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Does Conflict Beget Conflict? Explaining Recurring Civil War*

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This article attempts to explain why some countries experience civil wars while others do not. It argues that renewed war is likely to have less to do with the attributes of a previous war, as many people have argued, than with current incentives individual citizens have to rejoin a rebel group. Civil wars will have little chance to get off the ground unless individual farmers, shopkeepers, and potential workers choose to enlist in the rebel armies that are necessary to pursue a war, and enlistment is only likely to be attractive when two conditions hold. The first is a situation of individual hardship or severe dissatisfaction with one's current situation. The second is the absence of any nonviolent means for change. An analysis of all civil wars ending between 1945 and 1996 suggests that a higher quality of life and greater access to political participation have a significant *negative* effect on the likelihood of renewed war. Countries that provide higher levels of economic well-being to their citizenry and create an open political system are less likely to experience multiple civil wars regardless of what happened in a previous conflict.

Introduction

Civil wars create what has been called a conflict trap (see Collier & Sambanis, 2002). Societies that have experienced one civil war are significantly more likely to experience a second or third war than are societies with no prior history of violence. Indonesia, Iraq, Burundi, Rwanda, Sri Lanka, and Iran, for example, have all experienced recurring civil wars where violence broke out not once, but repeatedly over time.[1] Empirically, however, we know that most civil wars are not destined to repeat themselves. Between 1945 and 1996, only 36% of civil wars were followed by an additional war.[2] Single civil wars, like those that broke out in Argentina, Greece, and Costa Rica, are more the norm. Given this variation, what explains why some countries experience recurring civil war while others do not?

What little has been written about civil

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[1] Across cases, there was no consistent pattern in the timing of renewed war. Countries experienced renewed civil war as soon as two years after one war ended, as was the case in Iran, and as long as 33 years later, as was the case in Iraq. The median duration of peace in conflicts that occurred between 1945 and 1996 was 14 years. Thus, even a decade of peace was no guarantee that a country would not experience civil war again.

[2] Of the 58 cases of civil war that ended between 1945 and 1996, 22 experienced renewed war.

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war recurrence has tended to focus on the characteristics or attributes of the previous war to explain why a second or third war might occur (see Licklider, 1995; Doyle & Sambanis, 2000; and Hartzell, Hoddie & Rothchild, 2001). In this view, earlier wars set the stage for conflicts that occur in later years because the original grievances were not resolved, because violence exacerbated ethnic divisions making coexistence difficult, because war ended in unstable compromise settlements, or because the human costs of war created psychological barriers to building peace.

In what follows, I argue that none of these factors will lead to a second or third war in the absence of strong economic and political incentives for the average citizen to fight. A distinguishing feature of civil wars is the need for rebel leaders to recruit sufficient soldiers to man a rebel army. Civil wars will have little chance to get off the ground unless individual farmers, shopkeepers, and workers voluntarily choose to enlist in the armies that are necessary to pursue war, and it is the underlying political and economic conditions that make enlistment attractive that are likely to drive a second or third civil war (as well as the initial war). Only if we identify these micro-level motives for recruitment can we begin to explain why civil wars arise in some countries and not others, and why individuals who were once willing to join an army may or may not be willing to join again.[3]

An analysis of every country year in every country experiencing a civil war between 1945 and 1996 suggests that basic living conditions and the average person's access to political participation have a significant effect on the likelihood of renewed war, regardless of what has already happened in a previous conflict. Countries whose citizens enjoy high levels of economic well-being and have access to a more open political system are significantly *less* likely to experience multiple civil wars than autocratic countries with low levels of individual welfare. Other factors such as the duration of war and the willingness of a government to partition territory also had a significant effect on whether another war surfaces, but these effects matter only for certain types of renewed war. This suggests that war is unlikely to resurface unless individual citizens have pressing personal reasons for enlisting in a rebel organization.

Explaining Recurring Civil War

Current explanations for repeat war tend to fall into one of three camps: (1) those that focus on why the original war began, (2) those that focus on how the original war was fought, and (3) those that focus on how the original war ended.

Why the Original War Began

Scholars of civil war have long argued that some types of disputes are more difficult to reconcile than others and thus more likely to lead to repeat confrontations. Civil wars that are fought between competing identity groups are believed to be particularly intractable since, as Gurr (2000: 66) has observed, 'cultural identities – those based on common descent, experience, language, and belief – tend to be stronger and more enduring than most civic and associational identities'. Moreover, once war breaks out, ethnic identities and hatreds tend to become cemented in ways that make cooperation and coexistence between the groups even more difficult, and these are the wars that are likely to recur over time (see Rothchild & Groth,

[3] I am not the first person to identify rebel recruitment as an important factor in civil war. Elbadawi (2001), Collier & Hoeffler (2001), and Fearon & Laitin (2003) have all identified the differential ability to recruit as a possible cause of war, and Gates (2002) has argued that rebel retention is a key variable in the duration of civil war. In addition, for a classic argument on the importance of rebel recruitment, see Mao (1967).

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1995; and Kaufmann, 1996, 1998). The recurring conflict in the Balkans, as well as the repeated violence between groups such as the Hutus and Tutsis, Turks and Armenians, Jews and Arabs are often identified as examples of this.

Rebel demands are also thought to affect the likelihood of repeat conflict. Rebels who seek extreme objectives such as the elimination of an incumbent regime or the revolutionary overthrow of an entrenched political, economic, or social system have defined the conflict in a way that makes a stable long-term settlement less likely. Not only do extreme demands tend to lock parties into positions that lead to bargaining deadlocks, but public statements seeking extreme goals also raise expectations in the minds of supporters that these goals are attainable, making compromise more difficult. Wars might end temporarily, but will re-emerge as soon as one or both sides have regrouped sufficiently to seek a more satisfying solution.

How the Original War Was Fought

A second set of arguments focuses on the costs of a previous war to determine whether combatants are likely to return to the battlefield. Three mechanisms in particular are purported to make war more or less likely in the aftermath of especially costly fighting: the desire for retribution, combat weariness, and increased information about combatant capabilities. In a preliminary study of violence in civil wars, Kalyvas (2000) found that 'personal vengeance was a recurrent motive' for participation in war. Wars that inflict high costs on combatants and their supporters could exacerbate animosity between them and create a strong desire for retribution even after the war ends.[4] If this is true, then parties involved in more costly wars should be more eager to restart their conflict than if they had faced fewer costs and sustained less suffering.

Costly wars, however, could have the opposite effect. Countries that have experienced a particularly devastating civil war may be less vulnerable to a second or third war because supplies have been exhausted, soldiers fatigued, or popular support used up (Rosen, 1972). In this case, wars are less likely to recur because the resources and resolve needed to launch additional wars are lacking.

Finally, the length of a conflict may also provide important information about the government's relative strength and their own chances of winning a war. Smith & Stam (2002: 7), for example, have argued that 'wars that end quickly, leaving one or both sides still quite uncertain about the true balance of power, are much more likely to reopen than those wars that end not only with agreement about the balance of power but also little doubt about the certainty of that agreement'. Long wars, therefore, act as an important information source, with more accurate information helping to prevent renewed conflict in the future.

How the Original War Ended

Other scholars point to how the original war ended to predict whether it will start again, and three arguments tend to be made. The first focuses on the degree to which combatants are able to reconcile the main grievances driving the war. Governments that are willing to address and settle key rebel grievances are believed to have a higher chance of avoiding renewed violence than governments that leave important issues unanswered.[5] Once the main motivation driving a rebel movement has been addressed, the organization should dissipate, and wars should end.

[4] These more violent wars may also indicate a greater willingness (or tolerance) on both sides to pay the costs of war. Divisions in these wars may be so intense that they are unlikely to subside even well into the future.

[5] For arguments that focus on grievances as a main cause of war, see Gurr (1971) and Tilly (1978).

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The second argument focuses on a war's outcome to determine whether it will recur. Wars that end in a decisive military victory for one side are believed to be less likely to resume for one of two reasons. The first has to do with information. Decisive outcomes may impart more information about the victor's relative strength than those that end in some type of compromise settlement. In this case, potential challengers know they will face a relatively strong and resolute victor if they choose to act, and may be deterred from rebelling as a result. A decisive victory may also deter additional challenges for a second reason. In civil wars, the victorious party almost always gains full control over the instruments of state, allowing it to consolidate power in the aftermath of war (Zartman, 1989, 1995; Wagner, 1993, 1994). This consolidation is likely to increase its strength relative to other groups in society, increasing costs of rebelling and encouraging potential opponents to remain quiet. If the decision to rise up rests on the expected costs and benefits of fighting a particular opponent, then decisive victories that allow large power asymmetries to be institutionalized should be followed by fewer additional wars.

A third argument focuses on the geographic distribution of the combatants at the end of the war, and two opposing predictions are made. Kaufmann (1996, 1998) has argued that conflicts that leave the combatants physically separated are less likely to restart. This is because groups divided into separate homogeneous regions have less reason to fear a surprise attack, and fewer incentives to launch a pre-emptive attack of their own. Walter (2004), however, argues that partition should have the opposite effect, where a division of territory is likely to trigger additional wars rather than peace. In this case, partition serves to signal to other ethnic groups that the government is conciliatory and will likely acquiesce to their own demands for greater self-rule. The result should be a greater number of challenges and more war.

Argument

In what follows, I argue that factors related to rebel recruitment will be at least as important in determining where war will recur as factors associated with a previous war. The argument rests on the simple observation that for civil wars to resume, hundreds or thousands of individual citizens must actively choose to re-enlist with a rebel organization. Rebel leaders do not have the luxury to call on a standing army or forcibly conscript citizens should grievances or opportunities for rebellions arise. Instead, they must recruit and remobilize soldiers for each individual campaign. This places the onus for renewed war on ordinary people and the trade-offs they must make for returning to war or staying at peace, and their decision to enlist or not enlist is likely to be based on very personal cost calculations. The attributes of a previous war may matter, but civilians are not going to transform themselves from shopkeepers back into soldiers unless the conditions that exist *at any given point in time* encourage this transformation.

Enlistment, therefore, is likely to become attractive when two conditions hold. The first and most important is a situation of individual hardship or severe dissatisfaction with one's current situation. The status quo must be perceived to be worse than the possibility of death in combat, a condition I call 'misery'. The second is the absence of any nonviolent means for change. Violence must be perceived as the only available tool for the average citizen to improve his or her situation, a condition which can be termed 'lack of voice'. Because rebel recruitment is vital to the emergence of war, countries with high levels of individual hardship *and* restricted outlets for nonviolent change should be

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more likely to experience recurring civil war, regardless of what happened in the past.[6]

The fact that soldiers must be recruited for each distinct conflict does not mean that different individuals fight each war. If the theory is correct, the soldier who enlists in one war is likely to be the same soldier who enlists again and again. This is because enlistment is likely to come disproportionately from poor sectors of society and those sectors who feel particularly marginalized politically. In addition, individuals who were once soldiers are arguably more likely to rejoin rebel groups because they know the organization, the organization knows them, and because they may have problems reintegrating into society. The fact that personal motives for joining may be connected to a previous experience with fighting does not reduce the importance of current incentives to enlist. States with higher living standards and those with more open, competitive political systems should still be able to escape this conflict trap simply by reducing the incentives for these individuals to fight.

Focusing on the immediate incentives for enlistment, therefore, helps explain why individuals who were once willing to join a rebel army are then unwilling to join again. Individuals will have few incentives to enlist once their living standards have reached the point where the potential net benefits from fighting no longer exceed the status quo. A particularly clear example of this relationship can be found in Indonesia. Aceh's rebel organization, known as GAM, had a difficult time recruiting members between 1976 and 1989 owing in part to increased individual income levels, increased GDP, and rapid economic growth (Ross, 2003). The same individuals who had been willing to fight with GAM for independence from Jakarta between 1976 and 1979 were no longer willing to fight once their economic situation had improved, and conflict dissipated even though the movement's main objective (independence) had not been met. Enlistment significantly dropped even though no concessions had been made to the separatists. As living standards improve, the incentives to risk one's life to change the status quo decreases, even if grievances and animosity remain.

I should emphasize that the focus on individual incentives for enlistment does not mean that it is the only factor necessary for a civil war to resume. For a civil war to occur, intergroup antagonisms and grievances must exist, leaders must emerge to coordinate and manage recruitment, and resources and supplies must be available to support the movement over time.[7] In addition, there is more to the incentive structure of individuals than just declining standards of living and access to political participation. An individual's willingness to enlist in a rebel organization is likely to also be affected by his or her propensity to accept risk, as well as his or her political preferences and opinions. Civil wars will not emerge simply because individual citizens wish to improve their standard of living and have no political means to do so; a life of poverty in a one-party state does not guarantee that a civil war will erupt. This article seeks only to show that citizen participation is an important and understudied factor in the ability of these movements to get off the ground.

[6] Collier & Hoeffler (2002) were the first to argue that the opportunity costs for potential recruits were likely to be a main determinant in the outbreak of civil war. My argument is different as it maintains that individuals are driven to join rebellions as a means to improve extremely low standards of living, not to obtain profit. In my interpretation, individuals are motivated by desperation, not greed.

[7] Kuran (1989), for example, has shown how collective action problems can hinder the outbreak of rebellion. Collier has focused more closely on the financial incentives of rebellion, where the existence of lootable commodities can help encourage rebellion. For discussions on other issues necessary to recruit and sustain rebel organizations, see especially Gates (2002) and Collier & Hoeffler (2001).

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Research Methodology

The aim of this article is to present and test a theory of civil war recurrence that highlights the importance of individual incentives to fight. It is, in other words, an attempt to incorporate the calculations of the average rebel recruit into our understanding of civil war onset. To be included in the analysis, a country had to experience a civil war that ended between 1946 and 1996 as based on the coding criteria proposed by the Correlates of War (CoW) project.[8] To be coded as a civil war in the Correlates of War dataset, cases had to involve at least 1,000 battle deaths within a given year for the domestic part of the war. Competing theories were then tested using a cross-sectional time-series format with annual observations in each country as the unit of analysis. Based on this format and these criteria, a dataset of 1,151 country-years was created.[9] The Appendix lists the 58 conflicts from which these country years were drawn.[10]

Measuring the Dependent Variables

In order to see which of the theories presented above help predict the conditions under which countries will experience recurring civil war, I created three dependent variables. A binary variable, *Subsequent War*, was first fashioned to examine the general causes of any kind of subsequent conflict. It was coded 1 for the year in which a renewed war broke out regardless of who the combatants were and what their goals were, and 0 for all other country-years.[11] Since it is possible that the factors that lead the same set of combatants to restart a war may be very different from the factors that lead a new set of combatants to initiate a new war, I created two additional variables, *Repeat War* and *New War*. A war was coded as a *Repeat War* if it was fought by the same combatants for the same goals as the original war and met all the coding criteria outlined above. Of the 58 civil wars in the dataset, 14 ultimately resulted in repeat wars. In these 14 cases, combatants stopped fighting and often signed detailed agreements that outlined the transition to peace and the new form of government only to go back to war at a later point in time. A number of countries such as Burma and Iraq, however, experienced multiple unrelated wars. The last dependent variable, *New War*, was thus coded 1 for any year in which a subsequent war between new combatants broke out and 0 otherwise. Of the 58 cases of civil war that ended between 1946 and 1996, 8 were followed by new wars.

Measuring the Independent Variables

To determine if the issues driving the initial war affected the likelihood of subsequent wars, two different variables were included in the analysis. First, if the combatants broke down along ethnic lines, or a faction defined itself as a separate ethnic group, it was coded as an *Ethnic Civil War*; all other wars were coded as non-ethnic.[12] Second, the demands of the rebels in the original war were also recorded to determine what effect they had on the likelihood of additional wars. If the rebels initiated the war to obtain anything less than total control over the government (i.e. political reform, land reform, territorial autonomy, etc.) the war was coded as involving *Non-Total Goals*.[13] These conflicts were

[8] For greater elaboration, see Small & Singer (1982).

[9] Country-years with an ongoing war were dropped and are not included in the dataset.

[10] The Appendix is available at http://www-irps.ucsd.edu/irps/faculty/bfwalter/data.html.

[11] This information was obtained from the Correlates of War dataset, and Walter (2002); see http://www-irps.ucsd.edu/irps/faculty/bfwalter/data.html. More in-depth details regarding the coding rules for the dependent variable, as well as for the independent variables, are also available on this website, as well as on the website of *Journal of Peace Research*.

[12] Cases were coded based on information obtained from Keesing's Contemporary Archives and individual case histories.

[13] Cases were coded based on the stated aims of the rebels at the beginning of the conflict rather than the stated goals of the government, since it is the rebels who almost always initiate a war and are therefore likely to define its parameters. Keesing's Contemporary Archives and individual case histories were once again used as sources.

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expected to have a lower rate of recurrence than those fought in pursuit of more absolute goals. All other wars were coded as having *Total Goals*.[14] One potential problem with coding rebel goals based on the stated aims of the movement is that leaders may strategically misrepresent their aims in order to obtain a better settlement down the road. In this case, leaders may publicly demand more extreme concessions from the government, only to reduce these demands in give-and-take negotiations later on. While strategic misrepresentation almost certainly occurs, there remains considerable variation in the range of rebel demands across cases. In fact, rebel movements publicly sought limited aims in almost half of all civil wars fought between 1946 and 1996.[15] If the theory is valid, we should still observe variation in the outbreak of renewed war between those cases where the rebels demanded total versus non-total goals.

The second set of independent variables focused on the impact of war costs on renewed war. High costs were expected to have at least one of three effects. First, they could create a desire for revenge. Second, they could increase war fatigue. Third, they could provide important information about the likely outcome of a future war. To engage each of these possibilities, three variables were included in the analysis. The first, the number of *War-Related Deaths* that took place during a war, was measured as a continuous variable that ranged from a low of 1,000 battle deaths, to a high of more than 1.25 million deaths.[16] The second, a measure of the *Duration of War*, varied from a low of one week to a high of 396 months. Both measures were obtained from the Correlates of War dataset. The third criterion, *Displaced People*, was obtained from Sambanis (2000) and measured the number of people displaced both internally and externally due to the war. All three of these variables were log-transformed.[17]

The final set of variables focused on factors associated with the resolution or outcome of the original war. One logic suggests that if grievances surrounding the earlier war are resolved, renewed war should be less likely. Two measures were used in an attempt to isolate the effect of grievance resolution on war recurrence. The first, *Grievance Settled*, was a dummy variable constructed from a variety of sources including *Keesing's Contemporary Archives*, the Initiative on Conflict Resolution and Ethnicity, the African Centre for the Constructive Resolution of Disputes, and individual case histories. This variable was coded 1 if the terms of a treaty addressed and resolved the main rebel grievances that were stated at the beginning of the war, and 0 otherwise. Grievances were considered settled if a final peace treaty included provisions that specifically addressed these issues, or if the rebels won a decisive military victory and were therefore able to unilaterally implement these changes on their own.

Another potentially relevant factor associated with the outcome of the original war is the decisiveness of victory. Wars that ended with one side dominating the other were presumed to leave little opportunity or incentive for the weaker side to renew the

[14] In addition to this dummy variable, two additional measures of goals were analyzed that differentiated between different levels of rebel aims. These measures included an indicator of territorial goals (coded 1 if the rebels sought greater territorial autonomy/separation, 0 otherwise), and a categorical indicator of goals (coded 1 if the war was fought over political reform, 2 if over territorial autonomy or separation, 3 if over full control of the government, and 4 for social revolution). No significant differences to the substantive results emerged.

[15] Rebel demands were limited in 26 of 58 civil wars (45% of the cases).

[16] It should be emphasized that accurate counts of war-related deaths are notoriously difficult to obtain. Many deaths go unreported, while others are either under- or over-reported for strategic reasons. For a detailed discussion of how the CoW project attempted to correct this problem, see Small & Singer (1982: 70–77).

[17] Alternate analyses with these three variables not log-transformed led to identical conclusions.

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war. Thus, each regression includes a dummy variable indicating whether the war ended in a *Decisive Victory* (for either side) or not.[18]

The second measure attempted to address the notion that settlements based on some form of *Partition* between or among the combatants would be more likely to bring peace. Here I used the definition first presented by Sambanis (2000) where partition is defined as a war outcome that involves both border adjustment and demographic changes. Wars are coded 1 if an event of partition is observed, 0 otherwise. One problem, however, exists with coding partition this way. Civil wars that end in partition could not, by these coding rules, experience a second civil war, since any additional war between the two combatants would be defined as an interstate war. To account for this problem, all cases of war between previous combatants were included in the dataset, even if partition had occurred.[19]

Finally, to address the idea that the economic and political conditions on the ground at any given point in time are likely to affect the ability of rebel leaders to recruit soldiers, I include two sets of factors. The first addresses quality of life issues. Several different measures were used to test whether living standards influence the likelihood of renewed war. In the main analysis that follows, I include a measure of the *Infant Mortality Rate* (deaths per 1,000) in each country in each year. To test for the robustness of this theory, I substituted measures for *Life Expectancy* (measured at birth), the percent of *Adult Illiteracy*, and *Real GDP/capita* – all measured in each country in each year. Since each of these variables was highly correlated, they were not included simultaneously in the model and were instead used in alternate analyses. I also tested the effects of a scale that combined infant mortality, life expectancy, and adult illiteracy. Data on each of these measures was obtained from the Socio-Economic Data Division of the World Bank's International Economics Department.

The second factor that should affect individual citizens' decision to re-enlist (and thus the likelihood of renewed war) is political openness. Countries with few nonviolent outlets for citizens to seek governmental reform should be more susceptible to renewed war than those with more open systems. Three alternate measures were tested to see if 'voice' had any effect on renewed war: (1) an overall *Democracy/Autocracy* scale from the Polity III dataset; (2) a measure of *Executive Constraints* on a government's executive branch – also from Polity III; and (3) a measure of *Political Openness* published by Freedom House (also known as the Gastil Index). Since all three measures were highly correlated and because the Democracy/Autocracy score was available for almost all of the cases, only this score was used in the final analysis.

Finally, three additional variables were incorporated in the model as controls. A measure of the *ethnic heterogeneity* from the Vanhanen (1999) dataset was included in the model to see if countries with greater racial, religious, and linguistic divisions were prone to a greater number of conflicts.[20] A second control variable was included to account for a finding by Fearon & Laitin (2003) that the number of civil wars per year has increased over the last fifty years. In order to address this increase over time, I included a variable

[18] In an alternate test, decisive victories by the government were distinguished from decisive victories for the rebels. These tests indicate that the effects of a decisive victory are the same regardless of who wins. Source: Sambanis (2000), Variable OUTCOME2. Note this dataset is posted on the World Bank website: http://econ.worldbank.org/view.php?topic=19&type=18&id=13218.

[19] Only one case, Croatia and former Yugoslavia, suffered from this problem. It was included in the dataset as a separate observation.

[20] In alternate tests, a different measure of diversity within a nation – the commonly used *Ethnolinguistic Fractionalization* Index (ELF index) – was included. The results remained the same.

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indicating the year under observation. Finally, in line with Beck, Katz & Tucker (1998), I included both a count of the number of years from the end of the original conflict, *peace years*, and a natural cubic spline of *peace years* in order to assess how war recurrence is related to the duration of postwar peace.[21]

Findings

Why do some countries experience recurring civil war while others do not? Model 1 in Table I shows the results of a logit regression with *Subsequent War* as the dependent variable.[22] It tests a series of factors related to the original war and another series of measures related to current living conditions to see how each affects the propensity for any type of civil war to occur in any given year after combatants have agreed to end the previous civil war.

Two conclusions can be drawn from this analysis.[23] First, civil war recurrence is related to some of the characteristics of a previous war. Two factors (duration and partition) had a significant effect on whether a given country experienced multiple civil wars. In the first case, longer and presumably more costly wars reduced the likelihood that a country would face a second, third, or fourth conflict.[24] This findings mirrors findings by Mason & Fett (1996) and Sambanis (2000) that longer wars are less likely to recur. This relationship suggests that longer wars may be deterring additional challenges either because resources and support have been depleted or because better information on relative capabilities and resolve is available to potential combatants. Additional tests would be required to determine which of these two mechanisms is actually at play.

Partition was also highly significant.[25] Governments that had agreed to partition their country as a result of one war were significantly *more* likely to face additional wars. This finding stands in contrast to predictions made by Kaufmann that partition promotes long-term peace, but is compatible with Walter's (2004) expectation that partition would encourage copy-cat movements. Government concessions over territory in one case appear to encourage additional challengers to initiate their own demands.[26]

In contrast, all of the other factors related to the original war appear to have little effect on the re-emergence of violence. Wars fought for total goals, or between different ethnic groups[27] were no more likely to recur than wars fought over less demanding issues, or between the same ethnic group. Finally, the costs incurred during a previous war

[21] A comparison of the fit of the model with the splines and one without indicated that the war recurrence was non-linearly related to peace duration and thus that the splines should be included. All splines in the subsequent tables allowed for four knots, placed at 5, 9, 16, and 26 years of peace. The number of knots and several different knot placements were tested to try to determine the best fit. I also repeated the analysis using two different specifications (one with temporal dummy variables for each peace year included and one with only the continuous *peace years* variable included) and found that they led to identical substantive findings.

[22] The regressions use Huber/White standard errors with clustering by country to take into account the non-independence of multiple cases from the same country.

[23] In alternate analyses, I employed the same independent variables using a standard survival model to predict the number of peace years after each civil war. As expected, the conclusions were identical (Beck, Katz & Tucker, 1998). The same sets of factors that lead to recurring civil war are related to the duration of post-conflict peace.

[24] In a related study on the duration of peace, Fortna (2002) found that longer wars brought longer periods of postwar peace, and Hartzell, Hoddie & Rothchild (2001) found that longer wars were more likely to lead to longer periods of peace *if* a war ended in a negotiated settlement. Doyle & Sambanis (2000), however, found only weak support for the hypothesis that longer wars deter future conflict, and Dubey (2002) found no relationship at all.

[25] Sambanis (2000) had similar findings in a study of the effect of partition on ethnic war recurrence. In a study of ethnic civil wars since 1944, he found that partition in these cases was positively correlated with war recurrence.

[26] In an unrelated project, Walter (2004) has demonstrated that governments appear to take this into account when determining what concessions, if any, to make.

[27] Although Collier & Hoeffler (2001) found that countries in which the largest ethnic group constitutes 45–90% of the population are significantly more likely to experience civil war.

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(measured in terms of battle deaths) had no real effect on the likelihood that another war would occur.[28] Since the different measures of costs are related and at least somewhat correlated, I reran the analysis with each separately. I also created an additional variable, war intensity, which was battle deaths divided by war duration. Only duration was significantly related to future conflict in any of these different specifications. This supports the interpretation that duration serves an important information-revealing role in civil war.

Similarly, other than the effects of partition, there was no clear relationship between how a war ended and subsequent war.[29] Wars in which the main grievances remained unresolved were no more prone to repeat themselves than those that did not. Whether a previous war ended with a decisive victory also had little impact on the likelihood of renewed violence.[30] It is interesting to note, however, that a change in the balance of power between the two combatants over time may have a significant effect on the outbreak of renewed violence that is not captured in this static measure of the outcome of a civil war.[31]

The second important conclusion to emerge from Model 1 is that current living conditions do play a significant role in whether additional civil wars occur. Higher infant mortality rates in the years after the end of the first war are positively and significantly related to renewed war.[32] This lends support to the idea that individuals choose to re-enlist with rebel organizations when conditions at home are dire.

A lack of democracy or voice, at least as measured here, did not appear to be closely linked to the renewal of conflict. As we will see later, however, when the non-linear effects of democracy are assessed, ties between democracy and subsequent conflict do emerge.

Since it is difficult to interpret the magnitude of these effects from the logit regression shown above, Table II converts the significant coefficients from Model 1 into predicted probabilities. In each case, all of the other variables are held constant at values for a hypothetical median case.[33]

Table II indicates that all three factors highlighted can greatly increase or decrease the likelihood of subsequent war. Countries with a high infant mortality rate (measured as the 75th percentile) more than triple the odds that war will recur in any given year, compared to countries with a low infant mortality rate (measured as the 25th percentile). Countries that fight long wars are over five times less likely to return to war in a given year than countries that fight short civil wars. And governments that end one

[28] Sambanis (2000) and Doyle & Sambanis (2000) both found a significant and positive relationship between the human costs of war and war recurrence.

[29] Again, since the different measures of war outcome are correlated, I reran the analysis with each measure separately but found that this made no difference to the results.

[30] Doyle & Sambanis (2000) had a similar finding in their study of factors related to peacebuilding in the aftermath of civil war. They found that a decisive military victory for either side was completely unrelated to whether war recurred. Licklider (1995), Dubey (2002), and Fortna (2002), however, found that civil wars that ended in a military victory were significantly less likely to be followed by additional wars than wars that did not.

[31] In an interesting study of interstate wars, Werner (1999) found that a change in the relative power of the belligerents in the aftermath of war was more likely to lead to recurring war than a decisive military victory. This is because the increasingly stronger party to a conflict has incentives to renegotiate the terms of the previous peace settlement in its favor as its power increases. This relationship is not captured in my model, although the logic of the underlying argument should hold equally well in the case of recurring civil war.

[32] Elbadawi & Sambanis (2002) had similar findings. Using a cross-sectional time-series dataset with five-year frequency covering the period 1960–99, they found that greater economic development reduces the risk of the initial onset of civil war.

[33] The values for this median case are: ethnicity (0), extent of goals (.66), logged battle deaths per 1,000 (2.44), logged displaced persons (7.33), grievances settled (0), decisive victory (1), ethnic heterogeneity (43.7), year (1980), and peace years (16). These probabilities are calculated using a simulation procedure developed by King, Tomz & Wittenberg (2000).

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Table I. Determinants of Subsequent Civil War

	Model 1	*Model 2*	*Model 3*	*Model 4*
Characteristics of previous war				
Underlying issues:				
Ethnic conflict	.16 (.68)	–.15 (.69)	.28 (.89)	.17 (.66)
Total goals	–1.36 (.74)	–1.50 (.80)	–1.33 (.95)	–1.26 (.76)
Costs of war:				
Battle deaths/1,000[b]	.12 (.16)	.08 (.15)	.10 (.21)	.05 (.17)
Duration of war[b]	–.46 (.17)	–.46 (.17)**	–.64 (.23)**	–.42 (.18)*
Displaced persons[b]	.04 (.05)	.03 (.05)	.10 (.07)	.06 (.05)
War resolution:				
Decisive victory (1 – yes)	–.93 (.78)	–.99 (.80)	–1.04 (.88)	–.86 (.77)
Grievances settled (1 – yes)	.23 (.69)	.32 (.67)	.75 (.87)	.19 (.69)
Partition	2.08 (.94)*	2.27 (.93)*	1.87 (1.31)	2.02 (.99)*
Living conditions				
Infant mortality[a]	.02 (.01)**	—	—	.017 (.007)**
Life expectancy[a]	–	–.10 (.04)**	—	—
Illiteracy[a]	–	–	.037 (.019)*	—
Level of democracy[a]	.04 (.05)	.04 (.05)	.05 (.06)	.04 (.05)
Change in infant mortality[a]	—	—	—	.054 (.024)*
Change in democracy[a]	—	—	—	.06 (.07)
Controls:				
Ethnic heterogeneity	–.002 (.01)	–.01 (.01)	–.009 (.01)	.001 (.01)
Year	.02 (.03)	.02 (.03)	.04 (.03)	.02 (.03)
Peace years	–.72 (.34)*	–.72 (.34)*	–.60 (.39)	–.67 (.36)
Spline (1)	1.05 (.58)	1.05 (.58)	.81 (.71)	.44 (.73)
Spline (2)	1.27 (.51)	1.27 (.51)*	1.06 (.58)	1.21 (.54)*
Spline (3)	.57 (.33)	.59 (.34)	.50 (.39)	.54 (.36)
Spline (4)	.63 (.37)	.63 (.37)	.49 (.42)	.51 (.38)
Constant	–5.64 (2.01)	2.06 (2.87)	–5.96 (2.47)	–3.10 (2.36)
N (war occurrences)	22	22	21	22
N	1,073	1,061	999	1,008

[a] Lagged one year; [b] Logged.
Logistic regression. Figures are coefficients with standard errors in parentheses.
* p <.05; ** p <.01.
Stata VII was used to generate the statistical results.

civil war via partition increase almost tenfold the odds that they will face another violent challenge.

Readers should also not be misled by the low percentages in Table II. Even though, *in any given year,* the probability of returning to war is small, these probabilities cumulate over time. Thus, even a small increase in the probability of going to war in a given year means that the odds of *eventually* returning to war are much higher.[34]

[34] Thus even though, on average, across the 58 countries in the dataset there is only a 1.8 probability of returning to war in any given year, 21 of them (36%) eventually face renewed conflict.

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Table II. Probability of a Subsequent War

Variable	*Probability of subsequent war*
Infant mortality	
Low (41/1,000)	0.5
High (116/1,000)	1.7
Change in probability	1.2
Duration logged	
Short (0)	2.7
Long (3.99)	0.5
Change in probability	–2.2
Partition	
No	0.8
Yes	7.7
Change in probability	6.9

Probabilities are calculated varying particular independent variables from the 25th to 75th percentiles while holding other variables at values constant at a hypothetical median case using a simulation procedure developed by King, Tomz & Wittenberg (2000).

Robustness Checks

It remains unclear, however, which of the quality-of-life measures are more critical in the decision to fight, since only infant mortality is included in Model 1. Models 2 and 3 in Table I address this issue by looking at the effects of life expectancy and adult illiteracy on the likelihood of subsequent war. What becomes clear when each of these variables is included in a separate analysis is that a wide variety of quality-of-life measures are significantly related to war recurrence. Life expectancy and adult illiteracy are both significant or nearly significant ($p = .055$ for illiteracy) when substituted for infant mortality in the basic model. This suggests that higher levels of individual well-being, however measured, reduce the odds of additional civil wars.[35]

[35] Alternate tests suggested that wealth, (GDP per capita), had a similar if more muted effect on the likelihood of renewed war. As GDP was unavailable for about half of the country years, it was not included in the final model. A combined index of infant mortality, life expectancy, and illiteracy also had a significant and pronounced effect on the odds of returning to war.

What is less clear at this point is whether citizens care more about the change in their living standards over time or whether absolute living standards mattered more when determining whether to rebel. Model 4 in Table I tackles this question. Although the small number of cases and a fair degree of collinearity make it extremely difficult to adjudicate between the two different accounts, the results suggest that individuals respond both to absolute quality of life and to changes over time in quality of life. A measure of change in infant mortality in the preceding two years is significantly related to the onset of subsequent war. In particular, countries that experience relatively sharp increases in infant mortality are more prone to renewed war.[36] These results suggest that individuals turn to violence because their overall quality of life is low and also, potentially, because they believe conditions are declining rather than improving.

Finally, it is worth noting that only one of the different measures of democracy tested in Table I had a significant relationship to war recurrence. Later, I attempt to assess more carefully when democracy may be related to war recurrence.

Resuming Old Wars vs. Starting New Wars

An additional refinement of the analysis presented in Table I is necessary. Countries that experience multiple civil wars do not always experience the same type of war. One could argue that the conditions that lead to repeat wars are likely to be different from those that lead to brand new civil wars. Table III

[36] This relationship between worsening conditions and subsequent war continues to hold if one focuses on changes in life expectancy or changes in adult illiteracy. It also holds if one focuses on changes in the last five years rather than in the last two years. It does not, however, hold if one looks at the rate of change between the current country-year and the first year after the original war, making one less confident about the robustness of this finding. In all of these different specifications, absolute conditions retain their significance.

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Table III. Determinants of Subsequent Civil War: Non-Linear Effects of Democracy

	All subsequent wars	*Repeat war*	*New war*
Characteristics of previous war			
Underlying issues:			
Ethnic conflict	.24 (.64)	.69 (.67)	–2.64 (1.63)
Total goals	–1.73 (.78)*	–1.685 (.945)	–1.78 (1.49)
Costs of war:			
Battle deaths/1,000b	.12 (.17)	–.10 (.26)	.55 (.35)
Duration of war b	–.440 (.176)*	–.29 (.23)	–1.09 (.49)*
Displaced persons b	.04 (.05)	.12 (.07)	.01 (.12)
War resolution:			
Decisive victory (1 – yes)	–1.10 (.87)	–1.48 (1.04)	#
Grievances settled (1 – yes)	.32 (.62)	.50 (.43)	–2.49 (1.83)
Partition	1.91 (.91)*	.61 (1.26)	6.15 (2.44)*
Living conditions			
Infant mortality[a]	.018 (.006)**	.017 (.008)*	.031 (.016)
Clear democracy	–2.058 (1.139)	–1.32 (1.24)	#
Clear autocracy	–1.00 (.565)	–.78 (.74)	–1.65 (1.07)
Controls:			
Ethnic heterogeneity	–.01 (.01)	–.01 (.01)	.004 (.024)
Year	.02 (.03)	.01 (.04)	.07 (.07)
Peace years	–.73 (.33)*	–.721 (.407)	.55 (.67)
Spline (1)	1.16 (.57)*	1.215 (.686)	–1.33 (1.06)
Spline (2)	1.31 (.51)*	1.28 (.618)*	–.01 (.70)
Spline (3)	.59 (.33)	.689 (.406)	–.87 (.70)
Spline (4)	.71 (.37)	.33 (.71)	–.28 (.68)
Constant	–4.86 (2.07)*	–5.91 (2.73)*	–8.75 (4.29)*
N (war occurrences)	22	14	8
N	1,127	1127	846

[a] Lagged one year; [b] Logged.
Logistic regression. Figures are coefficients with standard errors in parentheses.
* p <.05; ** p < .01.
# Predicts outcome perfectly; variable is excluded.

explicitly distinguishes between the two different kinds of wars. In the second column, I look at the factors that predict *Repeat Wars*, where the conflict is between the original combatants over essentially the same sets of issues, and in the third column, I focus on *New Wars*, where the subsequent conflict is between a different set of combatants from the original war.[37]

The results in Table III suggest that for the most part the factors that lead the same combatants to go back to war are fairly similar to the factors that lead new combatants to start a war. In particular, 'misery' or quality of life is a critical factor in both types of war. Basic living conditions were related both to whether new combatants initiated violent civil conflict and to whether the same combatants returned to war. Countries with low rates of infant mortality were markedly less likely to have civil war re-emerge. The same results were obtained when life expectancy and adult illiteracy were independently substituted for infant mortality.

The results in Table III do, however, hint

[37] Given the small number of *new wars* (8), it is particularly difficult to model their causes, so the results in Table III should be read with some caution.

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at some interesting and potentially important differences between the factors that cause the two types of war. Surprisingly, there is little to no relationship between factors related to the old war and the repetition of that same war. The goals of the original combatants, their ethnicity, the costs of the previous war (both duration and battle deaths), and the degree to which rebel grievances were settled appear to have little effect on the re-emergence of that war. Thus, the attributes of a previous war do not appear to doom combatants to enter a cycle of repeated violence. However, some of the features of the previous war appear to be related to the onset of a new civil war. Specifically, partition and duration were significantly related to the onset of a new civil war. At first glance, this finding might appear peculiar. If anything, the attributes of a previous war should be related to a repetition of the same war, not a new one. This finding, however, is consistent with theories that focus on the effects of uncertainty on war initiation. Long wars and wars in which the government is willing to part with land reveal important private information about a government's willingness to fight, and its willingness to make concessions over territory. Thus, while short wars certainly have their merits, and partition has been advocated as a means to prevent additional wars, both appear to have the undesirable effect of triggering additional wars.

Contrasting Democracies, Autocracies, and Semi-Democracies

Earlier in the article, I argued that regime type should affect the average person's decision to enlist in a rebel army or not. Individuals should be more willing to initiate violent challenges in countries where there are few opportunities for citizens to influence the actions of government. The results to this point have not supported this prediction.

One explanation is that the relationship between democracy and violence may be more complex than the simple linear measure I have used to this point. Hegre et al. (2001) and Muller & Weede (1990) both argue that the relationship between democratic openness and violent conflict may be somewhat U-shaped, with clear democracies and clear autocracies less likely to experience violent internal conflict than those in the middle. In Table III, I also test this proposition against the three dependent variables (*Subsequent Wars*, *Repeat Wars*, and *New Wars*). In each case, I include dummy variables for clear democracies and clear autocracies and leave the third category, semi-democracies, as the excluded comparison group.[38]

The results are not consistent across all types of wars, but there is, nevertheless, a clear indication that true democracies are less likely to experience renewed civil war than semi-democracies.[39] When all types of subsequent conflict are considered, as in the first column, the differences between democracies and semi-democracies are not quite significant ($p = .07$) but the effects are large. In the median case, true democracies have less than a half a percent chance of ending in conflict in a given year compared to almost a two and a half percent chance for semi-democracies. There appears to be no relationship between the level of democracy and the case of repeat wars, but democracy powerfully predicts the initiation of new wars. In fact, across the entire dataset, a new civil war is never initiated in a true democracy and thus the variable itself has to be dropped from the model in the third column (see also Dubey, 2002). The effects for

[38] True democracies score a 6 or above on the democracy–autonomy CoW scale, true autocracies score a –6 or below score, and semi-democracies are everything in between.

[39] In an alternate specification, I included both a lagged democracy score and a squared democracy term and found that the results were consistent with the results presented in Table III.

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autocracy are not quite as clear. In two of the three cases, the sign on the autocracy coefficient is in the expected direction (negative) and approaching standard significance levels.

Other studies have found an inverted U-shaped relationship between the degree of democracy and the initiation of civil war, but their interpretations are different. Fearon & Laitin (2003) argue that this relationship exists because anocracies (or semi-democracies) are weak regimes that lack the resources necessary to repress or crush potential rebel movements. Hegre et al. (2001) make the related argument that the most autocratic regimes can repress dissent better than institutions that mix democratic and autocratic features. Although it is unclear which mechanism is at work, the fact that only mature democracies are able to avoid repeat civil wars indicates that the ability of individuals to participate in government could play an important role in their decision to support rebel movements or not.

Thus, it may be that liberal democracies are really the only types of regimes that can truly insulate themselves from violent internal challenges. This suggests that citizens who are able to express their preferences about alternative policies and leaders, who are guaranteed civil liberties in their daily lives and in acts of political participation, are less likely to become soldiers.[40] Offering citizens a real outlet for their concerns and having a government that is open to democratic change considerably reduces the likelihood of a civil war, whether or not a country had already experienced a previous war.

Conclusion

This article attempts to explain why some countries seem to be able to escape the conflict trap and others not. It offers an explanation that stresses the role individual citizens play in deciding whether to join a rebel army, thus allowing a civil war to get under way. Citizens whose quality of life remains at a critically low level and who are given little or no additional access to central decisionmaking should be much more likely to re-enlist in a rebel organization than those citizens whose welfare has improved, or who have the ability to participate in a competitive political process.

The empirical findings presented in the article support the idea that living conditions that favor individual enlistment in rebel armies – namely low quality of life and barriers to political participation – can help predict which countries will continue to experience civil war and which will not. The likelihood of returning to war was both a function of the basic well-being of the country's population and the accessibility of government decisionmaking to the average citizen.

The analysis, however, also showed that two factors associated with an earlier war do appear to encourage new combatants to initiate their own war. Governments that fought a short war against one set of challengers and governments that ended a previous war in partition were significantly more likely to face a violent challenge from a new rebel group. This supports the idea that the outcome and duration of an earlier war can play an important signaling role to other challengers in their decision to act or remain at peace. One war does appear to provide important information to other potential combatants about the potential costs and outcome of their own contest.

The next and potentially more difficult question is how to get leaders from these war-torn countries to open up their political systems and improve the individual welfare of their people when it is not always in their immediate interests to give up power or redistribute resources. Simply informing

[40] Elbadawi (2001) found similar evidence for poverty and the risk of war, and political rights and the risk of war.

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them that they are likely to faced renewed war if they do not act may be one important step. Some preliminary analysis on the current dataset also suggests that various types of outside intervention, in particular outside economic aid and third-party intervention, can have a positive effect on political openness and democratization. Countries that receive a high percentage of their GNP in the form of outside economic aid and countries that enjoy third-party security guarantees in the aftermath of one war appeared to be more likely to see improvements in democratization. This finding is supported by Doyle & Sambanis (2000: 795), who found that democratization is more likely in the aftermath of civil war 'when UN peace operations and substantial financial assistance are available'. It is less clear what factors encourage positive economic growth and improved individual welfare over time. Despite substantial research on this latter set of questions, considerable disagreement still exists.[41] Ultimately, if these questions can be resolved and leaders are willing to implement strategies that will improve individual living conditions and expand democracy, the conflict trap may be broken.

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[41] For a thumbnail view of work attempting to explain factors associated with economic growth, see Burnside & Dollar (1998, 2002), Sachs & Warner (1997), and Collier & Hoeffler (2002).

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