

A Certain Gamble: Preferences and Institutions in Rivalry Termination

Richard Saunders
Department of Political Science
Florida State University
rjs15d@fsu.edu

July 31, 2020

Abstract

Previous research shows that leader turnover and change in a leader's winning coalition are associated with rivalry termination. However, this research often conflates change in leadership or winning coalition with more fundamental reform of the institutions governing the state. This article argues that only changes in a rival's governing institutions should lead to rivalry termination. Changes in leader preferences may lead to conciliatory policies, but provide no certainty regarding the sincerity or longevity of these policies. Fundamental change to the institutions of a state alter the menu of policy options available to the leadership and are difficult to undo. Institutional reform in Rival A makes the leadership of Rival B more willing to undertake potentially risky cooperative action, leading to rivalry termination. I test this argument in a dataset of rivalry terminations spanning 1919-2010, finding that institutional reform in one rival leads to an increase in the likelihood of rivalry termination regardless of the issues of contention. Irregular leader turnover and change in a state's winning coalition have no effect. Further, in a break with previous research, I find that any institutional reform –toward autocracy, toward democracy or laterally –is associated with an increased likelihood of rivalry termination.

Introduction

Many scholars and practitioners in the realm of security and foreign policy have noted that the extreme suspicion and animosity that exists between geopolitical rivals makes for great difficulty in resolving outstanding disputes between those rivals. This is the case even when resolving these disputes would be beneficial to both parties (Rooney, 2018; Owsiak & Ryder, 2013; Dreyer, 2012; Morey, 2011; Prins & Daxecker, 2008; Hass, 2007; Colaresi, 2004; Cornwell & Colaresi, 2002; Bennett, 1997a; Bennett, 1997b; Goertz and Diehl, 1995). Maintaining a rivalry is costly for both states in terms of resources and currency (Colaresi 2005), and ending a rivalry and the significant defense spending that goes with it provides domestic benefits –a peace dividend (Mintz & Stevenson, 1995; Ward & Davis, 1992). However, a leader is likely to lose power if their attempts to improve relations with a rival are not reciprocated, or if they fail to respond with sufficient force to a rival’s aggression (Colaresi, 2004). Thus, the leadership of both states will find it difficult to offer a figurative olive branch, despite the reality that maintaining the rivalry is a drain on both states’ domestic resources. Because rivalry is maintained by the continuing competition over disputed issues between rivals (Dreyer, 2010 & 2012; Hensel, 1999); that rival leaders are unwilling to gamble on dispute resolution measures ensures that the rivalry will continue.

Unlike studies of rivalry onset where much of the focus continues to be on international factors, recent research on rivalry termination has largely turned toward an examination of the domestic politics of rivalry in an attempt to explain peacemaking activities between rivals. Much of this scholarship centers around what appears to be a nascent debate as to whether changing domestic institutions (Prins & Daxecker, 2008; Haas, 2007) or changing domestic political preferences and actors (Rooney, 2018; Dreyer, 2012) best explain the end of rivalry. Both positions note that ending the rivalry by resolving the underlying disputes can provide significant benefits to a state and its leader, but attempts at dispute resolution also require the leader to accept significant political risk. This suggests that only events

that provide a high degree of certainty that a leader's attempt at dispute resolution will be reciprocated should be associated with an increased likelihood of rivalry termination. I argue contrary to previous analyses (Rooney, 2018; Dreyer, 2012; Bennett, 1997a/b), that leadership turnover and changes in a rival's governing coalition do not lead to rivalry termination. While leadership or SOLS change may lead to a change in the preferences of one rival regarding continuation of the rivalry, these changes provide little certainty to the opponent that overtures of peace will be accepted if the new leadership must make policy within the same institutional framework as the previous leadership. Rather, it is only major institutional reform –regime change –which causes a clean break with past policy-formation processes that provides a rival the certainty required before he or she will risk making concessions to resolve the disputes that sustain the rivalry.

In the remainder of this paper, I test this argument in a dataset of rivalry termination for the period 1816-2010. I introduce a new measure of rivalry termination using the Thompson & Dreyer (2011) rivalry inventory, but that relies on the formal settlement of all existing disputes between rivals as the primary criteria for measuring a rivalry's ending. This measure is meant to remedy the skepticism with which Thompson & Dreyer suggest their own, more subjectively coded end dates should be viewed (p.12). I find that the severity of changes to the domestic political structure of a rival is an important predictor of rivalry termination. Previously theorized predictors such as changes in the source of leader support and irregular leader transitions have no effect on rivalry termination and sometimes appear to extend rivalries. Only the complete replacement of one institutional regime by another appears associated with rivalry termination.

Rivalry Termination

Previous research has identified a number of factors at the international level that appear to be associated with the ending of rivalries. Much of this research focuses on the loss, by one or both rivals, of the ability to continue militarized competition whether due to economic

exhaustion, military defeat or outright conquest (Rasler et al., 2013; Thompson & Dreyer 2011). Perhaps unsurprisingly, decisive wars between rivals or military occupation of one rival by an outside power are highly likely to lead to rivalry termination (Morey, 2011). Such was the case for six long-running rivalries that ended with the allied victory in the First World War¹ and for a further ten rivalries that end by conquest or occupation during the Second World War². Other system-level explanations of rivalry termination tend to center around the occurrence of powerful shocks to the international system, these shocks include the world wars, but also include other major shifts in the distribution of power or territory among the great powers (Diehl & Goertz, 2001; Goertz & Diehl, 1995). Finally, Owsiak and Rider (2013) note that the settlement of territorial disputes seems to be the key to resolving many rivalries, thus outside enforcement, repeated interaction and issue-linkages, all of which help resolve problems with states' ability to commit credibly to a territorial settlement, should also help to end rivalries. Interestingly, while many explanations focus on systemic changes that make one state unable to continue militarized competition, such as poor economic conditions and shifting relative power between rivals, these are often found to be unassociated with rivalry termination (Prins & Daxecker, 2008; Haas, 2007) and may actually prolong rivalry (Cornwell & Colaresi, 2002; Bennett & Nordstrom, 2000).

Much recent research on rivalry termination, however, emphasizes changes in the domestic politics of rival states to explain rivalry termination. Two primary schools of thought appear to exist regarding domestic politics and rivalry termination. One emphasizes changes in domestic institutions as a cause of peace, and the other argues that changing winning coalitions and policy preferences bring peace between rivals. In both cases, domestic political change is assumed, on average, to result in a reduction in belligerence compared to the historical norm

¹Austria/Italy 1847-1918; Ottoman Empire/Yugoslavia 1878-1918; Germany/United States 1889-1918; Austria/France 1494-1918; Austria/Russia 1768-1918; Ottoman Empire/Russia 1668-1918

²Czechoslovakia/Hungary 1920-1938; Czechoslovakia/Poland 1920-1938; Czechoslovakia/Germany 1933-1938; France/Italy 1881-1940; France/Germany 1756-1940; Britain/Italy 1934-1943; Germany/Russia 1890-1945; Japan/United States 1889-1945; Britain/Japan 1932-1945; Germany/United States 1933-1945.

between two rivals. Prins & Daxecker (2008) argue that increasingly democratic institutions allow rivals to resolve their disputes. Democratic polities are expected to punish leaders for renegeing on international agreements, and opposition parties are thought to have little incentive to coordinate in a bluff against the rival (p.25). Thus democratic states should be expected to provide more credible information as to their intentions, and democratic leaders should have stronger incentives to honor the agreements that they make (p.25-26). Thus, increasingly democratic institutions in the dyad should allow rivals to more easily overcome information and commitment problems, allowing them to resolve their outstanding disputes. Haas (2007) similarly emphasizes the importance of liberalization in ending rivalry. In examining the end of the Cold War, Haas argues that changes in Soviet foreign policy, domestic policy, and military power seem to have had little effect on the beliefs of U.S. policymakers as to the intentions of the Soviets or the viability of dispute-resolution between the U.S. and U.S.S.R. (158-161). American policymakers withheld anything more than symbolic cooperation until after the Nineteenth Party Congress in which Soviet formal institutions were radically liberalized, providing U.S. policymakers a level of certainty that Soviet behavior had fundamentally changed, which allowed that meaningful attempts at cooperation would be reciprocated rather than used by the Soviets to gain geopolitical advantage (p. 165-170).

In contrast, Rooney (2018) and Dreyer (2012), emphasize changes in leadership and in domestic political preferences to explain the end of rivalry. Dreyer notes that irregular leadership turnover brings new political preferences and ideologies into power, and that this change in preferences will end some rivalries, but not all (p.475). Specifically, Dreyer shows that irregular leadership turnover has no effect on ending rivalries in which actors contend primarily over issues of power or territory, but does contribute to ending rivalries that result primarily from policy or ideological differences (482-484). Drawing on Bennett (1997), Bryan Rooney (2018) carries this line of thought further, examining the effects of changes in the societal groups that a leader draws support from. It is argued that when new leaders come

to power who rely on a different coalition of supporters to maintain power, that new political preferences are brought into power that presage changes in foreign and domestic policy. This significant change in policy and preferences, it is argued, will bring actors into power who do not derive benefits from the continuation of rivalry, but who support compromise and reconciliation instead of continued competition (970-917).

Preferences Change and Rivalry Termination

Several previous studies of domestic politics and rivalry termination focus on the state undergoing domestic political changes and how these changes are likely to influence that state's policy positions (Rooney 2018, Dreyer 2012 , Bennet 1997a/b). These studies emphasize that significant changes in the preferences of state leaders lead, in turn, to change in the foreign and domestic policy positions that maintain the ongoing disputes that make up a rivalry. Thus change in the winning coalition that governs a state should be associated with rivalry termination. However, these studies largely ignore the reaction of Rival B –the state undergoing no domestic change– or implicitly assume that Rival B will react with cooperation to any perceived overture of peace on behalf of Rival A. I contend that ending a rivalry requires that both sides take cooperative steps to reduce tension and demilitarize their interactions. Thus when contemplating the effect of domestic political change on rivalry termination, we must take into account the actions and preferences of *both* rivals.

Importantly, Colaresi (2004) demonstrates that the leadership of Rival B may have incentives not to reciprocate Rival A's overtures of peace –especially when the sincerity and longevity of A's peaceful intentions is unknown. If the leader of Rival B is seen by her own domestic audience to be overly cooperative (or under-competitive) with Rival A, this significantly increases the probability that the leader will be removed from office (). Thus change in policy preferences in State A presents leader B with a dilemma. On the one hand she may reap the benefits of a peace dividend by ending the rivalry and also the ongoing costs

associated with continual militarized competition.³ But on the other hand, the sucker's payoff to be had from cooperating with a rival that only feigns dovish intentions can be disastrous for both leader and country. Benign action on the part of one rival –even when backed by sincere benign intent –is insufficient to end rivalry. Rivalry will only end once it can be credibly established that the new leader is both sincere in her cooperative disposition, and as important, that *future leaders* will also be constrained to follow similarly cooperative policies. Changes in leadership or even within a winning coalition provide little certainty as to the sincerity or longevity of a new leader's expressed cooperative preferences so long as they occur within a stable institutional context.

This latter point –that to end rivalry, domestic political changes must constrain new leaders away from continuing to pursue hostile policies –is central to the arguments put forward by both Prins & Daxecker (2008) and Haas (2007). However, in both of these previous analyses, it has been assumed that only a shift toward more democratic institutions constrain new leaders from continuing to follow belligerent courses of action (Prins & Daxecker, 2008 p.25-27; Haas, 2007 p.155-156). I expand upon these previous analyses by demonstrating that it is not only democratization that can end rivalry by constraining leaders, but rather, that any thoroughly institutionalized change in the rules that govern leader selection and policy formation can provide assurance that new leaders will not revert to the old pattern of rivalrous behavior.

Institutional Change, Certainty, and Rivalry Termination

Whether explicitly acknowledged or implicitly assumed, the concept of certainty is central to many of the arguments discussed above regarding factors associated with rivalry termination. The dilemma that leaders face –between the possibility of gains through peace on one hand and loss of office on the other –when contemplating cooperating to end a ri-

³See Mintz & Stevenson (1995), and Ward & Davis (1992) for a discussion on the existence of peace dividends and their economic and social impact.)

valry requires that this is the case. Decisive war outcomes, such as the allied occupation of Germany during the Second World War, or the collapse of the Ottoman Empire after the First World War end rivalries because they provide both sides with certainty that one side's destruction means the militarized competition cannot continue. Similarly, the collapse of the Soviet Union greatly contributed to the end of a number of other rivalries that had taken on an East/West ideological dimension. The loss of the primary benefactor of the Eastern Bloc while the Western Bloc retained its super power provided certainty to many of their allies –locked in their own struggles –that competition between the Eastern and Western Blocs was at an end. I contend that arguments that emphasize the effect of institutional change on rivalry termination provide an understanding of how changing domestic politics can also provide the level of certainty that is prerequisite to rivalry termination. I will argue, below, that major institutional changes provide the degree of certainty needed to overcome leaders' dilemmas in two ways. First, regardless of shifts toward or away from democracy, institutional change fundamentally alters the menu of policy options that a leader can feasibly follow while still maintaining a base of support. Second, institutional changes are more difficult to reverse than are changes in the preferences or within the leadership of an ongoing institutional regime.

Before continuing with this explanation, it is important to note that I use the terms regime change, irregular leader turnover, and change in a state's winning coalition as conceptually distinct from one another in important ways. Regime change is defined primarily by change in the norms and institutions by which a state chooses leaders and determines policy.⁴ Conceptually, irregular turnover and change of winning coalition are both attempts at measuring a change in the preferences of a state's leaders and are unconcerned with the change in the formal institutions of the state (Leeds & Mattes, 2015 p. 3-4). Both irregular

⁴Here I use Geddes, Wright, and Frantz (2014) definition of regime as a set of formal and/or informal rules for choosing leaders and policies.

turnover⁵ and change in the winning coalition⁶ can, but need not occur as part of a regime change. Conversely, regime change can occur when neither irregular turnover nor change in the winning coalition occurs. Empirically, regime change generally occurs in the absence of a change in the winning coalition when a state voluntarily reforms its institutions rather than being forced to do so by revolt or overthrow. This occurs occasionally when a former junta or single party allows competitive elections but then goes on to win those elections. Such was the case of Albania when the Communist Party allowed elections in 1991. This also occurs when a leader comes to power through a normal process but then centralizes government power under him or herself, leading to an eventual regime transition. This occurred in 1979 Iraq due to Hussein's purge of the Ba'ath party and also in Russia due to Vladimir Putin's consolidation of power. Additionally, this occurs often when an illiberal regime transitions between a pure and hybrid type, such as when a monarch or strongman allows elections for local-level self governance, or when an autocrat establishes a legislative body –or alternately, when these institutions are abolished.

I argue that irregular leadership turnover and change in a state's winning coalition, within an ongoing institutional regime, will most likely represent change in the preferences of a government and lead to changes in policy.⁷ However, this change does not signal a significant level of certainty to rivals that policy change will be long-lasting. Within many ongoing regimes, irregular leadership transitions can occur due to a leader's assassination or death in office, neither of which signal any great change in policy, assuming the leader's succession proceeds without the overthrow of the regime. Further, a number of states experience

⁵Defined as change of leadership in a manner not prescribed by the governing institutions (Goemans, Gleditsch, & Chiozza, 2009).

⁶Defined as change in the set of societal interests whose support allows the leader to gain and maintain power (Mattes, Leeds, & Matsumura 2016)

⁷It is common in the literature cited above to assume that, given the extreme belligerence between rivals, any change in policy will, on average, be a change toward more peaceful policy. I make use of this assumption as well, though provide some justification for its use below. Ultimately, if this assumption had no basis in reality, then I would expect a null finding in this analysis. That I and other researchers do find significant results in the expected direction –given this assumption –provides qualified evidence for its usefulness.

one or more "status-quo coups" that replace one leader with another without fundamentally altering the institutions of the state. This can occur when the government is a junta in which coup is the primary mechanism of leader replacement, or because the military returns to the barracks once a new leader is elected or installed according to the institutions of the state. Examples can be found in the Turkish coups of 1960 and 1971, the Brazilian coup of 1964, or in the forced resignation of elected leaders in a military-dominated hybrid regime such as occurred to Ecuador's Jaun Martínez in 1932 and Velasco Ibarra in 1934 and 1947. Similarly, a state's winning coalition can change significantly within a stable institutional regime. This occurs commonly in electoral democracies when one party hands off power to another that is backed by a significantly different group of supporters, but also occurs in many autocratic states where different factions within a ruling elite contend to govern the country. This sort of within-regime turnover in the winning coalition can occur due to the previously mentioned status-quo coup, but also occurs due to dynastic change in a monarchy –such as in 1920 Greece – or when division of a ruling party brings a new faction to power –as in Argentina in both 1928 and 1932. These forms of political change do not alter the basic set of interests and preferences that a ruler can appeal to in order to maintain power, nor do they indicate that subsequent leadership changes would not lead to a reverse in any policy of detente that an individual leader might institute.

In contrast, because regime change brings with it major changes in the institutions that govern both leader selection and the process of policy formation, regime change signals a clear break with past leadership and past policy. Where other forms of leadership turnover may signal a change in the winning coalition that serves to govern the state, fundamental changes in the institutions that control leadership selection and policy formation represent change more akin to a fundamental reshaping of the selectorate from which the winning coalition may be drawn. This fundamental change realigns the set of preferences that a leader must respond to in order to build his or her support coalition. Following regime change, some

previously influential actors or sets of actors who benefited from the status quo have likely been excluded from political influence or have seen their influence significantly curtailed. This removes appeasement of those actors' preferences –including their preferences regarding the ongoing rivalry –from the menu of policy-options available to a new leader seeking to build a support coalition. Other sets of actors that were excluded from influence under the previous institutional arrangement likely now hold a degree of influence over leader selection, and appeasing their preferences becomes a newly feasible means for the leader to maintain support. This should be true in the case of liberalizing regime change, but should also be true in *any* case in which regime change rearranges which societal groups have a say in choosing the leadership, no matter whether this change is considered liberal, autocratic, or a lateral move on the polity scale.

Further, the institutional framework governing a state is more difficult to change than are the political goals of a given leader or the name of the leader in office. Once accomplished, major changes to a state's governing institutions are harder to reverse than are changes in leadership or preferences. That reversing institutional changes is relatively more difficult than reversing leadership and preference changes is important to note for studying rivalry termination. In dealings between rivals, the sucker's payoff to be had if one is overly cooperative with a disingenuous rival is dangerous. Allowing a mortal enemy to take advantage of one's cooperative efforts places the state in peril and is likely to be catastrophic for a leader's continued political survival.⁸ This means that a thaw in relations between rivals resulting from changes in a rival's policy stance – such as the thaws in the Cold War associated with Khrushchev's de-Stalinization or Gorbachev's Glasnost –are unlikely to end rivalry. Resolving the rivalry would provide significant additional gains for a leader seen to end the hostility on favorable terms, but policy is easy to reverse by the next leader. Thus, major changes

⁸Colaresi (2004) provides strong evidence that leaders who allow themselves to be "suckered" by offering unreciprocated cooperation to a rival are highly likely to lose office.

in a rival's foreign or domestic policy will only lead to dispute resolution if the leader of the opposing state can be made highly certain that the thaw in relations heralds a permanent change in the rival's threatening stance. I argue that because fundamental changes to the institutions governing leader selection and policy making are difficult to reverse, they provide the degree of certainty that a new long-term relationship is possible. This assessment allows the leader to overcome natural risk-aversion and take the risky gamble of cooperation.

This dynamic was at play during the mid-1980's as members of the Reagan administration reacted to the reform process occurring in Gorbachev's Soviet Union. Haas (2007) shows that from the beginning of Gorbachev's reforms in 1985 to the institutionalization of the reformist ideology of the New Thinkers at the 1989 Nineteenth Party Congress, American decision-makers were unwilling to accept the risky gamble of reducing arms or otherwise extending an olive branch to the Soviets. Haas uses primary documents from the time to show that key policy-makers in the Reagan administration were highly suspicious that Soviet policy-change represented an actual reorientation of the Soviet position in regard to its rivalry with the United States (1997, p. 161-163). Rather, it was argued that Gorbachev's policies were, at best, likely to be reversed quickly by Soviet hard-liners after Gorbachev lost power (p. 165) and at worst, were meant to buy breathing space for the Soviet Union to reorganize so as to be more competitive with the United States in the long run (p. 168). Thus, we see that, absent fundamental institutional change in the U.S.S.R., American policymakers were unwilling to take risks to end the rivalry.

However, this pattern changed in 1989 with the Nineteenth Party Congress in which broad changes to the structure of government and selection of leaders were adopted by the Soviet leadership that served to institutionalize Gorbachev's reform efforts. According to Haas's examination of primary sources, these institutional changes were critical to American leaders' willingness to embrace more cooperative relations with the Soviets because they convinced the American leadership that the underlying process of Soviet policy-making had

changed (p. 167). In essence, the institutional changes enshrined at the Nineteenth People's Conference caused American leaders to reevaluate their estimation of the likelihood of successfully making gains by attempting to resolve their rivalry with the U.S.S.R. This prompted policy-makers to switch from a cautious wait-and-see policy to a more risky policy of active cooperation with the Soviet Union.

These insights imply three novel empirical predictions. First, absent fundamental change in the institutional regime of Rival A, changes in state preferences (embodied in change in leadership or the governing coalition) represent possible change in preferences, but promise no long-term change in policy. Thus, changes in leaders and preferences should not be associated with an increased probability of rivalry termination. Second, major institutional changes signal a clear break with the past policy-formation process. This provides a degree of certainty that future foreign and domestic policy will diverge from the past policies that have maintained rivalry thus far. Like Haas (2007), even in the absence of change in the underlying preferences or base of support for a government, I expect that significant institutional change should be associated with dispute an increase in the likelihood of rivalry termination. Third, when institutional change and change in preferences coincide, this signals both a break with the foreign policy that maintained the rivalry as well as a break with the prior regime's preference for pursuing the rivalry. When regime and preference change coincide, Rival B's certainty regarding the possibility of dispute resolution should be heightened, thus I expect a further increase in the likelihood of dispute resolution when institutional change is accompanied by changes in leader preferences.

I offer the following three formal hypotheses:

Preferences: *Changes in leadership or governing coalition should have no effect on the hazard of rivalry termination when not accompanied by institutional change.*

Institutions: *Large changes in state institutions should increase the hazard of rivalry termination regardless of changes in leader or coalition.*

Interaction: *When changes to both institutions and preferences occur simultaneously, there should be an additional increase in the hazard of rivalry termination.*

Measuring Rivalry Termination

Thompson and Dreyer (2011) note dissatisfaction with the measure of termination provided in their rivalry inventory (p. 11). Their more subjective approach to identifying rivalry, because it uses primary documents to identify cases of mutual mistrust and militarized threat is said to be significantly less useful in pinning down end-dates for rivalries than it is for start dates. It is relatively common for the salience of a rivalry to die down at times, meaning few statements are made regarding the rival, despite the reality that suspicions linger on before flaring up anew later. Thus, coding the end date according to statements of mutual suspicion and hostility in primary documents is imprecise. Given this lack of precision, I propose a new measure of rivalry termination that draws upon Thompson and Dreyer's rivalry inventory, but applies a more consistent set of coding rules to identify end dates.

I follow Bennet (1997b) in conceptualizing rivalry termination as occurring at the point at which two rivals agree to settle their outstanding disputes and then demonstrate adherence to that settlement. This provides for a more concrete measure of the end point of a rivalry as compared to a measure that attempts to determine the point in time at which suspicion and perceptions of threat between two rivals has petered out. This operationalization relies on four coding rules. First, for a rivalry to be considered ended, the rivals must sign an agreement or several agreements recognizing a mutually accepted settlement of the primary issues of contention in the rivalry, as identified by Thompson and Dreyer. Acceptance of this settlement must then be followed by a 10 year period without a militarized dispute related to the substantive issues of the settlement. In such a case, the rivalry is coded as ending in the year that the settlement is finalized. Second, if both rivals have renounced claims against the status quo, also followed by 10 years without a militarized dispute related to the issues at stake, the end of the rivalry is dated to the year in which the final claim against

the status quo is renounced.⁹ Third, if a dispute does occur within 10 years of settlement or renunciation of claims, two possibilities are allowed in the coding. First, if the militarized dispute is resolved through a clarification of the original settlement and that dispute is followed by 10 years without an additional dispute, then end date of the rivalry is "moved" to the date of the resolution of the dispute. If, however, a dispute occurs that represents a clear abrogation or repudiation of the agreement or represents a new claim against the status quo, the rivalry is coded as continuing until such a time that further agreements are signed to settle outstanding disputes.¹⁰ Finally, I also consider a rivalry ended if either rival state is occupied or annexed by a foreign power –the U.S. occupation of Iraq in 2003, for example, ends the Iraq/Saudi Arabia rivalry. Given this final coding rule, I include a control for foreign occupation in my empirical analysis.

I use several sources to determine the date upon which states settle their disputes. I rely most heavily on the U.S. Library of Congress *Country Studies* series of publications and the United Nations *Treaty Series* to identify treaty dates. In cases where rivals' disputes are resolved by mutual acceptance of court rulings, I rely on International Court of Justice *Reports of Judgments Advisory Opinions and Orders*. Where required, I supplement these materials with primary and historical sources. Finally, Table 10 in the appendix provides a replication and extension of Rooney's 2018 analysis of rivalry termination that uses the original Thompson and Dreyer rivalry termination dates. This robustness check replicates the substantive findings that I present in my analysis, demonstrating that my findings are not a function of this new measure of rivalry termination.

This operationalization provides a universe of 152 cases of rivalry during the years 1919-2010, upon which will be fit a series of survival models. 36 of these cases are right-censored at 2010 and 33 are left-truncated, beginning prior to 1919. Left truncated cases enter into

⁹This is most often the case following a ruling by an international governing body such as the International Court of Justice, in which both states pledge to respect the ruling but sign no official treaty.

¹⁰Note that these are very similar to the coding rules used by Bennet (1997b)

the model at time equal to the age of the rivalry in 1919. This is in keeping with common practices in dealing with left-truncated rivalries (see Cornwell & Colaresi, 2002; Prins & Daxecker, 2008; Dreyer, 2012). I also include in the appendix a replication of the main table presented below, but in which I drop all rivalries from the sample that begin prior to 1919. The results of this robustness check are very similar to those present in the main analysis.

Unlike previous analyses (Bennet 1997a & b), I do not aggregate these data into 5 year periods. In a survival model, the dependent variable is time until failure. Given that there is no reason to think that rivalries would be more likely to fail in every fifth year than at any other time in a given five-year period, aggregating time into 5-year periods only introduces uncertainty over the exact point of failure within that time period. This procedure results in a dataset of 3,909 periods at risk.

I fit a series of Cox proportion hazards models on these data to test the hypotheses presented above. Because there exist many time-varying covariates in these data, I use the count process devised by Anderson and Gill (1982). Standard errors are clustered on the rivalry. In keeping with common procedure for using Cox models (Keel, 2010; Box-Steffensmeier & Jones, 2004; Box-Steffensmeier & Zorn, 2001), I test the proportional hazard assumption and find it violated for some variables. I apply a method suggested by Allison (1995) in which each co-variate is tested for violations of the non-proportionality assumption. For the offending variables, an interaction between that variable and the natural log of the time variable is included in the model.¹¹

Operationalization

Leader, Preference, and Institutional Change

¹¹However, I also use Schoenfeld residuals to test the proportional hazards assumption and find little evidence to reject the proportional hazards assumption ($Chi^2 = 13.8$ on 9 degrees of freedom. $p < Chi^2 = 0.13$) and a test of Schoenfeld residuals for each covariant reveals no additional evidence of non-proportional hazards beyond the Allison test. Given that the global test's results conflict with the results of the test proposed by Allison, I include simple Cox proportional hazards models in the appendix to demonstrate that my findings are not sensitive to the choice of proportional or non-proportional hazards.

Previous analyses of rivalry termination (Rooney, 2018; Bennett, 1997) rely on the use of the polity *durable* variable to measure regime change. Wright and Bak (2016) demonstrate that this is an inappropriate measure of the concept that under-counts many important institutional changes. As such, I proxy for institutional change using a measure of regime change developed by Geddes, Wright and Frantz (2014).¹² This is an appropriate proxy because Geddes, Wright and Frantz define regimes according to the formal and informal rules that govern selection of leaders and the policy-formation process and define regime change as significant changes to these institutions (2014 p. 314-315). *Regime Change* variable takes the value "1" in any rivalry-year in which one or both rivals undergo regime change and "0" otherwise. Regime change occurs in approximately 9% of rival-years.

I also employ several measures that have been used in previous works on domestic political change and rivalry termination. Irregular changes in leadership (Dreyer 2011) and changes in the political coalition from which a leader draws support (Rooney, 2018) have previously been used in studies of rivalry termination to proxy for changes in policy and governing preferences. I follow these studies in constructing variables *Irregular Transition* and *SOLS Change*. For irregular leader transitions, I follow Dreyer's example in using ARCHIGOS (Goemans et al., 2009) to construct a variable that takes the value "1" in any year in which either rival experiences an irregular leader entry into office. To measure changes in the source of leader support, I follow Rooney in using the CHISOLS dataset (Mattes et al., 2016) to construct a variable that takes the value "1" in any year in which either of the rivals experiences a SOLS change as defined by CHISOLS.

The GWF regimes dataset and CHISOLS both use the list of leader transitions contained in ARCHIGOS as a starting point from which they then apply their separate coding rules. As such, using the three datasets in conjunction ensures that the findings presented below do

¹²I use a version of this measure that was published in the CHISOLS dataset because it covers a significantly longer time frame.

not result simply from systematic differences in coding the effective date of leader, support coalition and regime transitions. All transition dates are those appearing in ARCHIGOS. Neither regime change nor SOLS change are a subset of the other variable. Many cases exist in which regime change and SOLS change coincide, however, 32.5% of regime changes and 60% of SOLS change occur in isolation from the other.¹³ Table 1 displays the distribution of SOLS change and regime change.

War and Exogenous Regime Change: As does Bennett, I employ dummy variables to capture the effect on rivalry termination due to war between the rivals and exogenously enforced regime change. Victory of one rival over another in war or a forced regime change in one of the rival states should be expected to influence both the end of a rivalry as well as changes in the domestic policy of the losing state. Thus, these occurrences must be controlled for to ensure that I do not conflate the effect of one rival's victory over another with the effect of endogenously driven changes in policy within one rival. I create the variable *Decisive War* using the Correlates of War (COW) Interstate wars dataset (Sarkees et al. 2010). This variable takes the value "1" in the year in which a war between the rivals ends in a victory for either side and "0" otherwise. The second variable *Foreign Imposition* is constructed using the ARCHIGOS dataset. The variable *Foreign Imposition* takes the value "1" for any year in which ARCHIGOS codes that for either rival, there was the entry of a foreign imposed leader into office or in which a leader was removed from office by foreign intervention.

Civil War: Civil wars and other forms of violent domestic turmoil are associated with rivalry termination (Diehl and Goertz, 2001; Goertz and Diehl, 1995). Further, civil war is a major contributor to regime and leadership changes. I control for ongoing civil war using the Correlates of War Intrastate Wars (v4.1) dataset (Sarkees et al., 2010) to construct a variable that takes the value "1" in any year in which either rival experiences civil war and "0" otherwise.

¹³See above for a brief discussion of these off diagonal cases.

Military Capabilities: Loss of military competitiveness is cited as a major explanation of rivalry termination (Rasler et al., 2013; Thompson & Dreyer 2011). As such, I include a measure of the balance of power between rivals in my model that captures the disparity in rivals' Composite Index of National Capability (CINC) scores (Singer, Bremer & Stuckey, 1972). This variable is measured as the largest CINC score in the dyad divided by the sum of CINC scores in the dyad.

System Shocks: Previous research has shown that major disruptions of the world system such as due to World Wars, decolonization and the end of the Cold War end some rivalries while beginning others (Owsiak & Rider, 2013; Diehl and Goertz, 2001; Goertz and Diehl, 1995). As such, I control for the occurrence of shocks to the international system using the measure developed by Goertz and Diehl (1995).¹⁴

Contiguity: Finally, states located physically closer to one another should be expected to have relatively more intense disputes and to have a relatively easier time maintaining military competition, *ceteres paribus*. I control for physical proximity using the Correlates of War Direct Contiguity (V3.2) dataset (Stinnett et al., 2002). This variable takes the value "1" for any observation in which the rivals in question share a land or river border, or are separated by less than 400 nautical miles of water.

Results

Table 2 displays the result of a series of Cox models fit on the dataset described above. The table displays hazard ratios rather than raw coefficients. Hazard ratios below 1 indicate variables that are associated with a decrease in the hazard of rivalry termination while hazard ratios above 1 indicate an increase in the hazard of rivalry termination as compared to the baseline hazard function. Models 1 and 2 display the effect of measures of leader and preference change on rivalry termination when omitting a measure of regime change.

¹⁴However, I use the version of this measure that appears in Owsiak and Rider's (2013) replication data due to its longer temporal domain.

In both cases, the effect is positive and distinguishable from zero. However, upon including a measure of regime change in the model (Models 3 & 4) both SOLS change and irregular leader turnover are associated with a *decrease* in the hazard of rivalry termination, though not a statistically significant one. That is, in the absence of major institutional change, leader and coalition turnover appear to be associated with longer than baseline rivalries. In models 3 & 4, regime change has a large and statistically significant effect, increasing the hazard that rivalry will terminate by between 5.6 times the baseline in Model 3 and 6.2 times the baseline rate in Model 4. This seems to indicate that previous findings relating change in leaders and change in the sources of leader support to rivalry termination result largely from omitted variable bias due to the correlation between regime change and variables measuring changes of leadership and support coalition.

I more thoroughly address this possibility that previous findings have been due to omitted variable bias in Tables 9 and 10 in the appendix. Table 9 displays a direct replication of Rooney's 2018 main table, which shows a strong link between SOLS change and rivalry termination. In Table 10, I make one change. I replace Rooney's Polity-based measure of regime transition, which uses the Polity *durable* variable, with the more credible Geddes, Wright and Frantz measure of regime change. As I would expect, change in a state's governing coalition (measured by SOLs change) has no discernible effect on rivalry termination. Change in governing institutions, however, significantly increases the hazard of rivalry termination. As noted by Wright and Bak (2016), the Polity IV *durable* variable fails to capture a number of major changes to institutions governing leader selection and policy formation (p.2). These uncounted institutional changes remain as an excluded variable in previous analyses and bias findings through their correlation with leadership and preference change.

These initial findings provide strong support for hypotheses 1 and 2 regarding the effect of preference and institutional change on rivalry termination. Table 8 in the online appendix lists the 38 rivalries during the 1919-2010 time period that end within 5 years of a regime

change in one state of the pair. These 38 rivalries account for one third (32.8%) of rivalry terminations during this time period. 28 of these rivalries –just under one quarter of the total (24%) –terminate within 2 years of regime change in one state. While regime change may not be the only cause of rivalry termination, it seems to be one of the major causes.

Substantively, these findings suggest that, as was the case in the rivalry between the United States and Soviet Union, changes in leadership and leaders’ preferences regarding policy seem to have little influence on the likelihood that rivals will settle their disputes. These preference changes may lead to a temporary thaw in relations, as Khrushchev’s policy of de-Stalinization lead to a short improvement in relations between East and West, but as in the Cold War, preference changes are not sufficient to end a rivalry. In contrast, changes to the institutional structure of a regime have a large substantive effect, making subsequent dispute settlement much more likely. This holds true not only for cases where rivals dispute primarily over matters of policy or ideology, but also for rivalries rooted in global or regional power competition and those that stem from lasting territorial disputes. Table 4, in the online appendix, displays the results of models fit on three subsets of rivalry including positional rivalries (those where disputes center around position in the global or regional ordering of power), spatial rivalries (those where disputes center around territory), and ideological rivalries (those where disputes center around policy disagreements or the incompatibility of governing ideologies).¹⁵ Consistent with previous findings (Dreyer, 2012) regime change has the largest effect in ending ideological rivalries. However, where Dreyer finds irregular leader turnover to end only ideological rivalries, regime change also plays a significant role in ending positional and spatial rivalries as well.

Models 5 and 6 in the main table include interactions between regime change and the measures of leader and preference change, which are necessary to test hypothesis 3. Like

¹⁵For the ideological rivalry subset in Table 4, I combine Thompson and Dreyer’s Ideological and Interventionary rivalries into one category representing rivals that dispute largely over policy stances.

the preceding models, Model 5 and 6 show that SOLS change and irregular leader turnover have no discernible independent effect on rivalry termination. Regime change does, however, have an independent effect on termination. This indicates that regime change, on its own, is sufficient to promote dispute resolutions between rivals where leader and coalition change are not. As expected in hypothesis 3, the effect of regime change on rivalry termination increases significantly when occurring in conjunction with a change in leader preferences.

Figure 3 displays the substantive effects of regime change and preference change on the likelihood of rivalry survival based on the Cox regression in Model 5. SOLS/coalition changes alone do not appear to lead to rivalry termination at a greater rate than the baseline, and may in fact be associated with longer-lasting rivalries. Regime change, however, has a large independent effect, leading to a much higher likelihood of subsequent rivalry termination. The conjunction of both regime and SOLS change has an additional heightened effect in increasing the likelihood that a rivalry will end.

Taken together these findings indicate that irregular leader turnover and changes in the preferences that are represented in government do not, on their own, contribute significantly to the likelihood that rivals will subsequently resolve their disputes. It is only when one rival undergoes a fundamental shift in the norms and institutions that govern leader selection and policy formation that we see rivals subsequently move to resolve their differences.

Previous research has shown that rivalry termination is associated with increases in democratic constraints upon leaders in a dyad (Prins & Daxecker, 2008). Given this previous finding, a detailed examination of whether the type of regime change –transition to democracy, democratic breakdown, or transition from one autocratic regime to another –leads to different dispute-resolution outcomes is warranted. Table 3 displays a model in which I segregated regime change into three separate dummy variables. The first represents cases in which one autocratic regime is replaced by another autocratic regime. The second dummy represents democratic backsliding, in which a nominally democratic government is consoli-

dated into an autocratic regime. The final dummy represents transitions from autocracy to democracy. All three are associated with a statistically significant increase in the hazard of rivalry termination. As previous research would lead us to expect, transitions to democracy are associated with the largest effect, increasing the hazard that a rivalry terminates in the following period by an order of magnitude. However, in contrast to what previous research would lead us to expect, transitions from democracy to autocracy and from autocracy to autocracy are also both associated with a large increase in the hazard of rivalry termination of $\sim 500\%$ in each case. Table 8 displays a list of the 38 rivalries that end within 5 years after a regime change during the 1919-2010 time period. Examination of the pre and post change mix of regimes in the dyad also seems to reveal no clear pattern as to which direction of change or final regime mix should be thought to be primarily responsible for ending rivalry. Given this, we should conclude that it is regime change itself that ends rivalry, not only democratization, autocratization or changes to a shared regime type that matter.

Conclusion

Previous studies of the effect of domestic politics on rivalry termination consistently show that large changes in the domestic politics of one rival are associated with subsequent rivalry termination. Despite this, little work has been done to disentangle the effects of different forms of political change on rivalry. In this paper I demonstrate that changes in domestic politics have a differential effect on rivalry. The effect of domestic political change on rivalry depends on the extent to which it provides other rivals with certainty that attempts at dispute resolution will be reciprocated. Changes in leaders and winning coalitions represent moments of political instability, but do not necessarily represent a major departure from previous policy stances and are easily reversed. This provides little certainty that the rival will not defect from a cooperative path in a future time. However, fundamental changes in the institutions governing leader selection and policy formation provide a high degree of certainty that a state's future policy stances will depart from past stances. This fundamental political

shift eliminates much of the perception of risk that other leaders face when contemplating attempts at dispute resolution, leaving only the benefits associated with making peace.

These findings suggest that previous research (Rooney, 2018; Bennett, 1997) have incorrectly conflated regime change with change in preferences and governing coalitions. These are distinct concepts. Governing coalitions can change quite rapidly within a stable institutional context and leader preferences can vary significantly over time, even within a single administration. This easy malleability means that a rival has little reason to believe that a leader's preferences toward conflict resolution will not disappear with the next administration or even with the next news cycle. Institutions, in general, are harder to change than are leaders and their opinions. Thus, when there is a major rewrite of a state's governing institutions, it provides the rival with a far higher degree of certainty that subsequent movements toward a conciliatory policy will not be reversed in the future. This makes conflict resolution possible in the face of risk-averse attitudes born from the fear that one's overtures of peace will be taken advantage of by a rival.

References

- Aalen, O. (1978). Nonparametric inference for a family of counting processes. *The Annals of Statistics*, 701-726.
- Allison P. D., *Survival analysis using SAS. A practical guide*, 1995, Cary.
- Anderson, P. K. & Gill, R. D. (1982). Cox's regression model for counting processes: a large sample study. *Ann. Statist.* 10, 1100-20
- Bennett, D. S. (1997). Measuring rivalry termination, 1816-1992. *Journal of Conflict Resolution*, 41(2), 227-254.
- Bennett, D. S. (1997). Democracy, regime change, and rivalry termination. *International Interactions*, 22(4), 369-397.
- Bennett, D. S., & Nordstrom, T. (2000). Foreign policy substitutability and internal economic problems in enduring rivalries. *Journal of Conflict Resolution*, 44(1), 33-61.
- Box-Steffensmeier, J. M., Box-Steffensmeier, J. M., & Jones, B. S. (2004). *Event history modeling: A guide for social scientists*. Cambridge University Press.
- Box-Steffensmeier, J. M., & Zorn, C. J. (2001). Duration models and proportional hazards in political science. *American Journal of Political Science*, 972-988.
- Colaresi, M. (2004). When doves cry: International rivalry, unreciprocated cooperation, and leadership turnover. *American Journal of Political Science*, 48(3), 555-570.
- Colaresi, M. P. (2005). *Scare tactics: The politics of international rivalry*. Syracuse University Press.
- Cornwell, D., & Colaresi, M. (2002). Holy trinities, rivalry termination, and conflict. *International Interactions*, 28(4), 325-353.
- Diehl, P. F., & Goertz, G. (2001). *War and peace in international rivalry*. University of Michigan Press.
- Dreyer, D. R. (2010). Issue conflict accumulation and the dynamics of strategic rivalry. *International Studies Quarterly*, 54(3), 779-795.

Dreyer, D. R. (2012). Issue intractability and the persistence of international rivalry. *Conflict Management and Peace Science*, 29(5), 471-489.

Geddes, B., Wright, J., & Frantz, E. (2014). Autocratic breakdown and regime transitions: A new data set. *Perspectives on Politics*, 12(2), 313-331.

Goemans, H. E., Gleditsch, K. S., & Chiozza, G. (2009). Introducing Archigos: A dataset of political leaders. *Journal of Peace research*, 46(2), 269-283

Goertz, G., & Diehl, P. F. (1995). Taking “enduring” out of enduring rivalry: The rivalry approach to war and peace. *International Interactions*, 21(3), 291-308.

Haas, M. L. (2007). The United States and the end of the Cold War: Reactions to shifts in Soviet power, policies, or domestic politics?. *International Organization*, 61(1), 145-179.

Hensel, P. R. (1999). An evolutionary approach to the study of interstate rivalry. *Conflict Management and Peace Science*, 17(2), 175-206.

Keele, Luke. (2010). "Proportionally Difficult: Testing for Nonproportional Hazards in Cox Models" *Political Analysis*, Vol. 18, No., pp. 189-205

Leeds, B. A., & Mattes, M. (2015). Change in Source of Leader Support (CHISOLS) Dataset.

Marshall, M. G., Jaggers, K., & Gurr, T. R. (2009). Polity IV project: Political regime characteristics and transitions, 1800-2007. University of Maryland.

Mattes, M., Leeds, B. A., & Matsumura, N. (2016). Measuring change in source of leader support: The CHISOLS dataset. *Journal of Peace Research*, 53(2), 259-267.

Mintz, A., & Stevenson, R. T. (1995). Defense expenditures, economic growth, and the “peace dividend” A Longitudinal Analysis of 103 Countries. *Journal of Conflict Resolution*, 39(2), 283-305.

Morey, D. S. (2011). When war brings peace: A dynamic model of the rivalry process. *American Journal of Political Science*, 55(2), 263-275.

Owsiak, A. P., & Rider, T. J. (2013). Clearing the hurdle: Border settlement and rivalry termination. *The Journal of Politics*, 75(3), 757-772.

- Prins, B. C., & Daxecker, U. E. (2008). Committed to peace: Liberal institutions and the termination of rivalry. *British Journal of Political Science*, 38(1), 17-43.
- Rasler, K., Thompson, W. R., & Ganguly, S. (2013). *How rivalries end*. University of Pennsylvania Press.
- Rooney, B. (2018). Sources of leader support and interstate rivalry. *International Interactions*, 44(5), 969-983.
- Sarkees, M. R., & Wayman, F. (2010). Resort to war: 1816-2007. *Correlates of War*.
- Singer, J. D., Bremer, S., & Stuckey, J. (1972). Capability distribution, uncertainty, and major power war, 1820-1965. *Peace, war, and numbers*, 19, 48.
- Stinnett, D. M., Tir, J., Diehl, P. F., Schafer, P., & Gochman, C. (2002). The correlates of war (cow) project direct contiguity data, version 3.0. *Conflict Management and Peace Science*, 19(2), 59-67.
- Thompson, W. R., & Dreyer, D. (2011). *Handbook of Interstate Rivalry, 1494–2010*.
- Ward, M. D., & Davis, D. R. (1992). Sizing up the peace dividend: economic growth and military spending in the United States, 1948–1996. *American Political Science Review*, 86(3), 748-755.
- Wright, J., & Bak, D. (2016). Measuring autocratic regime stability. *Research & Politics*, 3(1), 2053168015626606.

Main Tables and Figures

Table 1: Cox Regression with Non-Proportional Hazards: Rivalry Termination 1919-2010

	(1)	(2)	(3)	(4)	(5)	(6)
	Hazard Ratio	Hazard Ratio	Hazard Ratio	Hazard Ratio	Hazard Ratio	Hazard Ratio
	b/se	b/se	b/se	b/se	b/se	b/se
Regime Change			5.6226***	6.2301***	4.5231***	6.5310***
Regime Change × SOLS Change			1.7077	1.9306	5.8814***	2.0260
Regime Change × Irregular Turnover					1.7242	4.5542***
SOLS Change	1.9173**		0.9802		0.7578	1.5507
Irregular Turnover	0.4760		0.2664		0.3279	
Civil War		1.8798+		0.7633		0.9669
Foreign Imposition		0.6277		0.2660		0.6580
Capability Disparity	1.5450+	1.5683+	1.4737+	1.4922+	1.4513	1.5024+
Cap. Ratio X Log(t)	0.3573	0.3641	0.3469	0.3534	0.3446	0.3526
Decisive War	6.1296***	6.0115***	2.2333*	2.2145*	2.3307*	2.2034*
Contiguity	1.9534	2.1332	0.7789	0.7629	0.8055	0.7586
Systemic Shock	2580.9601***	4655.3846***	1105.5295**	1025.0749**	1184.4827**	1064.6030**
Systemic Shock X Log(t)	5953.8494	10491.8489	2488.4066	2311.6630	2663.9401	2411.5214
Cold War	0.0878***	0.0749***	0.1043***	0.1057***	0.1018***	0.1041***
Cold War X Log(t)	0.0566	0.0476	0.0655	0.0666	0.0642	0.0662
Contiguity X Log(t)	27.0460**	24.6114**	22.3549*	22.4777*	25.0249*	21.6472*
Systemic Shock X Log(t)	31.4639	28.7427	29.0080	29.4769	32.8326	29.0571
Cold War X Log(t)	0.5239*	0.5400+	0.4949*	0.4899*	0.4831*	0.4947+
Contiguity X Log(t)	0.1625	0.1699	0.1754	0.1763	0.1730	0.1826
Systemic Shock X Log(t)	0.5235	0.3839	0.4426	0.4524	0.4310	0.4425
Cold War X Log(t)	0.7584	0.5205	0.6280	0.6422	0.6057	0.6331
Contiguity X Log(t)	1.2810	1.3981	1.3273	1.3165	1.3318	1.3268
Systemic Shock X Log(t)	0.5053	0.5213	0.5112	0.5093	0.5113	0.5178
Cold War X Log(t)	13.0543*	12.8431*	10.7506*	10.6142*	11.8240**	10.6363*
Contiguity X Log(t)	13.6834	13.4462	10.3808	10.1011	11.2997	10.0976
Systemic Shock X Log(t)	0.4719*	0.4689*	0.4887**	0.4929**	0.4790**	0.4920**
Cold War X Log(t)	0.1407	0.1393	0.1345	0.1337	0.1301	0.1332
Contiguity X Log(t)	0.2354	0.2042+	0.1912+	0.2047+	0.2041+	0.2035+
Systemic Shock X Log(t)	0.2182	0.1889	0.1736	0.1843	0.1836	0.1829
Cold War X Log(t)	1.4947	1.5252	1.5293	1.5066	1.4932	1.5106
Contiguity X Log(t)	0.4321	0.4390	0.4365	0.4264	0.4223	0.4278
Observations	3909	3909	3909	3909	3909	3909

Exponentiated coefficients

Rivalry-clustered standard errors

+ = $p < 0.10$, * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$ in two-tailed test

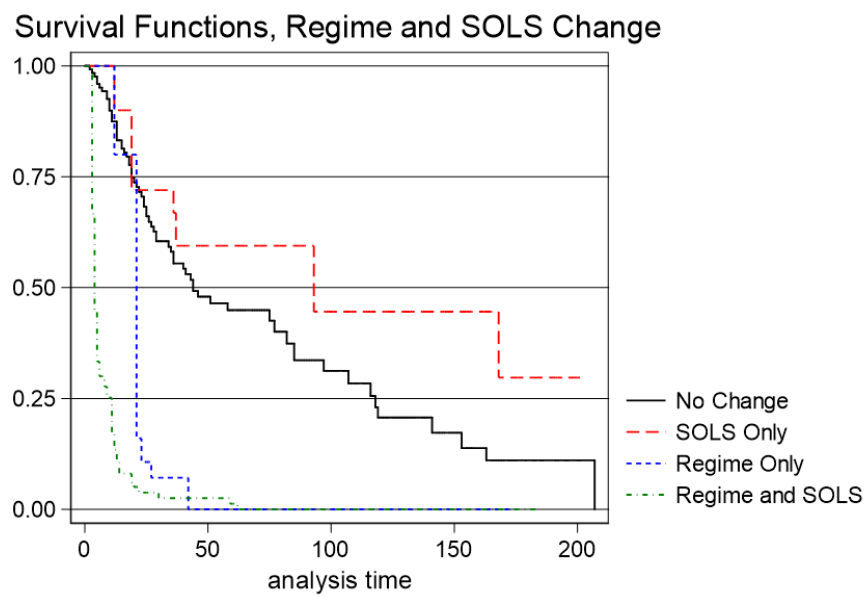


Figure 1: Kaplan-Meier Survival Functions

Table 2: Cox Regression: Regime-Change Type and Rivalry Termination 1919-2010

	Hazard Ratio exp(se)
Transition Autoc. to Autoc.	5.4785***
	2.4898
Transition to Autoc.	5.0132**
	2.6846
Transition to Democ.	12.6036***
	4.2457
Civil War	1.3847
	0.3199
Foreign Imposition	1.3624
	0.4887
Capability Disparity	865.8276**
	1927.0257
Cap. Ratio X Log(t)	0.1153***
	0.0710
Decisive War	14.3491*
	19.4976
Decisive War X Log(t)	0.5383+
	0.1980
Contiguity	0.5979
	0.8559
Contiguity X Log(t)	1.2505
	0.4786
Systemic Shock	10.2945*
	10.0040
Systemic Shock X Log(t)	0.4937*
	0.1370
Cold War	0.1995+
	0.1816
Cold War X Log(t)	1.5593
	0.4495
Observations	3909

Exponentiated coefficients

Rivalry-clustered standard errors

+ = $p < 0.10$, * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$ in two-tailed test

Table 3: Cox Regression: Regime-Change and Rivalry Termination by Type 1919-2010

	(Positional Rivalry)	(Spatial Rivalry)	(Ideological Rivalry)
	Hazard Ratio	Hazard Ratio	Hazard Ratio
	exp(se)	exp(se)	exp(se)
Regime Change	4.1790**	3.9732***	9.9713***
	1.8566	1.2770	4.5754
Civil War	1.1424	1.0712	1.6260
	0.4709	0.3297	0.6864
Foreign Imposition	3.8855*	3.7087*	5.9062+
	2.3660	2.1212	5.9062
Capability Disparity	58288.0650**	257.7025+	66.5659
	224877.2918	790.5340	284.4107
Cap. Ratio X Log(t)	0.0361**	0.1634*	0.1759
	0.0401	0.1405	0.2643
Decisive War	0.8948	52.0343**	1799.8137*
	1.5206	75.5904	5890.9048
Decisive War X Log(t)	1.1841	0.4452*	0.0882+
	0.5639	0.1691	0.1173
Contiguity	0.0465+	83.7625	3.3751
	0.0817	304.6678	7.4620
Contiguity X Log(t)	2.4023+	0.3457	0.3568
	1.1999	0.3074	0.2662
Systemic Shock	28.9082+	6.6523+	9.3850+
	49.7122	7.3155	12.0075
Systemic Shock X Log(t)	0.4192+	0.5317*	0.7102
	0.1949	0.1626	0.3184
Cold War	0.2667	0.0309*	0.5388
	0.3955	0.0428	0.8814
Cold War X Log(t)	1.6105	2.4538*	1.3100
	0.7423	0.9992	0.7701
Observations	2152	2726	1326

Exponentiated coefficients

Rivalry-clustered standard errors

+ = $p < 0.10$, * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$ in two-tailed test

Appendix A:

Table 4: Testing the Proportional Hazards Assumption

	Regime Change	SOLS Change	Civil War	Foreign Imposition	Capability Disparity	Decisive War	Contiguity	Systemic Shock	Cold War
	b/p	b/p	b/p	b/p	b/p	b/p	b/p	b/p	b/p
Interaction X Log(t)	0.9911	0.7333	0.8526	1.2853	0.0690	0.3716	0.5522	0.3700	1.9027
Regime Change	0.9725	0.1593	0.5076	0.6032	0.0000	0.0001	0.0309	0.0000	0.0180
	7.3818	6.6835	7.1425	7.0360	5.6299	6.9219	6.4501	6.0740	7.4995
SOLS Change	0.0149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.8751	2.5141	0.8712	0.8985	0.9461	0.8775	0.9130	1.0215	0.8833
Civil War	0.6281	0.2524	0.6168	0.7126	0.8403	0.6358	0.7408	0.9348	0.6495
	1.6210	1.5888	2.7284	1.6381	1.5106	1.6710	1.5021	1.4132	1.6809*
Foreign Imposition	0.0553	0.0656	0.2029	0.0514	0.0901	0.0427	0.0969	0.1418	0.0391
	3.0765	2.9875	3.0236	1.4066	2.4498	2.6358	3.2521	3.1605	2.7417
Capability Disparity	0.0007	0.0008	0.0007	0.8267	0.0067	0.0036	0.0004	0.0015	0.0023
	1.6535	1.6054	1.6418	1.7107	4362.6404	1.5691	1.2246	0.9445	1.5703
Decisive War	0.5307	0.5572	0.5359	0.5044	0.0000	0.5749	0.7994	0.9403	0.5711
	1.9346	1.9241	1.9236	1.9637	2.1853	61.9042	1.9036	1.9198	2.0256
Contiguity	0.0903	0.0911	0.0996	0.0894	0.0171	0.0000	0.0979	0.1083	0.0592
	1.3775	1.3462	1.3712	1.3868	1.1031	1.3736	11.0189	1.4677	1.3971
Systemic Shock	0.4264	0.4646	0.4399	0.4209	0.7947	0.3950	0.0292	0.3715	0.4085
	0.7699	0.8054	0.7763	0.7670	0.9978	0.7544	0.9419	27.7347	0.7292
Cold War	0.3970	0.4858	0.4223	0.3947	0.9937	0.3480	0.8445	0.0001	0.2987
	0.7991	0.8004	0.7917	0.7922	0.6340	0.7769	0.7510	0.8841	0.1082
	0.4945	0.4930	0.4785	0.4846	0.1280	0.4264	0.3830	0.6946	0.0093
Observations	3909	3909	3909	3909	3909	3909	3909	3909	3909

Exponentiated coefficients

Rivalry clustered standard errors

Bold font indicates variables that violate the proportional hazards assumption ($p < 0.05$).

Table 5: Cox Regression: Rivalry Termination 1919-2010 - Dropping all rivalries starting prior to 1919

	(1)	(2)	(3)	(4)
	Hazard Ratio	Hazard Ratio	Hazard Ratio	Hazard Ratio
	exp(se)	exp(se)	exp(se)	exp(se)
Regime Change	3.0897**	3.6863***	2.9318**	4.1627***
	1.1306	1.4298	1.191	1.6108
Regime Change × SOLS Chang			5.7999***	
			1.9720	
Regime Change × Irregular Turnover				5.7264***
				2.0998
SOLS Change	1.8541		1.7540	
	0.6600		0.9053	
Irregular Turnover		1.6794		2.7023
		0.7480		1.9791
Civil War	1.2392	1.1771	1.2339	1.2181
	0.3064	0.3065	0.3056	0.3171
Foreign Imposition	2.8225**	2.9199**	2.8401**	2.8099*
	1.0878	1.1876	1.0869	1.1353
Capability Disparity	64.5265	62.8905	64.1989	60.5523
	272.5486	270.9594	270.8095	259.8345
Cap. Ratio X Log(t)	0.1706	0.1729	0.1716	0.1742
	0.2579	0.2680	0.2585	0.2688
Decisive War	14008.4916***	12060.8280***	14038.0905***	12957.3195***
	35541.3250	29197.7962	35941.9158	31539.4111
Decisive War X Log(t)	0.0270**	0.0288***	0.0269**	0.0276***
	0.0299	0.0293	0.0302	0.0283
Contiguity	0.2795	0.3110	0.2785	0.2948
	0.3368	0.3662	0.3360	0.3465
Contiguity X Log(t)	1.6494	1.6033	1.6509	1.6264
	0.7469	0.7105	0.7485	0.7210
Systemic Shock	4.1796	4.3138	4.3230	4.1209
	5.5203	5.7342	5.9155	5.4831
Systemic Shock X Log(t)	0.6879	0.6728	0.6805	0.6821
	0.3376	0.3306	0.3455	0.3355
coldwar	0.6632	0.6158	0.6773	0.5973
	0.7009	0.6898	0.7292	0.6648
Cold War X Log(t)	0.7820	0.7828	0.7761	0.7903
	0.3141	0.3304	0.3182	0.3336
Observations	1461	1461	1461	1461

Exponentiated coefficients

Rivalry-clustered standard errors

*p<z0.05, **p<z0.01, ***p<z0.001 in two-tailed test

Table 6: Cox Proportional Hazards: Rivalry Termination 1919-2010

	(1)	(2)	(3)	(4)
	Hazard Ratio	Hazard Ratio	Hazard Ratio	Hazard Ratio
	exp(se)	exp(se)	exp(se)	exp(se)
Regime Change	7.1761***	8.1866***	6.6113***	8.4756***
	2.1524	2.3808	2.1955	2.4264
Regime Change × SOLS Change			6.4778***	
			1.9646	
Regime Change × Irregular Turnover				4.7198***
				1.7249
SOLS Change	0.8759		0.7847	
	0.2424		0.3540	
Irregular Turnover		0.5989		0.7177
		0.2085		0.5151
Civil War	1.6217+	1.6624*	1.6075+	1.6765*
	0.4095	0.4154	0.4088	0.4131
Foreign Imposition	3.0749***	3.1288***	3.1246***	3.1256***
	1.0206	1.0038	1.0286	1.0014
Capability Disparity	1.6538	1.5116	1.6445	1.5121
	1.3263	1.2126	1.3252	1.2128
Decisive War	1.9359+	1.8473	1.9386+	1.8488
	0.7605	0.7036	0.7677	0.7000
Contiguity	1.3780	1.3615	1.3633	1.3690
	0.5551	0.5344	0.5613	0.5354
Systemic Shock	0.7694	0.8009	0.7768	0.7963
	0.2388	0.2453	0.2436	0.2418
Coldwar	0.7991	0.8373	0.7954	0.8397
	0.2623	0.2692	0.2610	0.2719
Observations	3909	3909	3909	3909

Exponentiated coefficients

Rivalry-clustered standard errors

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ in two-tailed test

Table 7: Rivalries Ending Within 5 Years of Regime Change: 1919-2010

Rivalry	State A	State B	End Year	Starting Regime Mix	Preceding Regime	Succeeding Regime	Change State	Ending Regime Mix
29	Russia	China	1949	WL/SP	Warlord	Single-Party	China	SP/SP
34	Brazil	Argentina	1980	D/Junt	Democracy	Junta	Argentina	Junt/Junt
37	Columbia	Peru	1934	D/Pers	Personalist	Military	Peru	D/Military
47	El Salvador	Honduras	1993	D/Hyb	Hybrid	Democracy	Honduras	D/D
48	Guatemala	Honduras	1933	D/Junt	Junta	Monarcy	Guatemala	D/Mon
52	Chile	Argentina	1984	Junt/Junt	Junta	Democracy	Argentina	D/Junt
63	Japan	Russia	1956	Junt/SP	Junta	Democracy	Japan	D/SP
64	Greece	Bulgaria	1974	Junt/SP	Junta	Democracy	Greece	D/SP
66	Bulgaria	Romania	1940	Mon/Mon	Monarchy	Junta	Romania	Mon/Junt
71	Ethiopia	Italy	1943	Mon/Pers	Personalist	Other	Italy	Mon/Junt
73	Bolivia	Paraguay	1938	Olig/Olig	Oligarchy	Junta	Bolivia	Olig/Junt
80	Albania	Greece	1996	D/D	Democracy	Democracy	Albania	D/D
82	Hungary	Romania	1947	Junta/SP	Junta	Single-Party	Romania	SP/SP
89	Costa Rica	Panama	1941	D/Pers	Personalist	Hybrid	Panama	D/Hyb
120	Thailand	Vietnam	1991	Pers/SP	Personalist	Junta	Thailand	Pers/Junt
126	Russia	China	1992	SP/SP	Single-Party	Personalist	Russia	SP/Pers
129	Mali	Burkina-Faso	1986	Pers/Junta	Junta	Personalist	Burkina-Faso	Pers/Pers
131	Ghana	Ivory Coast	1966	SP/SP	Single-Party	Junta	Ghana	Junt/SP
132	Ghana	Nigeria	1972	Junt/Hyb	Hybrid	Junta	Ghana	Junt/D
139	Burundi	Rwanda	1973	WL/SP	Single-Party	Junta	Rwanda	WL/Junta
140	Indonesia	Malaysia	1966	D/Pers	Personalist	Junta	Indonesia	D/Junta
142	Sudan	Uganda	1974	Per/Per	Personalist	Personalist	Uganda	Pers/Pers
143	Chad	Sudan	1975	Per/SP	Single-Party	Junta	Chad	Per/Junta
144	Malawi	Tanzania	1994	Pers/SP	Personalist	Democracy	Malawi	D/SP
149	Rhodesia	Zambia	1979	SP/D	Democracy	Single-Party	Rhodesia	SP/SP
150	South Africa	Zambia	1992	SP/Olig	Single-Party	Hybrid	Zambia	Hybrid/Olig
151	Chad	Libya	1994	Pers/Pers	Personalist	Personalist	Chad	Pers/Pers
160	Libya	Sudan	1985	Pers/Hybrid	Hybrid	Democracy	Sudan	Pers/D
161	Congo (DRC)	Angola	1997	SP/Hybrid	Hybrid	Personalist	Congo	SP/Pers
163	Cameroon	Nigeria	2002	Pers/Junta	Junta	Other	Nigeria	Pers/Other
164	Mozambique	Rhodesia	1979	SP/D	Democracy	Single-Party	Rhodesia	SP/SP
165	Cambodia	Vietnam	1979	SP/SP	Single-Party	Single-Party	Cambodia	SP/SP
166	Mozambique	South Africa	1993	SP/D	Democracy	Oligarchy	South Africa	SP/Olig
172	South Africa	Zimbabwe	1993	SP/D	Democracy	Oligarchy	South Africa	SP/Olig
173	Belize	Guatemala	2000	D/Junt	Junta	Democracy	Guatemala	D/D
177	Kenya	Sudan	1994	SP/D	Democracy	Personalist	Sudan	SP/Pers
192	Congo (DRC)	Rwanda	2009	SP/Pers	Personalist	Democracy	Congo (DRC)	SP/D
193	Congo (DRC)	Uganda	2009	Pers/Pers	Personalist	Democracy	Congo (DRC)	Pers/D

Hybrid regimes are defined as those that mix democratic and autocratic characteristics.

Table 8: Direct Replication of Rooney 2018

	(1) Year T	(2) Year T	(3) 2 Years	(4) 3 Years
Source of Leader Support Change	2.129*** (0.590)	2.620** (1.134)	2.781** (1.244)	3.200*** (1.411)
Regime Transition (Polity)	2.068** (0.755)	3.102** (1.399)	3.117** (1.558)	2.554* (1.294)
Contiguity		0.295*** (0.111)	0.274*** (0.0927)	0.272*** (0.0991)
Probability of Stalemate		14.75 (62.73)	0.290 (1.195)	90569.9 (779890.7)
Past MIDs		0.963 (0.0267)	0.985 (0.0304)	0.983 (0.0311)
Peace Years		0.997 (0.00237)	0.995* (0.00243)	0.996* (0.00242)
Non-Rival MIDs		0.714** (0.0992)	0.810* (0.0883)	0.812* (0.0879)
Joint Democracy		1.102 (0.653)	1.471 (1.252)	1.931 (1.844)
Joint IGO Memberships		1.032** (0.0159)	1.044*** (0.0159)	1.036** (0.0158)
Ln(Trade)		0.873 (0.0749)	0.941 (0.0738)	0.964 (0.0742)
Observations	3474	1822	1536	1448

Exponentiated coefficients; Standard errors in parentheses.

All models are clustered on the dyad and include region fixed effects.

* $p < 0.10$, ** $p < 0.05$, *** $p < .01$

Table 9: Replication of Rooney 2018 with GWF Regime Change Variable

	(1)	(2)	(3)	(4)
	Year T	Year T	2 Years	3 Years
Source of Leader Support Change	1.169 (0.350)	1.455 (0.485)	1.291 (0.566)	1.681 (0.723)
Regime Change (GWF)	4.888*** (1.393)	5.390*** (2.282)	4.856*** (2.159)	3.710*** (1.741)
Contiguity		0.277*** (0.100)	0.267*** (0.0941)	0.269*** (0.0990)
Probability of Stalemate		233.2 (1168.1)	8.826 (34.08)	337287.4 (3112297.1)
Past MIDs		0.968 (0.0248)	1.004 (0.0329)	1.001 (0.0339)
Peace Years		0.998 (0.00237)	0.997 (0.00254)	0.997 (0.00251)
Non-Rival MIDs		0.716** (0.0949)	0.798** (0.0825)	0.797** (0.0820)
Joint Democracy		1.673 (0.968)	2.142 (2.016)	2.464 (2.454)
Joint IGO Memberships		1.027 (0.0166)	1.039** (0.0161)	1.033** (0.0160)
Ln(Trade)		0.892 (0.0720)	0.973 (0.0740)	0.990 (0.0751)
Observations	3474	1822	1536	1448

Exponentiated coefficients; Standard errors in parentheses.

All models are clustered on the dyad and include region fixed effects.

* $p < 0.10$, ** $p < 0.05$, *** $p < .01$