Research article

Political opportunity structures, democracy, and civil war

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Abstract

Theories of mobilization suggest that groups are more likely to resort to violence in the presence of political opportunity structures that afford greater prospects for extracting concessions from the government or better opportunities to topple ruling governments. However, existing efforts to consider the possible influences of political opportunity structures on incentives for violence and civil war empirically have almost invariably relied upon measures of democracy to proxy for the hypothesized mechanisms, most notably the argument that the opposing effects of political accommodation and repression will give rise to an inverted U-shaped relationship between democracy and the risk of civil war. The authors detail a number of problems with measures of democracy as proxies for political opportunity structures and develop alternative measures based on the likely risks that political leaders will lose power in irregular challenges and their implications for the incentives for resort to violence. The authors evaluate empirically how the security with which leaders hold office influences the prospects of violent civil conflict. The findings indicate that recent irregular leader entry and transitions indeed increase the risk of conflict onset, while democratic institutions are found to decrease the risk of civil war, after controlling for the new measures of state weakness.

Keywords

civil war, democracy, leaders, political opportunity structures, state capacity

Introduction

The salience of civil war in the contemporary world has generated a great deal of scholarly interest in its causes. The theoretical literature on civil war has postulated a variety of possible explanations for why governments and insurgents may resort to violence against one another. Some researchers highlight the role of grievances as the underlying motives for insurgency or protest, where the specific grievances can arise from issues such as poverty or economic deprivation, ethnic exclusion, lack of political rights and civil liberties, or frustrated aspirations or a gap between the actual social and economic status of actors and their expectations (see e.g. Buhaug, Cederman & Rød, 2008; Davies, 1962; Gurr, 1970). Others emphasize conditions that can help facilitate mobilization among potential insurgents, including the role of private benefits or incentives from conflict and the role of state strength in increasing the costs of protests and deterring potential insurgents from launching violent attacks (see e.g. Collier & Hoeffler, 2004; Fearon & Laitin 2003; Hironaka, 2005; Tilly, 1978). In turn, empirical research on civil war has considered a variety of measures intended to reflect either grievances that could give rise to

motives for protest or opportunities for resort to violence (see e.g. Sambanis, 2002, 2004, for useful reviews).

In this article, we revisit arguments about how democracy, state strength, and the notion of political opportunity structures can influence civil war and insurgent violence. We argue that it is important to consider theoretically the distinct impacts of repressive and accommodative forms of state capacity on the prospects for conflict, as well as the difference between persistent structural features that can enable or prevent conflicts and the more dynamic events that can make conflict more likely in certain periods. Many of the indicators used in empirical studies of civil war are relatively crude indicators of the underlying concepts and only loosely related to the theoretical rationale. Moreover, since the same operational measures are used as indicators for a large number of quite different concepts, it is often very difficult to discriminate between different interpretations and theories from the empirical results alone. We focus on the role of political

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institutions and conflict, and highlight the problems in using degree of democracy as a combined proxy for grievances and state strength or repressive capacity, as well as taking changes in degree of democracy as an indicator of political opportunity structures. We argue that measures of the degree to which political institutions are democratic provide a poor indicator of state strength, and highlight the need to seek separate measures of the ability of democratic institutions to encourage substitution to nonviolent political means and forms of political weakness that may encourage violence rather than to focus on their combined implications. We develop alternative measures of state weakness based on irregular leader changes and the likelihood that leaders will be vulnerable to challenges from contenders seeking political power or concessions. Our empirical results suggest that greater state weakness, as measured by irregular leader changes, indeed does appear to be associated with civil war onset. Moreover, we find that the risk of civil war depends upon factors influencing the anticipated state weakness as assessed by the risk of irregular leader changes. Although leaders that have entered irregularly can encourage civil war onset, as they are more likely to be susceptible to challenges and therefore more likely to make concessions to insurgents, the risk declines with longer tenure. Once we control for these measures of political weakness, we find that democracy has a clear negative effect on the risk of civil conflict onset, in line with what we would expect from theories stressing the role of political accommodation and opportunities for nonviolent activities.

Mobilization and civil war: State strength, repressive capacity, and political democracy

The current literature on civil war has to a large extent focused on identifying structural government or country characteristics that can make countries more or less prone to civil war. For example, the inverse relationship between a country's per capita income and civil war and the positive association between country size and civil war are often cited as key empirical facts in reviews on what we know about civil war (see e.g. Hegre & Sambanis, 2006). Although research on such country-level propositions has provided many useful insights about civil war, the near exclusive focus on structural features of countries at large or the government side has led to a relative neglect of the role of non-state actors in civil wars. Theories of civil war remind us that conflict is at least a minimally dyadic phenomenon (see Boulding, 1963; Most & Starr, 1989). As such, understanding civil war requires us to consider how interactions between governments and non-state actors give rise to violence rather than to focus exclusively on the attributes of one actor in isolation (see e.g. Buhaug, Cederman & Rød, 2008; Cunningham, Gleditsch & Salehyan, 2009).

Although the current literature on civil war emphasizes primarily country-level or government characteristics, the earlier literature on violent protest and revolutions preceding the current wave of studies on civil war tended to emphasize the role

of participants and mobilization, and the situations in which individuals decide whether to participate in protest or not. Many underlying grievances are either ubiquitous or constant features that change only very slowly over time. So-called political opportunity structure theories tend to highlight the role of specific changes or events that may provide windows of opportunity for protesters in achieving collective action or capitalize on weaknesses on the government side (see e.g. McAdam, 1982; Meyer, 2004; Tarrow, 1994). More specifically, events or changes that decrease the deterrent capacity of the state or make it easier for individuals to achieve collective action should help in providing a more dynamic element for understanding the timing of protest. Most of the literature on mobilization has focused on the role of an observed decline in state strength as an indicator of political opportunity structures (see e.g. Skocpol, 1979; Tilly, 1978), although one can also imagine forms of windows of opportunity that make it easier for insurgents to achieve mobilization, such as instances where dissatisfaction is revealed to be greater than commonly thought, and protests can rely on existing networks (see e.g. Chwe, 1999; Opp, Voss & Gern, 1995), or the potential role of innovative entrepreneurs or organizers that help overcome previous obstacles (e.g. Lichbach, 1995).

Theories of political opportunity structures have been developed primarily to understand social movements and nonviolent protest, but the idea that dynamic changes in state weakness or political opportunities can encourage mobilization has clear relevance for the risk of civil war as well. Civil war does not originate in a vacuum, and potential insurgents are likely to consider their anticipated prospects of achieving something by resort to violence. Everything else being equal, one would expect weaker states to be more likely to become targeted, either because the insurgents have an opportunity to seize political power directly through toppling the government, or because weaker governments that are vulnerable to challenges from other competitors – whether these are opposing factors or individuals within a ruling coalition – will be more likely to offer some form of accommodation to insurgents (see e.g. Rasler, 1996, on the case of Iran).

However, although arguments about 'state strength' or 'political opportunities' play an important role in many accounts of conflict movements, it is much less clear how one would operationalize these concepts, in particular in a cross-national setting. Meyer & Minkoff (2004) note that many conceptual discussions of political opportunities tend to leave issues of operationalization unspecified, and that many of the measures suggested in empirical studies tend to be highly idiosyncratic and context specific. For example, McAdam's (1982) measure of political opportunities for African American groups, based on the decline in lynchings in the American South, cannot easily be generalized to other settings. Likewise, despite the theoretical prominence of the concept of state capacity in studies of civil war, there is no consensus on how it may be measured (see Hendrix, 2010), and most existing applications focus on enduring structural features rather than

more dynamic changes. In perhaps the best-known example from civil war studies, Fearon & Laitin (2003), for example, use GDP per capita as an indicator of state strength. However, this is at best a very indirect measure. Although wealthier states may tend to be generally stronger, the example of North Korea attests to how not all poor states necessarily can be characterized as weak states, and theories of the resource curse point to how an increase in income actually can decrease state strength and the governability of countries through the distorting effects of wealth on rent-seeking and other disruptive activities (see e.g. Auty, 1993; Ron, 2005; Ross, 2004). Finally, GDP per capita has been used as an indicator of a number of quite different concepts by other researchers. Collier & Hoeffler (2004), for example, see higher GDP per capita as an indicator of the opportunity costs of conflict, and GDP per capita could also be seen as an indicator of economic grievances among potential insurgents rather than a measure of state strength (see Mack, 2008). Although many studies have demonstrated a relationship between GDP per capita and conflict, it is difficult to evaluate the relative merits of different arguments that all invoke the same empirical proxy measure.

Another tradition in the literature on political violence and civil war has approached the issue of state strength through measures of political institutions. Lack of freedom, political rights, and opportunities for political participation can on the one hand be seen as an obvious cause of grievances, which may motivate resort to violence against a government (e.g. Gurr, 1970; Schnytzer, 1994). This suggests that we should generally observe greater potential for insurgencies under autocratic regimes. By contrast, many have argued that democracies afford greater opportunities for groups to pursue their aims by nonviolent political means, and hence provide plausible substitutes for violence (see Eisinger, 1973; Sandler, Tschirhart & Cauley, 1983). However, other researchers have pointed out how autocracies are likely to respond to dissent with harsh repression (e.g. Davenport, 1995), and that countries with greater political openness may find it difficult to respond forcefully to violent conflict. Moreover, since regimes with high repressive capacity should be better able to deter conflict (e.g. Lichbach, 1995; Tullock, 1971), some researchers have argued the relationship between degree of democracy and the risk of conflict will be non-linear and non-monotonic, owing to the countervailing influences of declining repressiveness and greater opportunities for nonviolent political avenues. More specifically, the relationship between degree of democracy and risk of conflict should take the shape of an inverted-U, with the greatest risk of violence among semi-democratic countries that combine insufficient repressiveness to deter violence and insufficient political openness to induce substitution to nonviolent activities (see e.g. Hegre et al., 2001; Hibbs, 1973; Muller & Weede, 1990).

Many studies have indeed found evidence that seem consistent with the inverted U-curve argument. However, this line of research seems problematic for a number of reasons. First, degree of democracy is used here to proxy for two opposing trends, namely the repressive capacity of undemocratic states and the accommodative capacity of more democratic regimes. Instead of considering the hypothesized joint implications of the two opposing trends in terms of degree of democracy, it would be desirable to have direct measures of repressive capacity or state strength separate from the extent to which democracy facilitates substitution to nonviolent political means or strategies. We will detail one possible alternative based on information on political leaders and how they enter office.

Second, tests of the inverted U-curve arguments have typically relied on the Polity data, which provide a 21-point scale indicating a country's degree of democracy based on institutional characteristics. Although many studies appear to find evidence that the risk of civil war seems highest for countries with values in the middle of this scale, this finding may follow partly from construction. In particular, Polity contains a large number of observations where we do not see regular values on the subcomponents that make up the overall Polity scale, since institutional characteristics could not be classified according to the coding protocol. More precisely, observations are given a special code during periods of 'foreign interruption' (–66), cases of 'interregnum' (–77), defined by Gurr, Jaggers & Moore (1989: 6) as periods 'in which there is a complete collapse of central political authority', or periods of 'transition' (–88) where institutional characteristics presumably are unclear or undergoing significant changes. The Polity project has recently released versions of the data where the researchers implement a set of imputations to replace these special codes. More specifically, Marshall & Jaggers (2005) suggest replacing cases of interregnum with a Polity score of 0, linearly interpolating transition periods, and setting periods of foreign interruption to missing values. The first imputation procedure is potentially highly problematic, since countries may be coded as being in an 'interregnum' precisely because of conflict and violence (as noted by Gurr, Jaggers & Moore, 1989: 6), rather than their institutions being somehow 'in-between' democracy and autocracy. Moreover, although linear interpolation may be a reasonable strategy for dealing with missing data on slowly moving features, existing research shows that that political transitions rarely follow such a smooth pattern of change over time (see Lichbach, 1984).

Third, Vreeland (2008) suggests that the Polity data are problematic in testing arguments about institutions and civil war since two of the subcomponents in the Polity scale – namely, the Competitiveness of Participation (PARCOMP) and the Regulation of Political Participation (PARREG) – can acquire particular values based on whether a country experiences civil war. In particular, PARREG can take on a value of 1 in the event of 'unregulated participation', or a situation where there is no systematic control of political activity, or a value of 2 for 'factional' polities, with restricted patterns of competition between competing factions. However, Gurr, Jaggers & Moore (1989: 12) explicitly note that 'unregulated participation' could entail 'violent conflict among partisan groups', and that 'factionalism' is characterized by 'intense,

hostile, and frequently violent' competition, which in extreme cases 'may be manifested in the establishment of rival governments and in civil war'. Likewise, PARCOMP is coded as 0 in cases deemed 'not applicable' or 'unregulated competition' or 1 for 'factional competition', which may reflect situations where a country experiences civil war.[1] Vreeland (2008) argues that using these coding criteria risks introducing an inverted U-shape by construction, and shows that none of the other subcomponents of the Polity index appear to display the hypothesized inverted U-shaped pattern with conflict.[2]

Finally, 'anocratic' polities that have values in the middle range of the Polity scale are often countries in transition, on the way to either democracy or autocracy, and tend to be less persistent than clear autocracies or democracies (see Gleditsch & Ward, 1997; Gurr, 1974).[3] Many have argued that political transitions themselves may influence the risk of violent conflict, and it can be difficult to separate the potential impact of transitions from the impact of anocratic polities per se (Gleditsch, 2002a; Hegre et al., 2001). More generally, looking at data on degree of democracy alone provides at best a partial indication of political change and its potential impact on conflict. Any measure that identifies whether countries are democracies treats non-democracies as a residual category, where regimes essentially are defined by what they are not. This risks lumping together many quite disparate regimes as non-democracies, including socialist states such as the Soviet Union and kleptocracies such as Zaire under Mobutu. Gleditsch & Choung (2008) note how major political transitions such as the Iranian and Cuban revolutions do not show up as large changes in the Polity data, since the countries remained 'non-democracies' institutionally.

Leader entry and stability as measures of political opportunities

Our arguments about the importance of distinguishing between political opportunity structures as phases and more enduring features of state strength and the desirability of separate measures for political accommodation and repressive capacity are unlikely to be controversial. So far, however, we have said little about how these challenges may be overcome.

In this section, we expand on how information on leaders can help provide independent measures to assess state strength and political opportunities for potential challengers or violent protesters, separate from measures of the degree to which political institutions are democratic.

Before turning to the specific measures we propose, we first outline in greater detail the mechanisms linking the security with which leaders hold office to the risk of civil war. We have previously argued that challengers and rebels are strategic, and more likely to resort to violence when they stand a higher chance of achieving some success. As such, we would expect that weaker governments and leaders, vulnerable to challenges from competitors, would be more likely to encourage resort to insurgent violence. Whether a government is 'weak' is sometimes classified based on whether regimes in the end turn out to fall or not. However, this is a post hoc classification that can only be made after the fact. Moreover, it is not necessary for a leader to actually ultimately fall to encourage aggression, and concessions to insurgents may under some circumstances suffice to prevent violent conflict. Although whether leaders fail cannot be known with certainty ex ante, we would still expect that insurgents can recognize instances when leaders are likely to be weak and more likely to offer concessions. Moreover, there are clear empirically observable relationships between certain ex ante observable leader characteristics and resulting political stability that we can use to identify such opportunity structures.

Ethiopia provides a good example illustrating how state instability and periods of weakness can encourage resort to violence. In Ethiopia, the Marxist Derg successfully overthrew Emperor Haile Selassie in September 1974. Although the coup makers certainly succeeded in overthrowing the previous government, the situation after the coup saw considerable instability as different factions and individuals within the Derg vied for political power and control. The first two heads of state after the coup – Aman Andom and Tafari Benti – were both forcefully removed from power and killed during the struggle. During this period, a number of other groups stepped up their challenges against the government through violent means, including Marxist groups as well as ethnically based insurgencies seeking autonomy for various non-Amhara groups. In the Uppsala armed conflict data, the Ethiopian People's Revolutionary Party (EPRP), the Oromi Liberation Front (OLF), and the Tigrayan People's Liberation Front (TPLF) are all considered to be involved in a civil war beginning on 1 January 1976. Many of these organizations predated the turmoil at the center of the state, yet the timing of the increase in mobilization and the outbreak of the conflict in its aftermath suggests that the groups responded to these changes. Although it is difficult to establish whether this conflict would not have happened in the absence of a weakened central government, the turmoil in the wake of the coup and infighting within the new leadership seems to have encouraged other actors to intensify their campaigns against the government, eventually leading to a full-fledged civil war (see De Waal, 1991).

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[1] These definitions might seem to imply that PARREG and PARCOMP in these cases must have the same values, but this is not the case in the observed data. Although PARREG = 1 implies that PARCOMP = 0, the reverse is not the case. Moreover, PARCOMP = 1 actually implies that PARREG = 4 ('restricted') and only 6% of observations with PARREG = 2 have PARCOMP = 1.

[2] From a different perspective, Treier & Jackman (2008) argue that the problem of measurement error in the Polity data makes it difficult to evaluate non-linear relationships with other outcomes of interest.

[3] Gurr (1974: 1487) introduced the term 'anocratic' to denote regimes lacking centralized political power and institutionalization. The term is commonly used to denote regimes with a Polity score above –6 and below 6, or regimes with 'a mix of institutional characteristics, some democratic and others ... authoritarian' (Vreeland, 2008: 404).

To what extent can such instances of state weakness and leaders likely to suffer challenges be identified empirically? The Archigos data, developed by Goemans, Gleditsch & Chiozza (2009), detail the specific manner in which leaders enter into and leave political office. Leaders may enter power in a *regular* manner, in accordance with prevailing rules and practices, or in an *irregular* manner, relative to existing rules. The former may include gaining power through elections, in a competitive democratic system, or designation by the incumbent leader (e.g. Papa Doc handing over power to Baby Doc), or a committee with the authority to appoint a successor in autocratic systems (e.g. the leadership of a single party or Politburo). Leaders may also enter power in an irregular fashion, for example by seizing power through a coup or a violent overthrow of the previous leader, as in a military coup or the Iranian revolution.

In this article, we examine the positive effect of revealed political opportunity structures by examining whether civil conflict onset is more likely in the wake of irregular regime changes, that is, situations where one leader first leaves power by irregular means and a new leader assumes power by irregular means. To restate our discussion more formally as a hypothesis, we expect that irregular transitions can encourage resort to violence and hence should yield a higher risk of civil war onset (H1), as such observed transitions signal windows of opportunity and state weakness.

It may be argued that irregular leader transitions and civil war may be endogenous or influenced by common causes. Moreover, the risk of civil war can increase when there is a perceived risk that leaders will be vulnerable to challenges, irrespective of whether we ultimately see a transition or not. As such, we will consider two alternative approaches to the hypotheses on the effect of observed irregular transitions. First, we will consider the possibility that instances with a high predicted risk of irregular transitions are more likely to see conflict (H2), based on ex ante observable characteristics. Second, we will consider whether the irregular entry of a current leader, as an observable proxy for the risk of irregular exit, increases the risk of conflict onset. Goemans, Gleditsch & Chiozza (2009) show that the manner in which a leader enters office is strongly related to how leaders lose office. Leaders who have entered power irregularly are over three times more likely to leave office in an irregular manner, and irregular exit is the modal form of exit for leaders who have entered power irregularly. The strong relationship between mode of entry and expected mode of exit for a leader makes the mode of entry a suitable predetermined indicator of how the risk of irregular transitions may influence civil war (see also Lacina, 2007). However, it would be unreasonable to expect that mode of entry should have a constant effect on conflict, irrespective of the duration of a leader's tenure or time since the irregular entry. Rather, we would expect the impact of irregular entry to decay with time in office. For example, although Fidel Castro entered power irregularly, the length of his rule beyond the initial years should suffice to demonstrate the strength of his position.

Goemans & Bas (2006) show that the negative impact of irregular leader entry on economic growth declines with time, making leaders who have entered regularly and irregularly essentially indistinguishable after an initial window. As such, we examine the impact of irregular entry and how this varies with time, and we expect that leaders who have entered power by irregular means will have a high likelihood of conflict, but that the positive effect of initial irregular entry will dissipate with longer tenure, as these leaders become more secure in office (H3).

Finally, we also reconsider the effects of democracy, once we have taken into account the effects of political opportunity structures through leader weakness and the potential problems with the Polity scale. More specifically, we will consider separately the components of the Polity scale that may underlie the inverted U-shape, more specifically the irregular Polity values (–66,–77,–88) and the values of PARCOMP and PARREG that may reflect conflict. We expect that when we control for the revealed state weakness determined by the coding of these categories and partition out observations with these specific values on the Polity scale, we should find that greater degrees of democracy should have a negative monotonic relationship with civil war (H4).

Empirical analysis

Our unit of analysis is the state-year, for all independent countries from 1946 to 2004. We chose the country-year as the natural unit of analysis as most of our data are available at a yearly level only, although we have more fine-grained data for some characteristics such as leaders, political institutional changes, and conflict.

Data and measures

Our measure of conflict is based on the Uppsala/PRIO Armed Conflict Data (see Gleditsch et al., 2002). More specifically, our dependent variable is a binary indicator of whether a state experiences the onset of intrastate conflict claiming more than 25+ deaths in a calendar year. Since we are only interested in new conflicts breaking out, we exclude observations with subsequent years of the *same* conflict.[4]

Our measure of irregular transitions is taken from the Archigos data. We use Archigos to identify whether the leader in power entered irregularly and the tenure of a leader, measured in days at the end of the year. Not all leader changes imply political transitions, and we identify irregular transitions or alterations between distinct coalitions in autocratic regimes in instances where a leader leaves power irregularly and a new leader enters irregularly within a 12-month period. We focus

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[4] We furthermore exclude short lulls in fighting and do not code new onsets when there is an interval of less than two years between two periods of a violent conflict. However, onsets of new civil wars are included as onset, even if there is another ongoing conflict.

on both exit and entry to avoid situations where a leader is forced to give up power but a constitutionally or designated successor then assumes power in a regular manner.[5] There can also be cases where an outgoing leader may exit in a regular manner, but a new leader enters irregularly. Many monarchies, for example, have unclear lines of succession, with the consequences that the exit of one leader may give way to instability as contenders vie for power (hence the phrase 'long live the King'). However, irregular entry is here partly a function of lack of a clear manner of succession, and the new entrants tend to be closely associated with the previous leader. We thus prefer to err on the side of caution and not count these as irregular transitions among autocracies, although they will be counted as irregular leader entries where conflict then may follow in the wake of leader changes.[6]

We use the Polity data to measure the extent to which a country has political institutions that can be characterized as democratic. Unlike the recommendation of the Polity project, we do not impute a value of 0 for 'interregnum' or linearly interpolate cases 'in transition'. The predicted value for these polities based on alternative data sources such as the Freedom House data suggest values very close to –10 or most autocratic end of the scale, and we assign these observations a value of –10 instead. We also introduce separate dummy variables identifying observations with irregular Polity values to see if these differ in their expected influence on civil war. Finally, we introduce dummy variables for observations with the values of PARREG and PARCOMP seen as problematic by Vreeland as they may be influenced by whether countries experience conflict.

We also include a number of relevant control variables based on existing studies of civil war that plausibly could be associated with our main variables of interest. First, we include the log of GDP per capita (from Gleditsch, 2002b), which is a potential rival measure of state strength. This is a central control variable, as political instability and state weakness potentially could reflect variation in wealth and income. Second, we include the log of population (from Gleditsch, 2002b), as larger countries potentially could be systematically more

stable (for example, through a screening effect where weaker states disintegrate over time) or have more opportunities for instability because they have larger or more diverse populations. Finally, we include a count of the number of successive years of peace since conflict or independence, whichever is shorter, since violent conflicts often recur and the time since the last conflict could be associated with prospects for political instability or state weakness. Since the influence of conflict history or dependence is unlikely to be linear in the count of years at peace, we use an exponential function $\exp^{-py/\alpha}$, where py indicates the consecutive years of peace and α is a half-time parameter. Trial and error suggested that $\alpha = 4$ provides a reasonable fit to the data. This implies that the original risk of conflict at the end of a prior conflict is halved within three years.[7]

Empirical results

We first illustrate the relationship of civil war to irregular transitions through some simple descriptive statistics. For our annual observations, we find that as many as 31% of the observations with irregular leader transitions in the current or previous year coincide with a civil war. This compares with an incidence rate of only 14% among the observations without irregular regime transitions, and strongly suggests that civil wars often go together with political turmoil or irregular transitions. However, looking at how transitions go together with instances of civil war does not necessarily show that instability generates a higher risk of conflict, as it is conceivable that conflict also may generate a higher risk of transitions. In Table I, we restrict our attention to the initial onset of conflict, as coded by the Uppsala armed conflict data. Table I indicates that civil war onset is considerably more likely in instances where we have irregular transitions. More specifically, we see civil war onset in about 12% of all the cases with irregular transitions, compared to less than 4% of the observations where we do not see irregular transitions.[8] This supports our argument that irregular transitions signaling state weakness and political opportunities can increase the risk of civil war through encouraging aggression against a regime from challengers or protestors.

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[5] For example, Guatemalan President Serrano attempted a self-coup in 1993, and suspended the constitution and dissolved parliament in an effort to fight corruption. The self-coup was met with resistance and Serrano resigned under pressure. However, he was replaced by his vice-president, and the new president was hence appointed in a constitutional manner by the legislative assembly.

[6] We consider the transition dates in Archigos to exclude cases where transitions that take place after the outbreak of a conflict (based on Startdate2 in the Uppsala armed conflict data), since these may be the result of conflict rather than a prior factor contributing to the outbreak, but we retain transitions that occur simultaneously with the recorded conflict onset date. Although conflicts are recorded as starting on a particular date in the Uppsala data, this normally refers to the first casualties in a conflict that eventually reaches the 25 deaths threshold, and the activities of the organization may in some cases precede the dates (Harbom, Strand & Nygård, 2009: 8–9).

[7] We have also considered two alternative approaches for dealing with time dependence, namely cubic spline functions of time as suggested by Beck, Katz & Tucker (1998) or cubic polynomial of time as suggested by Carter & Signorino (2007). We find that the latter actually fits the data less well than our exponential function, while the former has a marginally better fit. However, judging from standard information criteria, the increase in fit is not commensurate to the additional loss of degrees of freedom. We thus prefer to retain the simple exponential function as this is parsimonious and easy to interpret, but we note that our substantive results remain similar irrespective of the specific approach for dealing with time dependence.

[8] The overrepresentation of onset in years with transitions holds even if we lag transitions by one year, although this will exclude conflict outbreak following transitions in the same year.

Table I. Civil war onset by irregular transitions

	Civil war onset	
	No	*Yes*
No transition	6,568 (96%)	250 (4%)
Irregular transition	223 (88%)	30 (12%)

Percentages in parentheses sum to 100 across rows.

Table II. Civil war onset by Polity transitions

	Civil war onset	
	No	*Yes*
Transition to autocracy	40 (87%)	6 (13%)
No transition	6,575 (96%)	258 (4%)
Transition to democracy	82 (94%)	5 (6%)

Percentages in parentheses sum to 100 across rows.

Skeptics may question to what extent our results showing that civil war onset tend to follow irregular transitions differ from previous work suggesting a relationship between changes in the Polity data and the risk of civil war. In Table II we consider the relationship of civil war onset to changes in the Polity scale that result in changes between democracies and non-democracies, using the threshold for democracy suggested by Jaggers & Gurr (1995).[9] As can be seen from Table II, there is some evidence that the relative share of conflict onset is higher following transitions. In particular, transitions from democracy to autocracy have a very high share of civil war onset observations, although one must also consider that the number of instances where democratic institutions break down over this period is very limited (i.e. 46). However, despite the large amount of work on the notion that democratization entails risks of conflict (e.g. Snyder, 2000), the evidence for a higher share of civil war onset is very weak for transitions to democracy, which have only a marginally higher share of conflict onset than years without transitions. Moreover, the number of transitions on the Polity scale (135) is much smaller than the number of irregular transitions (253). This again supports our claim that although changes in transitions reflected in the Polity scale in many cases may tell us something about state weakness or political opportunity structures that could encourage aggression, the Polity data are primarily a measure of degree of democracy in a country's institutions and as such leave out a considerable amount of relevant political changes and instability, especially among autocracies.

Although suggestive, the descriptive figures and bivariate relationships shown so far could obviously be due to third factors that influence both the risk of civil war and political instability and leader changes. We now turn to our multivariate analysis, including factors that are commonly believed to be associated with civil war. Model 1 in Table III first presents the results for a null model, where we do not consider the impact of irregular transitions or the dummy flagging observations with potentially problematic Polity values due to the coding of the subcomponents. The results for Model 1

indicate that that the irregular Polity categories of 'interregnum' (–77) and 'in transition' (–88) indeed are strongly positively associated with conflict. This in turn implies that imputation techniques assigning these observations a Polity value of 0 or values likely to be in the middle of the Polity scale through linear interpolation can indeed generate support for a seeming inverted U-shape for the risk of conflict by construction. The coefficient estimate for 'foreign interruption' (–66) is actually negative, perhaps reflecting the fact that states with foreign interruption may be more likely to have conflicts involving other states that are less likely to be coded as civil wars. However, the enormous size of the coefficient suggest a problem of separation (see Zorn, 2005),[10] and we therefore omit this category from the remainder of the analysis.

However, even after taking into account all of the special transition categories in the Polity data, the results still suggest an inverted U-shaped relationship between the Polity democracy scale and civil war onset, with a maximum effect when a state has a Polity score of just above 0. Replacing the quadratic specification with a linear term results in a positive (albeit not statistically significant) coefficient. Hence, the inverted U-shaped relationship between degree of democracy and conflict onset seems to be supported by the data, even when we account for the potential problems due to imputation of values on Polity scale for the special categories.

Model 2 adds a term for the presence of an irregular transition in the current or prior year, as well as separate dummy variables for observations with the potentially problematic values of the PARCOMP and PARREG subcomponents. The results return a clear positive estimated coefficient for irregular transitions. The coefficient estimate suggests that the log-odds of conflict more than double when countries experience an irregular transition in a window spanning the current and the prior year, strongly consistent with our claim that such instances of political instability can encourage violent conflict. We also find support for Vreeland's claim that certain values of PARREG that could reflect the presence of civil war are positively associated with conflict onset. However, in the case of PARCOMP, the potentially problematic values are actually

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[9] More specifically, countries with a Polity score of 6 and above are considered coherent democracies. Jaggers & Gurr also distinguish between 'coherent autocracies', which have Polity scores of –6 or below, and 'anocracies', but we do not consider this difference among non-democracies here.

[10] The problem of separation refers to cases where some predictors have little or no variation in the response, which makes it difficult to estimate meaningful coefficients. In this case, we only have one case of conflict onset under 'foreign interruption', namely Uganda in 1979.

Table III. Logit estimates of conflict onset

	Model 1		Model 2		Model 3	
	Coef	*SE*	*Coef*	*SE*	*Coef*	*SE*
(Intercept)	−4.492	0.792	−4.893	0.819	−4.760	0.819
log of GDP pc	−0.289	0.084	−0.265	0.086	−0.312	0.084
Polity	0.0003	0.012	−0.035	0.019	−0.048	0.017
Polity squared	−0.0101	0.003	−0.007	0.003		
Polity = −66	−11.848	299.798				
Polity = −77	2.874	0.447	2.226	0.517	1.614	0.444
Polity = −88	1.378	0.383	0.753	0.461	0.161	0.384
PARCOMP = 0 | 1			−0.397	0.227	−0.656	0.197
PARREG = 1 | 2			0.446	0.226	0.499	0.226
log of population	0.378	0.042	0.376	0.042	0.369	0.042
Conflict history	2.127	0.181	2.044	0.182	2.052	0.183
Irregular transition			0.735	0.245	0.779	0.245
Chi-square	370.8		383.6		377.8	
Df	9		11		10	
N	6,103		6,103		6,103	

negatively associated with civil conflict onset. Finally, we note that the sign for the linear part of the Polity democracy scale now switches sign and becomes negative. The net implied relationship between civil war is still non-monotonic given these estimated coefficients, since negative values on the Polity scale will be rendered positive by the quadratic term. However, the flex point, or the specific value where the net impact on the risk of conflict reaches its maximum value, becomes much lower relative to Model 1, more specifically this now occurs at a Polity value of about –2.5.

In the case of Model 1, we were unable to find support for any effect of democracy when we replaced the quadratic specification with a linear specification, that is, just the Polity scale without the squared values. However, as can be seen in Model 3, if we replace the quadratic specification in Model 2 with a linear term, we now get a clear and significant negative coefficient for democracy. Hence, we find evidence consistent with our argument about the substitution for democracy once we partition out observations with the problematic values on the Polity scale. Skeptics may argue that a non-linear specification for the effects of democracy still provides a better fit to the data, since Model 2 finds a significant estimate for the squared term. Although a model with more terms by construction must fit the data better, we believe that the simpler linear specification is more defensible on theoretical grounds. We do not normally let all our terms in a regression model enter models non-linearly, and any gain in the statistical fit of a model must be tempered by the loss in degrees of freedom. For example, adding the square of the log of population also increases the statistical fit of the model, but we should clearly be skeptical of such a specification unless it is justified on theoretical grounds. Hence, even if the quadratic specification is statistically significant and fits the data marginally better than the linear term for democracy, the difference seems sufficiently small that the linear form can be said to provide a reasonable, yet

more parsimonious representation of the data. Formal decision theoretic criteria for evaluating the trade-off between fit and parsimony likewise support the linear over the quadratic specification here.[11] In sum, it seems reasonable to infer that there is a great deal more evidence of democracy having a negative effect on the risk of civil war onset once we take into account the positive effects on conflict from state or leader weaknesses.

We take this to support our claim that the alleged non-linear relationship between conflict and democracy is primarily a result of the influence on conflict of coding of particular values for the Polity components, and it supports our argument that greater democracy affords greater possibility for substitution to nonviolent political means than an autocracy. It is unlikely that something about the institutions of a partial democracy per se increases the risk of conflict, but rather something about the ways in which a country comes to be a partial democracy that may be associated with a higher risk of conflict. More specifically, we know that countries classified

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[11] Raftery (1995: 133–134) proposes a Bayesian Information Criterion measure BIC′ to compare the relative degree of support for different models. The general formula is $BIC' = -\chi^2_{k0} + p_k \ln(n)$, where χ^2_{k0} is the likelihood ratio test statistic for a model M_k against the null model M_0, p_k is the number of degrees of freedom consumed by model k, and n is the number of observations. The more negative the BIC′, the greater the evidence for the model over the null. Note that BIC′ penalizes models that consume more degrees of freedom and adjust for the sample size. The Bayes factor, or degree of support for one Model A over another Model B, can be approximated by the difference between BIC'_{MA} and BIC'_{MB}. In this case, $BIC'_{M2} = -383.6 + 11 \ln (6103) = -287.7$ and $BIC'_{M3} = -377.8 + 10 \ln(6103) = -290.6$. The more negative BIC′ value implies that Model 3 is better supported and that the increase in fit for Model 2 with the quadratic specification is not commensurate with the additional loss in degrees of freedom. The difference between the two is above the threshold of 2 that Raftery (1995: 141) suggests constitutes positive evidence for one model over the other.

Table IV. Logit estimates of conflict onset

	Model 4		Model 5		Model 6	
	Coef	*SE*	*Coef*	*SE*	*Coef*	*SE*
(Intercept)	−4.245	0.866	−4.869	0.851	−4.958	0.854
log of GDP pc	−0.271	0.094	−0.307	0.085	−0.301	0.086
Polity	−0.055	0.019	−0.044	0.018	−0.044	0.018
Polity squared						
Polity = −66						
Polity = −77	1.735	0.639	2.193	0.465	2.107	0.472
Polity = −88	0.024	0.484	0.216	0.382	0.172	0.386
PARCOMP = 0 | 1	−0.558	0.211	−0.702	0.199	−0.698	0.199
PARREG = 1 | 2	0.623	0.255	0.542	0.227	0.536	0.228
log of population	0.354	0.043	0.378	0.043	0.379	0.043
Conflict history	2.068	0.214	2.020	0.186	2.02	0.186
Predicted risk irregular transition	0.118	0.033				
Irregular or aut. trans.					0.334	0.279
Irrgular entry			1.087	0.313	0.972	0.327
log of tenure			−0.050	0.108	−0.031	0.109
Entry * log tenure			−0.386	0.167	−0.339	0.171
Chi-square	343.2		394.4		395.7	
Df	10		12		13	
N	4,983		6,093		6,093	

as 'anocratic' in the Polity data often appear to be states where weak leaders who would prefer to rule in an autocratic manner try to offer some half-hearted reform in order to strengthen their position, yet are unwilling to offer reforms that would suffice to bring about any meaningful form of democratic rule.

We now move from observed irregular transitions to examine how potential state or leader weakness affects the prospects for civil war onset. We first consider a two stage approach, using a measure of the predicted risk of irregular transition as a covariate. Our approach is based on first estimating the predicted risk of an irregular transition, based on the data and model specification in Gleditsch & Choung (2008) as well as the covariates in the model. In essence, we use features such as economic performance, regional political characteristics, religious distributions, previous regime type, and a leader's time in office to predict the risk of an irregular transition (see the web appendix for the full results from the first stage regressions). We then use the predicted linear index from this regression as a right-hand side covariate in the second regression. The normal standard errors will not be valid in this second regression since the linear index for the risk of irregular transfers consists of predicted estimates from the first stage regression, and we use bootstrapping to obtain standard errors for the second-stage equation, using 1000 samples with replacement (see Davidson & MacKinnon, 1993). Even if our ability to accurately predict when transitions occur may be limited (Gleditsch & Choung, 2008; Kuran, 1991), we can see from Model 4 in Table IV that a higher predicted risk of irregular transitions is clearly associated with a higher risk of conflict onset. Hence, the previous results indicating that irregular transitions increase the risk of civil war cannot simply be dismissed as an artifact of endogeneity and reverse causality. The

other results for Model 4 are largely similar to those found for Model 3. In particular, we continue to find a significant negative coefficient for the Polity democracy measure.

Given the downsides of predicted regressors and the difficulty of interpreting the effects of time directly in Model 4, we find it helpful to also consider irregular entry of the current leader as an ex ante observable indicator for the risk of irregular transitions. Model 5 in Table IV provides estimates of the risk of conflict with a term for leaders that have entered irregularly, the length of their time in office, and an interactive term between the two. Model 5 indicates a strong positive coefficient for irregular leader entry, and the magnitude of the coefficient suggests that leaders that have entered power irregularly are almost three times more likely to experience conflict at the outset of gaining power than leaders who have assumed power in regular ways. However, since the model now has an interactive term between irregular entry and time in office, the actual specific impact of irregular entry will depend on the length of time that a leader has in office. The coefficient estimates for the log of the tenure and the interaction with irregular entry are both negative, indicating that conflict becomes less likely over time and that the original effect of irregular entry decreases over time. Figure 1 illustrates how the predicted risk of conflict onset varies by type of leader entry and the length of a leader's time in office, for a median observation profile. The grey lines indicate a one standard error confidence bound for the predicted values. Figure 1 shows that the differences in risk of conflict onset are very dramatic at the outset of a new leader, where leaders that have entered irregularly have an estimated risk of conflict onset almost three times higher than that of a leader who has entered regularly, everything else being held constant. The risk of conflict onset generally declines
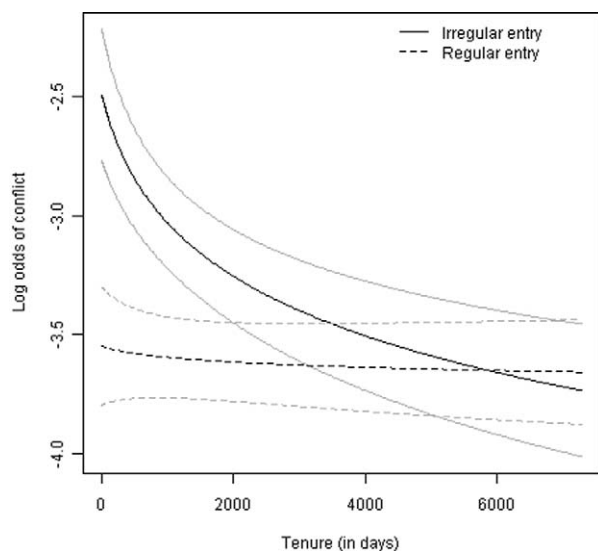
Figure 1. Effect of irregular entry and time in office on conflict onset

with tenure, but the net effect once we take into account the negative interaction between leader entry and time in office suggests that the declining risk of conflict onset with time in office is much greater for leaders who have entered irregularly. Keeping everything else constant, we find that leaders who have entered irregularly but manage to hold on to power for over 15 years have a lower estimated risk than leaders who have entered regularly. The confidence intervals for the predicted risks of conflict leaders that have entered power irregularly and those that have entered regularly overlap after about 2,000 days, or about five and a half years. Although staying in power for periods as long as this is very uncommon among leaders who enter regularly, the tails of leaders with very long tenure is much higher among leaders who have entered irregularly and have managed to extend their rule beyond the first couple of years.

We omit the term for an irregular transition in Model 5 in Table IV. Although an irregular transition is not strictly the same as irregular leader entry, the likelihood of an irregular transition will generally be much higher for leaders that have entered irregularly, even if the effect dissipates over time, and a term for irregular leader entry will capture some of the same variance. However, when we introduce a term for irregular leader entry in Model 6, we continue to find a positive effect for the observed windows where we see irregular transition, suggesting that the specific time around irregular transitions still see an increased likelihood of conflict.

Discussion and conclusions

Many studies have examined non-linear specifications of democracy and civil war to proxy for disparate mechanisms believed to affect the risk of violent conflict. In this article, we have shown that it is possible to devise separate measures of the *opportunities* for violence that emanate from political instability and weaker leaders, and the *willingness* for violence

that stems from restricted opportunities for political participation and advancing political claims by nonviolent means. Data on leader changes can be helpful for devising independent measures of state strength. Periods of leader changes indicate moments of political opportunities, where potential insurgents may mobilize and resort to violence. Furthermore, information on when leaders enter office as well as how long they have held office can tell us a great deal about how vulnerable leaders will be to challenges, either from rebels directly or from other contenders who can challenge leaders weakened by domestic dissent. Our results lend strong support to the claim that political opportunities, as measured by irregular political leader changes, indeed appear to be associated with civil war onset. Moreover, we find that the risk of civil war depends upon factors influencing the anticipated state weakness as assessed by the risk of irregular leader changes. Although leaders that have entered irregularly can encourage civil war onset as they are more likely to be susceptible to challenges and therefore more likely to make concessions to insurgents, the risk of civil war declines with longer tenure. Once we consider these forms of political weakness, we find that democracy has a clear negative effect on the risk of civil conflict onset. We take this to support the conclusion that there probably is nothing about the institutions of partial democracies per se that make such states prone to conflict, and that we should shift our attention to how state weakness may compel autocracies both to introduce half-hearted democratic reforms *and* provide political opportunities that may encourage resort to violence.

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