europe, while other types of conflict dyads were more evenly distributed throughout the European continent. To account for the logistical feasibility of dyadic conflict, we analyzed the subset of polities that shared a land or maritime border according to the historical atlases of McEvedy (1972, 1992). The bottom two contingency tables in Table 1 reveal a similar pattern for this subset as before: parliamentary-parliamentary dyads were both relatively uncommon (12 percent of the total) *and* relatively war-prone (34 percent of all conflicts). While only one-half of one percent of contiguous absolutist dyads experienced conflict in an average decade, nearly 5 percent of contiguous parliamentary dyads experienced it.

Overall, the descriptive evidence suggests that the most politically representative dyads were the most warlike in pre-modern Europe, while the most politically unaccountable dyads were the most peaceful. Two parliamentary regimes were more likely to go to war with each other than mixed dyads, and the latter were more war-prone than absolutist dyads. Although this evidence reveals a stark pattern in the historical data, regime type

was not the only predictor of armed conflict, and several potential confounders – from prior conflict participation and imperial ambitions, to unobserved dyadic characteristics and interdependence – may have driven historical variation in conflict behavior. To account for such concerns, we now turn to a more rigorous empirical analysis.

5 Statistical Models

We analyze the determinants of pre-modern warfare with two complimentary empirical strategies: a simple dyadic model of interstate conflict, and temporal exponential random graph models (TERGM) that account for dyadic interdependence and the dynamics of multilateral, coalitional war (Hanneke, Fu and Xing, 2010, Leifeld and Cranmer, 2015).

Previous research on the structure of contemporary militarized interstate rivalries and disputes has shown these phenomena to be primarily bilateral (Wolford, 2015, Diehl and Wright, 2016). For this reason, dyadic analysis has been the dominant approach to the empirical study of interstate conflict (Croco and Teo, 2005, Diehl and Wright, 2016), including research on the influence of political regime type on war (e.g., Dafoe, Oneal and Russett, 2013, Gartzke and Weisiger, 2013, Gibler and Braithwaite, 2013, Colgan and Weeks, 2015, Renshon and Spirling, 2015).

Despite the methodological dominance of dyadic analysis, international relations literature has become increasingly cognizant of the fact that dyadic conflicts can arise due to circumstances external to the dyad, and that a failure to account for these unmodeled interdependencies can yield biased estimates (Poast, 2010). Given such concerns, network analysis – and TERGM in particular – provides a useful alternative to the purely dyadic approach, by allowing extra-dyadic or system-level features (e.g., the degree of multilateralism in the international system) to affect dyad outcomes, while still accounting for dyadic and actor-level factors (e.g., regime type) (Hanneke, Fu and Xing, 2010, Krivitsky and Handcock, 2014, Leifeld and Cranmer, 2015).

While network analysis mitigates potential bias related to dyadic interdependence, other biases could emerge through shared but unmeasured characteristics of polities (i.e., latent homophily), or unmeasured common dynamics of the system (O'Malley, 2013). Efforts to formally account for temporal dependence in a dynamic network setting also

call for a consistent number of polities across time periods – a requirement that does not extend to dyadic panel data analysis.

We address these concerns in two ways. First, we adhere to current best practices in TERGM specification (Gerber, Henry and Lubell, 2013, Cranmer, Heinrich and Desmarais, 2014). Second, we maintain a methodologically plural approach. If both the dyadic and TERGM methods yield similar empirical results, then we should have greater confidence that the parliament-war relationship represents a genuine historical pattern, and not a statistical aberration.

5.1 Dyadic Analysis

Our dyadic analysis makes use of the following model specification:

$$\text{war}_{ijt} = \text{logit}^{-1}\left(\beta_1 \text{parl}_{it} + \beta_2 \text{parl}_{jt} + \beta_3 \text{parl}_{it}\text{parl}_{jt} + \gamma X_{ijt} + r_i + r_j + f(t) + \epsilon_{ij} + u_{ijt}\right) \tag{1}$$

where war_{ijt} takes the value of 1 if the first polity i in the dyad initiated a conflict against the second polity j in a given time period t, and 0 otherwise. Our temporal units of analysis t are decades, unless otherwise indicated. $parl_{it}$ indicates whether side i (attacker) was a parliamentary regime at time t, $parl_{jt}$ indicates whether side j (defender) was parliamentary, and $parl_{it}parl_{jt}$ is a multiplicative interactive term (i.e., "both parliamentary").[9] X_{ijt} is a matrix of time-variant dyadic covariates, including geographic contiguity, the relative physical size of the two polities, and the possession of permanent overseas colonial settlements (if any). Geographic continuity helps proxy for the opportunity for conflict, while relative size helps proxy for power relations. Colonial possessions help account for imperial ambitions as alternative explanations for pre-modern warfare. r_i, r_j are regional fixed effects, which control for time-invariant demographic, geographic, economic, and social features specific to each region.[10]

We adjust for temporal dependence, $f(t)$, by including in separate models (1) time

[9] To limit our analysis to the onset of new conflicts (i.e., rather than participation in prolonged wars), we always drop dyads in continuous conflict after the first time period t in which the war occurred.

[10] We include regional dummies for Eastern, Northern, Southern, and Western Europe, and – in Section 6 – Northern Africa and Western Asia according to the Statistical Division of the United Nations (1999).

fixed effects, (2) regional time trends, (3) a temporal spline, or (4) a cubed time term (Carter and Signorino, 2010). These controls help account for common shocks to the international system over time (e.g., Black Death, military revolution), along with historical waves of forcible regime promotion (Owen, 2010, pp. 1-7) and the evolution of international norms regarding dispute settlement. Finally, we account for dyad-specific errors ϵ_{ij}, which we model using random effects, and i.i.d. errors u_{ijt}.[11]

5.1.1 Dyadic Results

The dyadic analysis confirms that parliamentary polities were most likely to experience conflict, particularly against each other. Table 2 summarizes the results of regression models based on Equation (1) at the dyad-decade level. The results for dyad-year data are substantively the same (see Appendix Table A.6).

As is clear from Figure 3a, parliamentary-parliamentary dyads had the highest probability of conflict.[12] For two such polities with a common border, the probability of dyadic conflict in an average decade was 0.024 (95% CI: 0.017, 0.033).[13] By contrast, the probability that two contiguous absolutist regimes went to war was almost ten times lower, at 0.0028 (95% CI: 0.0018, 0.0042). Mixed dyads were much more likely to experience conflict than absolutist dyads, but less likely than fully parliamentary dyads. Parliamentary polities attacked non-parliamentary ones at a comparable rate (0.01; 95% CI: 0.007, 0.015) as non-parliamentary polities attacked parliamentary ones (0.01; 95% CI: 0.007, 0.014).

The likelihood of conflict was far smaller for non-contiguous polities – where war required a relatively costly and logistically challenging expeditionary campaign by at least one of the belligerents. Yet the rank ordering across dyad types was the same. The probability of conflict between two non-neighboring parliamentary polities was 0.004 (95% CI: 0.003, 0.006), about ten times higher than for two non-contiguous absolutist polities.

[11] Due to the binary nature of our dependent variable, a fixed effects estimator would drop all dyads that never went to war, or in which regime type or other regressors were temporally stable over 1200-1800. Such a specification is not theoretically appropriate in our case, since it bases its inferences on a small subset of the population of historical European polities, and assumes that the dropped peaceful dyads avoided conflict due to some unmodeled idiosyncratic dyadic feature, while substantive independent variables like political regime type were irrelevant to this lack of conflict (Beck and Katz, 2001).

[12] Although the coefficient estimate for the interaction term ("both parliamentary") is negative in Table 2, suggesting some consistency with the modern democratic peace, this estimate is statistically insignificant in all model specifications but one.

[13] The predicted probabilities are based on Model 5 of Table 2.

5.2 Network Analysis

Although the dyadic analysis establishes a useful benchmark, the assumption of dyadic independence may not adequately capture the multilateral nature of pre-modern European warfare, where conflicts often unfolded between coalitions of polities (rather than pairs of individual polities), and where war decisions were potentially interdependent across dyads. To account for this possibility, we now complement the dyadic analysis with a series of TERGM models (Hanneke, Fu and Xing, 2010).

Rather than viewing each conflict as the outcome of an independent, dyad-level process, TERGMs assume that the probability of conflict between each pair of polities was conditional on broader, extra-dyadic patterns of warfare within the European state system. At each time period, the combination of these dyadic conflicts represents a "network" of interstate warfare, and TERGMs treat this network as a single, multivariate dependent variable. Formally,

$$P(\mathbf{Y}_t|\boldsymbol{\theta}, \mathbf{Y}_{t-1}) = \frac{\exp\left(\mathbf{g}\left(\mathbf{Y}_t, \mathbf{Y}_{t-1}\right)\boldsymbol{\theta}\right)}{c(\boldsymbol{\theta}, \mathbf{Y}_{t-1})} \tag{2}$$

where the dependent variable, $\mathbf{Y}_t$, is the observed conflict network at time t. $\mathbf{Y}_t$ is a $N_t \times N_t$ matrix, where N_t is the number of polities at time t, and individual dyads $y_{ijt} = 1$ if polity i initiated a conflict against j at time t, and $y_{ijt} = 0$ otherwise. On the right-hand side, $\mathbf{g}()$ is a vector of network statistics for $\mathbf{Y}_t$ and $\mathbf{Y}_{t-1}$, $\boldsymbol{\theta}$ is a vector of coefficients, and $c(\boldsymbol{\theta}, \mathbf{Y}_{t-1})$ is a normalizing constant.

TERGMs treat the observed network $\mathbf{Y}_t$ as a single draw from a probability distribution of random networks. They enumerate this sample space of networks by conditioning on the observed features of $\mathbf{Y}_t$ (e.g., number of polities, regime types, past conflicts), and estimate optimal $\boldsymbol{\theta}$ parameters through maximum pseudo-likelihood. The $\boldsymbol{\theta}$ estimates can be interpreted as the log-odds of a conflict between polities i and j, following a unit increase in each variable (e.g., regime change from absolutist to parliamentary).

To capture the generative process underlying the conflict network, we include in the $\mathbf{g}()$ vector the same polity-level and dyad-level covariates as before (i.e., regime type, border contiguity, geographic size, colonial posessions), along with a series of higher-

order network effects. These include, for each t, the density of the network (i.e., number of "edges"), the number of polities at peace ("isolates"), and the number of reciprocal dyads in the system. To account for the dynamics of coalitional warfare, we condition on the number of polities initiating conflict against a single polity ("in-stars") at each t. Because some polities accounted for a disproportionate share of conflict – not as a result of a single dyadic dispute, but as a characteristic of an expansionist, activist foreign policy – we also condition on the number of polities initiating conflict against multiple targets ("out-stars") at each t.

We account for changes to the conflict network over time with two additional network statistics. The first is an autoregressive "memory" term, which indicates whether each conflict existed in the previous time period (Leifeld, Cranmer and Desmarais, 2015). The second is delayed reciprocity, or the tendency of polities to initiate conflict against polities that attacked them in the previous time period. This model specification closely follows previous applications of TERGMs to international conflict, and particularly to economic sanctions (Cranmer, Heinrich and Desmarais, 2014). In the Appendix, we provide a formal description of the structure of $\mathbf{g}()$.

5.2.1 Network Results

The TERGM results generally mirror those from the dyadic analysis. Table 3 reports the full set of estimated θ coefficients for the directed (Models 1-2) and undirected versions (Models 3-4) of the conflict network, the latter of which account for uncertainty about conflict initiation. Figure 3b reports the predicted probabilities of conflict for each type of dyad (i.e., absolutist, parliamentary, and mixed) based on the parameters of Model 2. We evaluated model fit by examining the area under the receiver-operator characteristic curve (AUC), which can be interpreted as the probability that – for a randomly-selected pair of dyadic relationships, one conflictive and one peaceful – the model assigns a higher predicted probability to the dyad in conflict. Model 2 had a higher AUC than all others, with a predictive accuracy of .97 in-sample and .89 out-of-sample.[14]

In an average decade, the probability of conflict was highest for parliamentary dyads

[14]We evaluated out-of-sample predictive accuracy by training each TERGM model on data from 1200 to 1750, and using the 1760-1800 subsample as the test set.

(.0025, 95%CI: .0023, .003), and lowest for absolutist dyads (.0011, 95%CI: .0008, .0013). The primary difference from the earlier dyadic results is the lower absolute magnitude of these predicted probabilities. While conflict was a rare event in both cases, it became even more uncommon after we accounted for dyadic interdependence. A second difference is in the relative propensity for conflict among mixed dyads: non-parliamentary polities attacked parliamentary ones at a slightly higher rate (.0021; 95% CI: .0019, .0024) than parliamentary polities attacked non-parliamentary ones (.0019; 95% CI: .0018, .0021). In the dyadic model, these relative propensities were essentially the same.

Several additional results emerge for the higher-order, structural network characteristics in Table 3. First, many polities opted out of interstate military competition entirely (positive isolates). While some polities initiated more than one conflict in a decade (positive out-two-stars), relatively few initiated more than two (negative, insignificant out-three-stars). Second, while moderately-sized coalitions were quite common in pre-modern Europe (positive in-two-stars), large coalitions were not (negative, insignificant in-three-stars). Third, reciprocity drove much of the variation in conflict initation. The probability of an attack by *i* against *j* in a given decade increased substantially if *j* attacked *i* in the same (positive reciprocity) or previous time period (positive delayed reciprocity).

6 Robustness Checks

Our main statistical results indicate that pre-modern parliamentary regimes were significantly more likely to go to war than absolutist ones. For robustness, we now look beyond our benchmark set of controls and evaluate other potential confounding factors: outlier dyads and polities, temporal heterogeneity, regional differences, uncertainty over the direction of conflict initiation, and regional trends. Wherever possible, we implement these robustness checks for both empirical strategies (i.e., dyadic and TERGM).

6.1 Outliers

Since only 7 percent of dyads fall into the fully parliamentary category, one particular polity or rivalry may be driving our results. For example, Figure 2 shows clusters of parliamentary-parliamentary conflicts in the Low Countries and in northern Italy. It is thus possible that the high rate of conflict participation for such dyads may simply reflect

persistent fights between rival polities in these two regions.

Appendix Table A.7 suggests that no one influential dyad drives our results. The dyad with the highest number of conflicts was the one between France and England: France attacked England 8 times, and was attacked by England another 7 times. Yet Franco-English conflicts accounted for just 8.6 and 7.5 percent of all parliamentary-parliamentary conflicts, respectively. 28 directed dyads in the fully parliamentary set experienced conflict just once. If we omit the France-England dyad (or other influential dyads) from the data, then we still obtain the same relative propensities as before. Appendix Figures A.1a and A.1b show that the predictions of Model 5 of Table 2 remain consistent when we exclude one dyad at a time from the sample.[15]

A related concern is that some polities accounted for a disproportionate share of conflicts. For instance, one-third of all European conflicts between 1200 and 1800 involved France, 19 percent involved Austria (including the Holy Roman Empire), and 16 percent involved England. We have controlled for this possibility in our TERGM models by conditioning the probability of dyadic conflict on "out-stars," or the frequency with which highly-active belligerents appeared in the system. Taking this one step further, Appendix Figures A.1c and A.1d show that the iterative exclusion of polities from the data does not significantly change our results. Conflicts involving parliamentary regimes were still more likely than conflicts between absolutist ones.

6.2 1500-1800 Period

Our statistical analyses thus far have made use of the entire sample of interstate conflicts between 1200 and 1800. Yet there may have been systematic differences in the international geopolitical environment between the late medieval (1200-1500) and early modern eras (1500-1800). The military revolution of the 1500s saw the widespread adoption of firearms, infantry tactics, and new methods of logistics and recruitment (Parker, 1996, pp. 1-2). Gennaioli and Voth (2015) argue that these events changed the fiscal requirements of conflict participation, which may have differentially affected parliamentary and absolutist regimes.

[15]This adjustment is significantly more complex in the TERGM case, since – with dyadic interdependence – the exclusion of a single polity or dyad requires that we also discard all other connections those polities may have had with other members of the system, fundamentally altering the structure of the network.

The various temporal controls in the dyadic analysis account for common shocks to the international system, including the sixteenth-century military revolution. To further account for this event, we replicate our analyses while restricting the data sample to the 1500-1800 subperiod. Appendix Figure A.2 reproduces the simulations from Figure 3 for this subperiod (full results in Appendix Tables A.8 and A.9). Apart from differences in relative conflict propensities for mixed dyads in the TERGM analysis, the 1500-1800 results are consistent with those for the full sample: parliamentary dyads were significantly more likely to go to war with each other than absolutist dyads. Furthermore, the predicted probabilities of conflict among parliamentary dyads were larger for this subperiod. This result is consistent with Gennaioli and Voth (2015)'s claim that the fiscal requirements of war increased after 1500, disproportionately affecting parliamentary regimes.

6.3 Beyond Europe

All of the above statistical analyses have restricted their inquiry to conflicts on the European continent. While there are not many major recorded conflicts outside Europe in our database (see Figure 2), warfare in the Middle East and North Africa posed a unique set of challenges for pre-modern European polities. Due to the logistical requirements of deploying and supporting troops over extended lines of communication, only relatively wealthy polities capable of projecting power over long distances could participate. A substantial portion of these conflicts also involved absolutist dyads, such as the Ottoman Empire versus Neapolitan or Papal forces.

To ensure that the exclusion of such conflicts is not driving our results, we replicated the models in Table 2 with the full geographic sample of European and non-European conflicts. The results (summarized in Appendix Figure A.3) are substantively the same as before: parliamentary regimes were more likely to go to war – against each other and overall – than absolutist regimes.

Another concern involves historical belligerence by imperially-minded regimes (Sobek, 2005). We have included the possession of permanent overseas colonial settlements (by either or both dyad members) as covariates in our model specifications. As Tables 2 and 3 show, the probability of conflict was indeed higher for polities with colonial possessions. However, the standardized "colonizer effect" is smaller in magnitude than the "regime

effect," which remains robust after we account for this additional source of variation.

6.4 Regional Trends

Regional economic and demographic patterns may have affected the incentives of polities to go to war (Gartzke, 2007). Regional economic growth, for example, may have sparked increases in local population density, which in turn influenced the relative scarcity of land and thus the incentive to fight expansionist wars. In this regard, underlying regional trends, and not political regime types per se, may explain the war-proneness of early parliamentary regimes.

Although the various temporal controls in the dyadic analysis account for common economic and demographic shocks and trends, time series data on local economic development – or suitable proxies, like urbanization – are not systematically available for our historical sample of 80-plus polities. One tractable way to control for local economic and demographic patterns is to include region-specific linear time trends and re-run the main specifications. To operationalize this approach, we interacted decadal fixed effects with regional dummies for the four European regions as described in Section 5. The results (reported in Models 3 and 7 of Table 2) remain consistent in magnitude and significance.

6.5 Uncertainty about Conflict Initiation

A final set of robustness checks accounts for measurement error surrounding the directed nature of conflict dyads. If there is some uncertainty over which polity was responsible for conflict initiation, then statistical analyses of directed data – where polity i attacked or did not attack j at time t – may be misleading. This directionality does not affect inferences about the relative conflict propensity of fully parliamentary or fully absolutist dyads, but it may be problematic with respect to the two mixed dyad types. While we make no theoretical claims about whether parliamentary regimes attacked non-parliamentary ones at a higher rate than the other way around, we would expect that both dissimilar dyad types fought at a higher rate than fully absolutist dyads.

To help address this concern, we discarded measures of directionality altogether and ran a series of undirected TERGM models. The results, reported in Models 3 and 4 of Table 3, are substantively the same as before. Parliamentary polities were significantly more

likely to experience conflict in a given time period than absolutist regimes, regardless of which side shot the first arrow or fired the first round.

7 Discussion

This paper has analyzed 600 years of conflict in pre-modern Europe, and found that early parliamentary regimes were significantly more belligerent than absolutist monarchies. Although parliamentary regimes were relatively uncommon before 1800, they fought in a disproportionately high share of armed conflicts. These results suggest that the democratic peace – which has characterized interstate conflict behavior since the nineteenth century – is a departure, rather than a continuation, of previous historical trends. Prior to 1800, more representative and accountable political regimes were more war-prone than absolutist ones.

We attribute these results to the political economy of warfare in pre-modern Europe. Although the establishment of early parliamentary institutions enabled polities to raise greater fiscal resources for war, there remained insufficient institutional constraints to reduce war's frequency. Even if monarchs did view war as a "royal sport," those who could most afford to compete tended to share political power with representative assemblies.

Beyond this important historical discontinuity, our analysis has also revealed some areas of consistency across the pre-modern and modern eras. Just as contemporary democratic regimes often fight wars against non-democratic opponents, pre-modern parliamentary polities fought frequently against their non-parliamentary rivals. This result is partly due to the fact that the vast majority of potential belligerents in the pre-modern European state system were non-parliamentary – in the same way that most modern polities have been non-democratic (at least until a few decades ago). In contrast to the modern era, however, we find no robust evidence that pre-modern parliamentary regimes were less likely to fight against other parliamentary ones.

Our goal here has been to systematically evaluate the relationship between political regime type and war participation during a historical era that the international relations literature has mostly overlooked. Yet the patterns revealed by our analysis raise several new questions. How did parliamentary belligerence in the pre-modern era subsequently

evolve into a durable peace? If (partial) political power-sharing was not enough to prevent armed conflict in early parliamentary regimes, then why are modern democratic polities better able to resist the temptation to mobilize their latent military capacity for war? While a rigorous treatment of these questions lies outside the scope of the current paper, we conclude with several potential paths forward for future research on this topic.

One possibility – in line with Tilly (1992), Bates (2010), and Morris (2014) – is that interstate military competition eventually created the conditions for domestic peace. As the fiscal and military strength of parliamentary polities grew, they may have fought more wars, but they also became better positioned to impose domestic security. Establishing parliaments was a way to co-opt domestic elites, enabling them to challenge a ruler's decisions without resorting to military means. As polities improved their domestic stability, and representative assemblies gained more power, the institutional mechanisms behind the contemporary democratic peace were finally able to emerge.[16]

A second potential explanation is the advent of the mass army during the Napoleonic Wars (Posen, 1993, Onorato, Scheve and Stasavage, 2014). Until the end of the eighteenth century, European polities relied on small long-service armies, staffed disproportionately by foreign mercenaries and freelance professionals. The mass mobilization of civilians into the French Army in the early 1800s was unprecedented, facilitated in part by another new development – nationalism. To help guarantee that new recruits arrived with enough skill and zeal, nineteenth-century polities organized mass literacy campaigns, focused on imbuing civilians with shared identity and purpose (Aghion et al., 2014). This development expanded the military capacity of European polities, but also made territorial conquest more difficult, as the recruits on the opposing side were now "citizens" of the territory they were defending, and were more likely to resist foreign occupation. The heightened costs of expansionist war may have deterred parliamentary aggressors from launching opportunistic military campaigns.

A related possibility is that universal suffrage – a defining feature of modern democracies that was lacking in early parliamentary regimes – created new demands for domestic spending. Along with greater fiscal requirements brought about by the advent of the mass

[16] In a related manner, Lemke and Carter (2016) analyze how historical state birth origins can influence subsequent war participation.

army (e.g., education, healthcare), the extension of the franchise may have increased expectations for social spending, helping lay the foundation for modern European welfare states (Lindert, 2004, pp. 179-82). These developments may have made it politically difficult to commit as large a share of the budget to military purposes as early parliamentary regimes had. As a result, parliamentary regimes that expanded the franchise and became more democratic were no longer able to exploit their latent fiscal capacity toward war, absent significant domestic support (Scheve and Stasavage, 2010).

These different explanations are not mutually exclusive – it is possible that all of them (or none) may simultaneously be true. From the evidence that we presented here, however, one thing should be quite clear: the absence of war between more representative and accountable political regimes is a relatively new historical phenomenon. Ascertaining why this is the case, and what changed, should be a priority for future research.

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Figure 1: Timelines of political regimes in pre-modern Europe

Figure 2: Distribution of historical conflicts

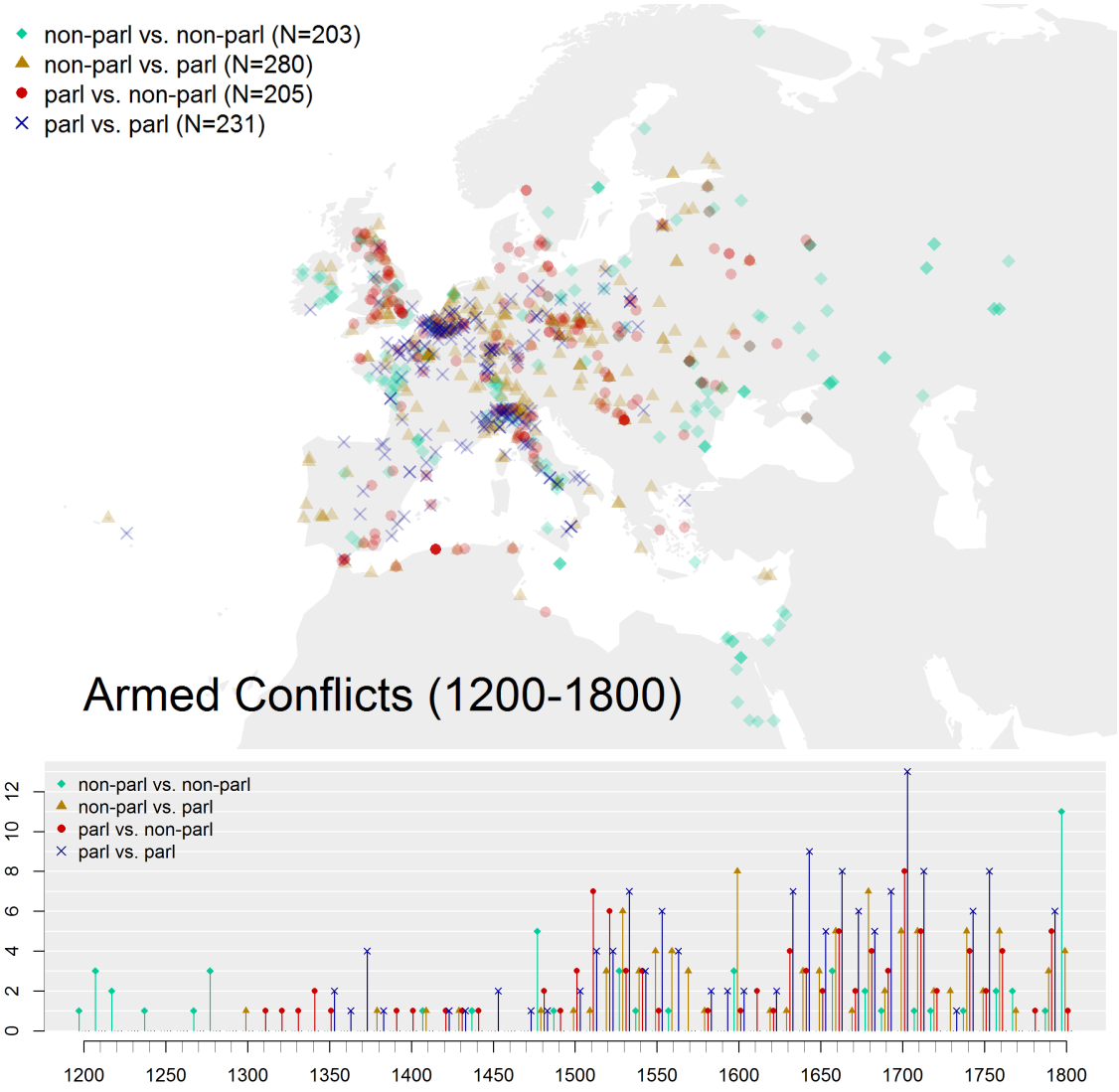
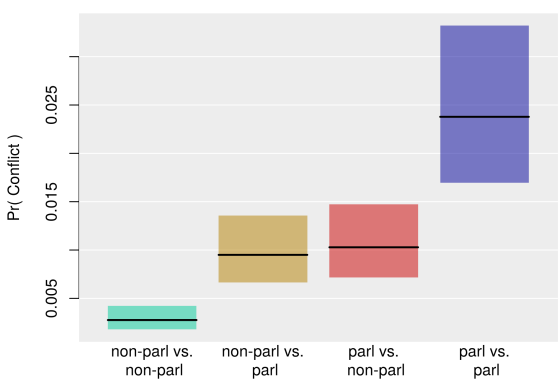
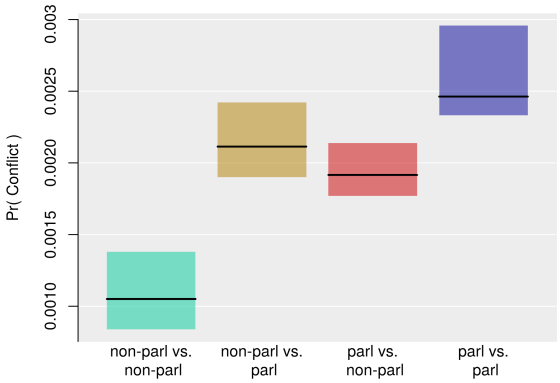


Figure 3: Predicted probability of dyadic conflict



(a) dyadic analysis (logit) Model 5, Table 2



(b) network analysis (TERGM) Model 2, Table 3

Table 1: Regime type and interstate conflict in Europe (1200-1800), dyad-decade

All dyads	Dyad frequency			Conflict propensity	
	Non-parliament	Parliament		Non-parliament	Parliament
Non-parliament	40,554	11,593	Non-parliament	44	74
	(59%)	(17%)		(16%)	(27%)
Parliament	11,577	4,944	Parliament	64	93
	(17%)	(7%)		(23%)	(34%)
Contiguous dyads	Dyad frequency			Conflict propensity	
	Non-parliament	Parliament		Non-parliament	Parliament
Non-parliament	4,976	2,002	Non-parliament	23	44
	(49%)	(20%)		(14%)	(26%)
Parliament	1,993	1,198	Parliament	43	57
	(20%)	(12%)		(26%)	(34%)

Table 2: Determinants of conflict initiation (1200-1800), dyad-decade

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
			logit				*random effects logit*		
Parliamentary attacker	1.990***	1.460***	1.321***	1.247***	1.247***	1.121***	1.196***	1.058***	1.058***
	(0.215)	(0.220)	(0.237)	(0.227)	(0.227)	(0.267)	(0.254)	(0.256)	(0.256)
Parliamentary defender	2.035***	1.498***	1.411***	1.338***	1.338***	1.282***	1.319***	1.211***	1.211***
	(0.205)	(0.209)	(0.218)	(0.211)	(0.211)	(0.260)	(0.247)	(0.250)	(0.250)
Both parliamentary	-0.736**	-0.264	-0.382	-0.324	-0.324	-0.363	-0.363	-0.283	-0.283
	(0.256)	(0.263)	(0.274)	(0.266)	(0.266)	(0.335)	(0.321)	(0.323)	(0.323)
log(Area ratio)			0.0574′	0.0586′	0.0586′	0.0779′	0.0727	0.0763′	0.0763′
			(0.0323)	(0.0323)	(0.0323)	(0.0459)	(0.0450)	(0.0452)	(0.0452)
Geographic contiguity			1.739***	1.743***	1.743***	1.639***	1.597***	1.631***	1.631***
			(0.147)	(0.147)	(0.147)	(0.168)	(0.163)	(0.164)	(0.164)
Permanent colonies (attacker)			0.584**	0.497*	0.497*	0.507′	0.590*	0.554*	0.554*
			(0.225)	(0.224)	(0.224)	(0.288)	(0.275)	(0.277)	(0.277)
Permanent colonies (defender)			0.754***	0.696**	0.696**	0.988***	1.013***	1.016***	1.016***
			(0.217)	(0.215)	(0.215)	(0.280)	(0.268)	(0.270)	(0.270)
Permanent colonies (both)			0.265	0.275	0.275	-0.438	-0.292	-0.434	-0.434
			(0.358)	(0.354)	(0.354)	(0.475)	(0.453)	(0.456)	(0.456)
Constant	-6.734***	-4.012***	-7.707***	42.77	-9.525***	-4.706***	-8.292***	43.54	-10.21***
	(1.011)	(1.126)	(0.462)	(35.30)	(1.193)	(1.227)	(0.659)	(41.37)	(1.682)
$ln(\sigma^2)$						0.500**	0.282	0.413*	0.413*
						(0.183)	(0.200)	(0.189)	(0.189)
Region FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Dyad RE						✓	✓	✓	✓
Time FE		✓				✓			
Regional trends			✓				✓		
Time spline				✓				✓	
Time cubed					✓				✓
Observations	81,976	57,596	81,056	81,056	81,056	56,676	81,056	81,056	81,056
Number of dyads	4,155	4,041	4,155	4,155	4,155	4,041	4,155	4,155	4,155
Log-likelihood	-1589	-1463	-1401	-1422	-1422	-1294	-1359	-1372	-1372

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, ′ p<0.1

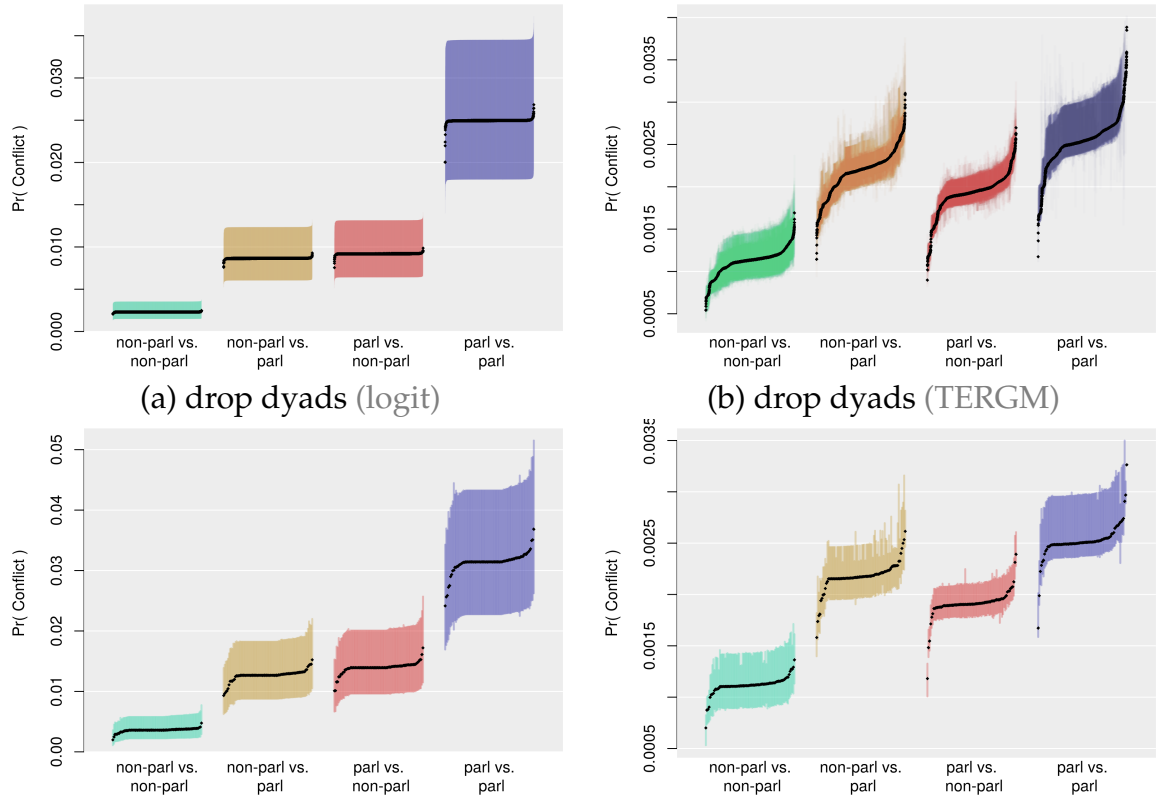
Table 3: Determinants of conflict initiation (1200-1800), network-decade

	(1)	(2)	(3)	(4)
	temporal exponential random graph model			
Polity-level				
Parliamentary (attacker)	0.41**	0.6**		
	(0.17)	(0.2)		
Parliamentary (defender)	0.39**	0.46**		
	(0.15)	(0.16)		
Parliamentary			0.51***	0.7***
			(0.17)	(0.14)
log(Area) attacker	0.21***	0.16**		
	(0.05)	(0.05)		
log(Area) defender	0.27***	0.2***		
	(0.05)	(0.05)		
log(Area)			0.31***	0.22***
			(0.04)	(0.04)
Permanent colonies (attacker)	0.25	0.07		
	(0.15)	(0.17)		
Permanent colonies (defender)	0.21	0.04		
	(0.16)	(0.19)		
Permanent colonies			0.41**	0.31
			(0.14)	(0.19)
Dyad-level				
Parliamentary (both)	-0.16	-0.28*	-0.16	-0.34**
	(0.09)	(0.11)	(0.11)	(0.13)
log(Area ratio)	-0.06	0	-0.02	0.03
	(0.05)	(0.04)	(0.05)	(0.05)
Geographic contiguity	1.44***	1.34***	1.72***	1.59***
	(0.19)	(0.19)	(0.21)	(0.19)
Permanent colonies (both)	0.61**	0.44	0.84***	0.65*
	(0.21)	(0.23)	(0.24)	(0.28)
Conflict at $t-1$		1.6***		2.3***
		(0.29)		(0.22)
Network-level				
Edges	-18.63***	-15.68***	-22.75***	-18.71***
	(2.15)	(2)	(2.72)	(2.36)
Reciprocity	2.11***	1.94***		
	(0.49)	(0.56)		
Delayed reciprocity		0.86**		
		(0.34)		
Isolates	0.96***	0.84**	0.63	0.36
	(0.25)	(0.27)	(0.51)	(0.44)
In-two-star	0.64***	0.71***		
	(0.2)	(0.2)		
Out-two-star	0.82***	0.88***		
	(0.25)	(0.23)		
Two-star			0.64*	0.8**
			(0.35)	(0.32)
In-three-star	-0.12	-0.13		
	(0.1)	(0.1)		
Out-three-star	-0.12	-0.15		
	(0.16)	(0.15)		
Three-star			-0.1	-0.15
			(0.16)	(0.14)
Region FE	✓	✓	✓	✓
Directed graph	✓	✓		
Observations	68,886	63,128	34,443	31,564
Area under ROC (in-sample)	0.97	0.97	0.96	0.96
Area under ROC (out-of-sample)	0.86	0.89	0.85	0.88

Bootstrapped standard errors in parentheses (1,000 replications)
*** p<0.001, ** p<0.01, * p<0.05, ' p<0.1

Online Appendix

Figure A.1: Sensitivity analysis: dyad and polity exclusion



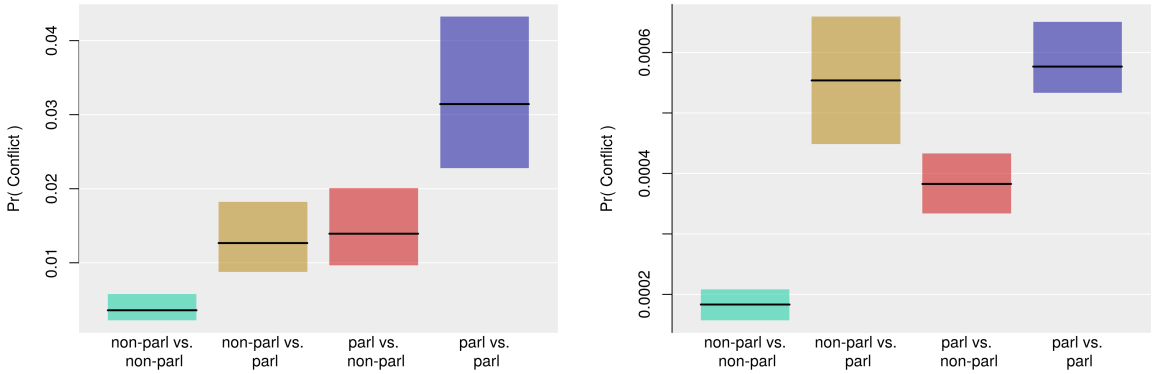
(a) drop dyads (logit)

(b) drop dyads (TERGM)

(c) drop polities (logit)

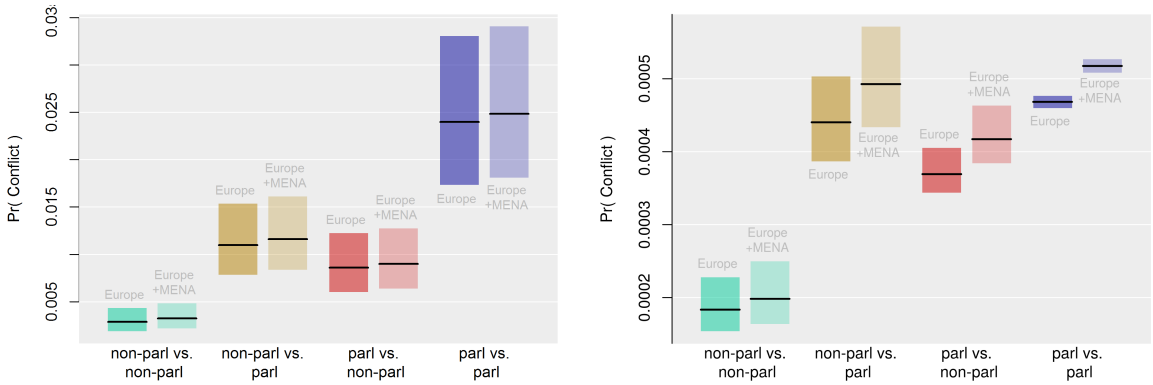
(d) drop polities (TERGM)

Figure A.2: Predicted probability of dyadic conflict: 1500-1800 only



(a) 1500-1800 (logit) (b) 1500-1800 (TERGM)

Figure A.3: Sensitivity analysis: include conflicts in Middle East and North Africa



(a) dyadic analysis (logit) Model 3, Table 2

(b) network analysis (TERGM) Model 2, Table 3

Table A.1: Major individual conflict events comprising the Thirty Years' War

	Conflict Name	Year	Nearest Settlement	Country
1	Sablat	1619	Budweis	Czech Rep
2	White Hill	1620	Prague	Czech Rep
3	Fleurus	1622	Fleurus	Belgium
4	Hochst	1622	Frankfurt am Main	Germany
5	Wimpfen	1622	Bad Wimpfen	Germany
6	Stadtlohn	1623	Stadtlohn	Germany
7	Breda	1624	Breda	Netherlands
8	Bridge of Dessau	1625	Dessau	Germany
9	Lutter	1626	Lutter am Barenberge	Germany
10	Stralsund	1626	Stralsund	Germany
11	Wolgast	1628	Wolgast	Germany
12	Madgeburg	1630-1	Madgeburg	Germany
13	Breitenfeld	1631	Leipzig	Germany
14	Frankfurt (Oder)	1631	Frankfurt (Oder)	Germany
15	Werben	1631	Werben (Elbe)	Germany
16	Lützen	1632	Lützen	Germany
17	Nuremberg	1632	Nuremberg	Germany
18	River Lech	1632	Rain	Germany
19	Nordlingen	1634	Nordlingen	Germany
20	Tornavento	1636	Oleggio	Italy
21	Wittstock	1636	Wittstock	Germany
22	Breda	1637	Breda	Netherlands
23	Leucate	1637	Leucate	France
24	Breisach	1638	Breisach	Germany
25	Fuenterrabia	1638	Hondarribia	Spain
26	Rheinfelden	1638	Rheinfelden	Switzerland
27	Casale	1640	Casale Monferrato	Italy
28	2nd Breitenfeld	1642	Leipzig	Germany
29	Lérida	1642	Lérida	Spain
30	Rocroi	1643	Rocroi	France
31	Freiburg	1644	Freiburg im Breisgau	Germany
32	Allerheim	1645	Allerheim	Germany
33	Jankau	1645	Jankov	Czech Rep
34	Mergentheim	1645	Bad Mergentheim	Germany
35	Lérida	1647	Lérida	Spain
36	Lens	1648	Lens	France
37	Zusmarshausen	1648	Zusmarshausen	Germany

Source: Clodfelter (2002).

Table A.2: Warfare in pre-modern Europe (1200-1800)

Variable	Obs	Mean	Std. Dev.	Min	Max
Start year	920	1637	149.583	1203	1799
End year	920	1637	149.549	1204	1800
Duration (years)	920	1.067	0.376	1	8
Land battle	920	0.570	0.495	0	1
Naval battle	920	0.073	0.260	0	1
Siege (land)	920	0.357	0.479	0	1
Aggressor victor	920	0.577	0.494	0	1
Defender victor	920	0.359	0.480	0	1
Draw	920	0.065	0.247	0	1

Table A.3: Coding scheme for belligerents with multiple names

Belligerent	Coding Scheme
Austria	Coded as such for mentions of "Austria", "Holy Roman Empire" and "Habsburgs" as Austria was a main constituent entity in all cases. In maps in McEvedy (1972, 1992), Austria includes the "German Empire (Holy Roman Empire) and dependent territories."
Castile	Coded as such for mentions of "Castile," "Kingdom of Castile" or "Kingdom of Leon and Castile," in addition to "Castile and Aragon" after unification (post-1469) and "Spain" and the "Spanish Kingdom (including dependencies)" from 1500 onward.
Florence	Coded as such for mentions of "Tuscany" from 1530 onward.
Hungary	Coded as such for mentions of "Hungary."
Holland	Coded as such for mentions of "Holland," the "Dutch Republic," the "United Provinces," the "Batavian Republic" and the "Netherlands" as Holland was the main constituent entity in all cases. Does not include the Spanish Netherlands.
Naples	Coded as such for mentions of "Naples" and "Southern Italy."
Piedmont	Coded as such for mentions of the "Duchy of Savoy" and the "Kingdom of Sardinia."
Prussia	Coded as such for mentions of "Brandenburg," "Brandenburg-Prussia," and the "Kingdom of Prussia."
Russia	Coded as such for mentions of the "Principality of Novgorod" and the "Great Principality of Vladimir (including dependent territories)" prior to 1450. All other principalities in the Kiev Rus are coded as separate actors. After 1450, coded as such for mentions of the "Principality of Moscow." Other principalities including Novgorod are coded as separate actors. After 1600, coded as such for mentions of the "Russian Empire." Russian codings based heavily on maps in McEvedy (1972, 1992).

Sources: McEvedy (1972, 1992), Clodfelter (2002), Bradbury (2004).

Table A.4: Additional parliamentary regimes

Polity	Supporting Evidence
Aragon	1348-1600: "...extensive powers, including legislation and control of the grant of taxes; they were reinforced by a range of privileges, which the Castilian Cortes lacked...But the contractual relationship between king and subjects was not achieved until 1348" (Graves, 2014, p. 15-16).
Bavaria	1483-1499: "In Germany, for example, in the fifteenth century the Estates of Brandenburg, Bavaria and Wurrtemberg not only claimed the right to control taxation but at times took over management of the prince's estates; by using their power of the purse they often influenced the ruler's policies, especially restraining him from military adventures" (Myers, 1975, p. 18).
Ireland	1300-1600: "Edward I of England (1272-1307) grants parliamentary taxation with the assent of elected representatives...became frequent and important only in the course of the fourteenth century" (Graves, 2014, p. 19).
Navarre	1401-1600: "In the fourteenth and early fifteenth centuries assemblies, based on fealty, auxilium, and decisions requiring the approval of all and binding on all, developed also in Portugal and Navarre" (Graves, 2014, p. 16).
Scotland	1300-1681: "Parliaments developed also in England's Celtic neighbors: in the thirteenth century in Ireland and in the fourteenth century in Scotland. Whilst [Scotland's] general councils, unlike parliaments, have no judicial functions or powers, they both exercised legislative and taxing authority" (Graves, 2014, p. 19).
Sicily	1200-1483: "In Sardinia, Naples and Sicily assemblies exercised the taxing power and were prepared to assert themselves against the king's representative. Nevertheless, royal needs intensified financial pressure on them in the sixteenth century..." (Graves, 2014, p. 93-94).

This table describes the six additional regimes that we have coded as parliamentary beyond those identified by Stasavage (2010) and van Zanden, Buringh and Bosker (2012). See the text for further details.
Sources: Marongiu (1968), Myers (1975), Graves (2014).

Table A.5: Polities and regime types in pre-modern Europe (1200-1800)

Name	Polity	Parliament	Name	Polity	Parliament
Almohad Caliphate	1212-1278		Lusatia, Silesia, and Moravia	1483-1600	
Almoravid Empire	1200-1212		Milan	1483-1600	
Aragon	1212-1600	1348-1600		1701-1783	
Austria	1401-1800	1401-1800	Minor Principalities	1401-1483	
Bavaria	1483-1783	1483-1499	Naples	1401-1600	
	1797-1800			1783-1800	
Bohemia	1200-1600		Norman County of Capua	1200-1212	
Bosnia	1212-1278		Norman Duchy of Apulia	1200-1212	
Bulgarian Empire	1212-1401		Norway	1200-1401	
Burgundy	1600-1681		Ottoman Empire	1401-1800	
Byzantine Empire	1200-1212		Principality of Chernigov	1200-1278	
	1278-1401		Principality of Galicia	1200-1401	
County of Barcelona	1200-1212		Principality of Moldavia	1401-1681	
Castile	1200-1701	1269-1651	Principality of Pereyaslavl	1200-1278	
	1783-1800		Principality of Riazan	1401-1600	
Cherkesy	1600-1783		Principality of Smolensk	1212-1483	
Cisalpine Republic	1797-1800		Principality of Volhynia	1212-1401	
Confederation of the Grisons	1483-1600		Principality of Wallachia	1401-1783	
Cossacks	1681-1701		Palatinate	1483-1783	
Crimean Khanate	1600-1783		Papal States	1278-1800	
Denmark	1200-1401		Piedmont	1483-1800	1483-1800
	1483-1800		Pisa	1200-1401	
Despotate of Epirus	1212-1401		Poland	1200-1797	1372-1797
Empire of Majorca	1200-1212		Polotsk Principalities	1212-1278	
	1278-1401		Pomerania	1483-1600	
Empire of Nicaea	1212-1278		Portugal	1212-1600	1254-1600
England	1200-1800	1377-1800		1681-1800	
Ests	1212-1278		Prussia	1483-1800	1525-1666
Florence	1483-1800	1483-1500	Ragusa	1483-1681	
France	1200-1800	1300-1500	Republic of Pskov	1401-1600	
Genoa	1401-1797	1401-1797	Russia	1200-1800	
Germany	1200-1800		Saxony	1483-1681	1483-1681
Granada	1278-1600			1783-1800	1783-1700
Great Principality of Kiev	1200-1212		Scotland	1200-1681	1300-1681
Hanover	1681-1800		Serbia	1200-1483	
Holland	1483-1800	1483-1800	Sicily	1200-1483	1200-1483
Hungary	1200-1600	1458-1600	Siena	1483-1600	
Ireland	1200-1600	1300-1600	Sweden	1200-1401	
Kingdom of Navarre	1200-1278			1600-1800	1626-1800
	1401-1600	1401-1600	Switzerland	1483-1800	
Kingdom of Cyprus	1212-1278		Teutonic Knights	1278-1600	
	1401-1600		Transylvania	1600-1681	
Kingdom of Leon	1212-1278		Turov-Pinsk Principality	1212-1278	
Knights Hospitalier	1797-1800		Union of Kalmar	1401-1483	
Knights of the Sword	1212-1278		Valencia	1200-1212	
Latin Empire	1212-1401		Venice	1200-1727	1287-1797
Ligurian Republic	1797-1800		Wales	1200-1278	
Lithuania	1212-1483				

We classify polities as parliamentary based on the presence of a representative assembly with control over taxation.

Table A.6: Determinants of conflict initiation (1200-1800), dyad-year

	(1)	(2)	(3)	(4)	(5)
	← *logit* →			← *random effects logit* →	
Parliamentary attacker	2.270***	1.676***	1.605***	1.302***	1.206***
	(0.182)	(0.196)	(0.187)	(0.244)	(0.239)
Parliamentary defender	1.931***	1.359***	1.290***	1.082***	0.981***
	(0.182)	(0.190)	(0.182)	(0.248)	(0.243)
Both parliamentary	-0.781***	-0.339	-0.262	-0.925**	-0.842**
	(0.215)	(0.227)	(0.220)	(0.308)	(0.305)
log(Area ratio)		0.0322	0.0314	0.0571	0.0543
		(0.0270)	(0.0275)	(0.0465)	(0.0471)
Geographic contiguity		1.837***	1.847***	1.442***	1.456***
		(0.120)	(0.119)	(0.170)	(0.169)
Constant	-8.803***	-12.17***	-10.46***	-12.46***	-11.60***
	(1.006)	(3.463)	(0.964)	(3.148)	(1.388)
$ln(\sigma^2)$				1.052***	1.065***
				(0.143)	(0.144)
Region FE	✓	✓	✓	✓	✓
Dyad RE				✓	✓
Time spline		✓		✓	
Time cubed			✓		✓
Observations	769,414	635,661	769,414	635,661	769,414
Log-likelihood	-3098	-2856	-2867	-2629	-2638
Number of dyads	4,155	4,041	4,155	4,041	4,155

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, ' p<0.1

Table A.7: Absolutist and parliamentary conflict dyads, decade level

Absolutist dyads	conflicts	Parliamentary dyads	conflicts
England vs. France	4	England vs. France	15
Bavaria vs. Ottoman Empire	4	Austria vs. France	10
Russia vs. Ottoman Empire	4	Castile vs. France	9
Aragon vs. France	3	Castile vs. England	7
Ottoman Empire vs. Papal States	3	France vs. Piedmont	6
Crimean Khanate vs. Russia	3	Castile vs. Holland	5
France vs. Naples	2	France vs. Holland	4
France vs. Ottoman Empire	2	Poland vs. Sweden	3
France vs. Russia	2	Austria vs. Genoa	2
Prussia vs. Russia	2	Genoa vs. Piedmont	2
Aragon vs. Granada	1	Austria vs. Sweden	2
Aragon vs. Portugal	1	Holland vs. Sweden	2
Bohemia vs. Hungary	1	Austria vs. Venice	2
Castile vs. Almohad Caliphate	1	France vs. Genoa	2
Castile vs. France	1	Holland vs. Austria	2
Crimean Khanate vs. Bavaria	1	Saxony vs. Austria	2
Crimean Khanate vs. Papal States	1	Saxony vs. Castile	2
England vs. Castile	1	Austria vs. Castile	1
France vs. Knights Hospitalier	1	Austria vs. Piedmont	1
France vs. Sicily	1	England vs. Holland	1
Hungary vs. Ottoman Empire	1	Florence vs. Austria	1
Naples vs. Ottoman Empire	1	Florence vs. Castile	1
Ottoman Empire vs. Bohemia	1	France vs. Prussia	1
Ottoman Empire vs. Palatinate	1	France vs. Venice	1
Papal States vs. Aragon	1	Piedmont vs. Castile	1
Papal States vs. Milan	1	Prussia vs. Poland	1
Papal States vs. Naples	1	Saxony vs. Hungary	1
Teutonic Knights vs. Lithuania	1	Saxony vs. Prussia	1
Transylvania vs. Ottoman Empire	1	Sweden vs. Castile	1
		Sweden vs. Prussia	1
		Sweden vs. Saxony	1
		Venice vs. Castile	1
		Venice vs. Florence	1
Total	48	Total	93

Directed dyads (attacker vs. defender) shown as undirected dyads for brevity. Due to regime change over time, dyads may be absolutist over one period but parliamentary over another. For example, prior to 1300, England and France were both absolutist (hence this dyad appears in the absolutist column). Between 1377 and 1500, however, both polities were parliamentary (hence this dyad now appears in the parliamentary column). From 1500 onward, England remained parliamentary, while France reverted to absolutism. See Table A.5 for further details.

Table A.8: Determinants of conflict initiation (1500-1800), dyad-decade

	(1)	(2)	(3)	(4)	(5)
Parliamentary attacker	1.154***	0.944***	0.944***	0.884**	0.884**
	(0.224)	(0.225)	(0.225)	(0.271)	(0.271)
Parliamentary defender	1.406***	1.315***	1.315***	1.287***	1.287***
	(0.215)	(0.216)	(0.216)	(0.262)	(0.262)
Both parliamentary	-0.295	-0.259	-0.259	-0.235	-0.235
	(0.276)	(0.278)	(0.278)	(0.351)	(0.351)
log(Area ratio)		0.0853**	0.0853**	0.0946*	0.0946*
		(0.0289)	(0.0289)	(0.0407)	(0.0407)
Geographic contiguity		1.575***	1.575***	1.470***	1.470***
		(0.134)	(0.134)	(0.174)	(0.174)
Constant	-6.057***	-449.2′	52.22	-485.8*	60.38′
	(0.180)	(232.4)	(31.79)	(239.0)	(33.90)
$ln(\sigma^2)$				0.638***	0.638***
				(0.176)	(0.176)
Observations	32,346	32,346	32,346	32,346	32,346
Number of dyads	2,152	2,152	2,152	2,152	2,152
Time spline	N	Y	N	Y	N
Time cubed	N	N	Y	N	Y
Dyad RE	N	N	N	Y	Y
Log-likelihood	-1365	-1265	-1265	-1203	-1203

Notes: Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, ′ p<0.1

Table A.9: Determinant of conflict initiation (1500-1800), dyad-year

	(1)	(2)	(3)	(4)	(5)
Parliamentary attacker	1.509***	1.278***	1.278***	1.065***	1.065***
	(0.189)	(0.190)	(0.190)	(0.264)	(0.264)
Parliamentary defender	1.437***	1.323***	1.323***	1.072***	1.072***
	(0.191)	(0.191)	(0.191)	(0.266)	(0.266)
Both parliamentary	-0.440′	-0.406′	-0.406′	-0.897**	-0.897**
	(0.232)	(0.233)	(0.233)	(0.345)	(0.345)
log(Area ratio)		0.0820***	0.0820***	0.0966*	0.0966*
		(0.0222)	(0.0222)	(0.0444)	(0.0444)
Geographic contiguity		1.626***	1.626***	1.288***	1.288***
		(0.110)	(0.110)	(0.183)	(0.183)
Constant	-8.065***	-23.77***	81.55**	-25.09***	84.55**
	(0.160)	(5.777)	(29.19)	(4.985)	(28.65)
$ln(\sigma^2)$				1.224***	1.224***
				(0.148)	(0.148)
Observations	300,592	300,592	300,592	300,592	300,592
Number of dyads	2,152	2,152	2,152	2,152	2,152
Time spline	N	Y	N	Y	N
Time cubed	N	N	Y	N	Y
Dyad RE	N	N	N	Y	Y
Log-likelihood	-2711	-2542	-2542	-2291	-2291

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, ′ p<0.1

Formal TERGM Model Specification

We specify the vector of network statistics $\mathbf{g}()$ as follows:

$$
\begin{aligned}
\mathbf{g}(Y_t, Y_{t-1}) = \; & \text{parl}_{it} + \text{parl}_{jt} + ln(\text{area}_{it}) + ln(\text{area}_{jt}) \\
& + 1\{\text{parl}_{it} = \text{parl}_{jt}\} + |ln(\text{area}_{it}) - ln(\text{area}_{jt})| \\
& + r_i + r_j + w_{ijt} \\
& + \sum_{\forall i,j} y_{ijt} + \sum_{i} 1\{\sum_{j} y_{ijt} = 0\} + \sum_{\forall i,j} y_{ijt} y_{jit} \\
& + \sum_{\forall i,j} \sum_{\forall k \neq \{i,j\}} y_{jkt} y_{ikt} + \sum_{\forall i,j} \sum_{\forall k \neq \{i,j\}} y_{kit} y_{kit} \\
& + \sum_{\forall i,j,k} \sum_{\forall h \neq \{i,j,k\}} y_{jht} y_{iht} y_{kht} + \sum_{\forall i,j,k} \sum_{\forall h \neq \{i,j,k\}} y_{hit} y_{hit} y_{hkt} \\
& + \sum_{\forall i,j} \left(y_{ijt} y_{ijt-1} + (1 - y_{ijt})(1 - y_{ijt-1}) \right) + \sum_{\forall i,j} \left(y_{ijt} y_{jit-1} + y_{jit} y_{ijt-1} \right)
\end{aligned}
$$

where parl_{it} and parl_{jt} indicate that the attacker and defender, respectively, had a parliamentary regime at t, and $ln(\text{area}_{it})$, $ln(\text{area}_{jt})$ are the logged areas of each polity.

Dyad-level covariates include an indicator of identical regime type ($1\{\text{parl}_{it} = \text{parl}_{jt}\}$) to control for 'homophily', and the absolute difference in territorial size, $|ln(\text{area}_{it}) - ln(\text{area}_{jt})|$, as a rough proxy for relative power. We also include regional dummies (r_i, r_j), and an indicator of geographic contiguity, w_{ijt}, equal to 1 if the two polities either shared a geographic border, or were located within 200km of each other.

Higher-order network statistics include the number of edges in the network at t ($\sum_{\forall i,j} y_{ijt}$), the number of isolates ($\sum_i 1\{\sum_j y_{ijt} = 0\}$), and the number of reciprocal dyads ($\sum_{\forall i,j} y_{ijt} y_{jit}$). We also include the number of incoming and outgoing 2-stars ($\sum_{\forall i,j} \sum_{\forall k \neq \{i,j\}} y_{jkt} y_{ikt}$, $\sum_{\forall i,j} \sum_{\forall k \neq \{i,j\}} y_{kit} y_{kit}$) and 3-stars ($\sum_{\forall i,j,k} \sum_{\forall h \neq \{i,j,k\}} y_{jht} y_{iht} y_{kht}$, $\sum_{\forall i,j,k} \sum_{\forall h \neq \{i,j,k\}} y_{hit} y_{hit} y_{hkt}$).

Finally, we include an autoregressive 'memory' term ($\sum_{\forall i,j} \left(y_{ijt} y_{ijt-1} + (1 - y_{ijt})(1 - y_{ijt-1}) \right)$) and delayed reciprocity ($\sum_{\forall i,j} \left(y_{ijt} y_{jit-1} + y_{jit} y_{ijt-1} \right)$).