Toward a Democratic Civil Peace? Democracy, Political Change, and Civil War, 1816–1992

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*C*oherent democracies and harshly authoritarian states have few civil wars, and intermediate regimes are the most conflict-prone. Domestic violence also seems to be associated with political change, whether toward greater democracy or greater autocracy. Is the greater violence of intermediate regimes equivalent to the finding that states in political transition experience more violence? If both level of democracy and political change are relevant, to what extent is civil violence related to each? Based on an analysis of the period 1816–1992, we conclude that intermediate regimes are most prone to civil war, even when they have had time to stabilize from a regime change. In the long run, since intermediate regimes are less stable than autocracies, which in turn are less stable than democracies, durable democracy is the most probable end-point of the democratization process. The democratic civil peace is not only more just than the autocratic peace but also more stable.

The "third wave of democratization" (Huntington 1991; Vanhanen 2000) has raised hopes for a more peaceful world. The thesis of the democratic peace suggests that the spread of democracy will promote a decline in interstate warfare (Doyle 1986; Russett 1993), at least once the unsettling effects of the transition period are overcome (Ward and Gleditsch 1998). But does democratization also lead to civil peace?

Considerable research has examined how regime type or the level of democracy relates to domestic conflict. Much of it focuses on the result that semidemocracies (regimes intermediate between a democracy and an autocracy) exhibit a higher propensity for civil conflict than either extreme. Another strand of research focuses on how changes in regime lead to domestic conflict. This has implications for the former finding, since semidemocracies are more prone to regime change. Indeed, is the greater propensity for violence of intermediate regimes equivalent to the finding that states in political transition experience more violence? Are the results relating civil violence to level and change, in fact, one and the same finding? Or,

are both explanations relevant? That is the key issue examined in this article.

We link level of democracy and regime change in an empirical analysis that uses data from 152 countries in the period 1816–1992. We also explore the implications of the direction and magnitude of political change. The statistical model we formulate overcomes some of the problems in research that is based on country-years, such as the fact that these do not constitute independent observations, as well as the possibility that the amount of civil war in the system of states fluctuates over time. Finally, our work adopts a multivariate framework with several control variables, among them socioeconomic and cultural factors, as well as spatial and temporal contagion. A separate analysis, with a more extensive set of control variables, is performed for the post–World War II period.

DEMOCRACY, DEMOCRATIZATION, AND CIVIL WAR

Level of Democracy and Civil War

Harshly authoritarian states and institutionally consistent democracies experience fewer civil wars than intermediate regimes (de Nardo 1985; Francisco 1995; Muller and Weede 1990), which possess inherent contradictions as a result of being neither democratic nor autocratic. Semidemocracies are partly open yet somewhat repressive, a combination that invites protest, rebellion, and other forms of civil violence. Repression leads to grievances that induce groups to take action, and openness allows for them to organize and engage in activities against the regime. Such institutional contradictions imply a level of political incoherence, which is linked to civil conflict.

A number of works support the hypothesis of an inverted U-shaped curve between democracy and domestic violence, but most are based on a small number

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of cases or a short period. For instance, Francisco (1995) examines only the former German Democratic Republic, Czechoslovakia, and the Palestinian Intifada. The study by Muller and Weede (1990) used data collected by Taylor and Jodice (1983) for 1973–77.[1]

Ellingsen and Gleditsch (1997) confirmed the inverted U-shaped curve for a longer period, 1973–92. Using two different measures of democracy, they found that open regimes experienced civil war very rarely or, in the case of First World democracies, not at all. Moreover, by far the highest frequency of conflict occurred in semidemocracies, yielding a clearly inverted U-shaped curve across all levels of economic development.

Political Change and Civil War

The road to democracy is complicated and can be marked by internal violence and even collapse of the state (Bratton and van de Walle 1996; Casper and Taylor 1996). Autocratic countries do not become mature consolidated democracies overnight. They usually go through a rocky transition, in which mass politics mixes with authoritarian elite politics in a volatile way. Political change deconsolidates political institutions and heightens the risk of civil war, as discussed by a number of scholars (e.g., Sahin and Linz 1995; Tarrow 1994).

In a classic argument, de Tocqueville ([1856] 1955, 182) points out that "revolutions do not always come when things are going from bad to worse. . . . Usually the most dangerous time for a bad government is when it attempts to reform itself." Huntington (1991) finds that political violence is frequently coupled with democratization. Such changes are unlikely to occur without serious conflict, especially in countries with different ethnic minorities (Horowitz 1993). Communal groups in liberalizing autocracies have substantial opportunities for mobilization, but such states usually lack the institutional resources to reach the kinds of accommodation typical of established democracy (Gurr 1993, 165). When authoritarianism collapses and is followed by ineffectual efforts to establish democracy, the interim period of relative anarchy is ripe for ethnonational or ideological leaders who want to organize rebellion.

Theoretically, consolidation can occur anywhere on the autocracy-democracy spectrum. Those at either extreme can be consolidated or unconsolidated. Consolidated autocracies exhibit self-enforcing rules and institutions that prevent protest and other activities aimed against the state. Semidemocracies also may become consolidated. If the central idea of an inverted U-curve describes the relationship between regime type and civil war, however, the inconsistent and contradictory nature of these regimes should prevent them from becoming consolidated.

Political institutions also can be deconsolidated.

Political change, whether in the form of democratization or autocratization, can create instability. The loss of legitimacy by the regime induces dissatisfied groups to struggle against it. If the direction of change is toward autocracy, the deconsolidation of political institutions also implies increasing repression (Zanger 2000, 225–6). Repression by a regime without well-developed political institutions is likely to promote civil violence (Lichbach 1987, 1995; Moore 1998).

The initial high level of uncertainty and unrest caused by a regime change will gradually diminish as protesters abandon their aspirations or find ways to obtain part of what they want within the new regime. In the case of democratization, new and more open institutions take root and promote a peaceful resolution of domestic conflict. As time passes, these become more entrenched, and the likelihood of regime failure decreases. The pattern works similarly for autocratization. As repressive institutions strengthen, the effect of the regime change is less destabilizing and therefore less likely to generate political violence.

One Explanation or Two?

Compared to well-established democracies or autocracies, intermediate regimes have a higher hazard of civil war, as do regimes just emerging from a political transition. Are these two findings one and the same? Semidemocracies may be more prone to civil war because, on average, they have more recently undergone a political change. Gurr (1974, 1500) finds that the average persistence of the highly coherent polities—democracies and autocracies—exceeds that of "anocracies," or polities with mixed authority patterns. Below, we corroborate this finding with newer data. The implication is that we cannot readily determine whether a high risk of civil war is due to level of democracy or regime change. The two factors unquestionably overlap. Does the inherent inconsistency of semidemocracies account entirely for their greater frequency of civil war? Or does the youth of semidemocracies fully explain why they are more prone to conflict? Or do both factors affect the risk of civil war?

We cannot satisfactorily answer these questions without including both political change and level of democracy in our analyses. If both factors are relevant, we would expect to see evidence of an inverted U-curve even when controlling for the time since regime change. By controlling for each variable, we can assess whether one, the other, or both are significant.

HYPOTHESES

In an attempt to distinguish between intermediate position or change as the cause of civil conflict, we posit the following hypotheses.

HYPOTHESIS 1. *Semidemocracies are more likely to experience civil war than either democracies or autocracies.*

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[1] Krain and Myers (1997) find that democracies are less prone to civil war than autocracies, but they do not account for semidemocracies and only provide a bivariate analysis.

HYPOTHESIS 2. *Institutionally consistent democracies and stark autocracies are equally unlikely to experience civil war.*

HYPOTHESIS 3. *Countries that have undergone a recent political transition are more likely to experience civil war than countries whose political system has remained stable.*

HYPOTHESIS 4. *The two relationships described in hypotheses 1 and 3 are both valid and reinforce each other. Thus, the likelihood of civil war in semidemocracies remains higher than in other regime types, even a long time after a regime change.*

Hypothesis 1 reflects the inverted U-curve regarding the relationship between level of democracy and domestic violence, and hypothesis 3 states that regime change leads to a heightened risk of civil war in the short run. Both have found support in previous work. Hypothesis 2 states that the inverted U-curve is symmetric, as demonstrated by Muller and Weede (1990) and in contrast to Krain and Myers (1997). Hypothesis 4 accounts for the possibility that hypotheses 1 and 3 are complementary. A rejection of hypothesis 4 would mean that either hypothesis 1 or 3 is a sufficient explanation of the probability of civil war.

RESEARCH DESIGN

The Cox Regression Model

Comparable studies in this field have made use of data sets with country-years as the unit of observation (e.g., Auvinen 1997; Ellingsen 2000; Zanger 2000), but if regime change causes civil war, we expect conflict to follow shortly after regime change. The relevant time frame ranges from a few days to a few years. To model civil war as a consequence of regime change, we have to relate conflict to regime information up to the last day before the civil war breaks out. A country-year approach is unsuitable for modeling swift changes, because it makes sequential events in the same year appear to be simultaneous. Also, the Correlates of War (COW) data on civil war are coded by date, and the Polity IIId data set exactly dates regime changes to the extent possible. Such precision allows us to control for whether a conflict represents diffusion of international war or of civil war in a neighboring country.

As argued in a study of interstate war (Raknerud and Hegre 1997), the country-year structure has disadvantages of a more statistical nature.[2] Country-years do not constitute independent observations. If a civil war continues for some time, war data for the subsequent country-years will be highly dependent on the first year. Removing (censoring) country-years with continuing civil war may ameliorate this problem. Correspondingly, however, consecutive years of peace in a country are just as dependent on the first year of peace. If we censor continuing war, we also should censor continu-

ing peace, but then nothing would remain of the country-year structure. If we do not censor at all, we have a poor basis for estimating the statistical significance of the parameter estimates.

Analytical techniques for country-year data also assume a constant baseline probability of civil war, regardless of other variables. One could imagine that the amount of civil war in the interstate system fluctuates over time, following global political, ideological, and economic variations. If this fluctuation is correlated with trends in the independent variables, there is a potential problem, and to solve it Raknerud and Hegre (1997) formulated an application of the Cox regression model.[3] We modify their model to apply it to civil war. The main idea of Cox regression is the assumption that the hazard of civil war $\lambda_c(t)$ for country c can be factored into a parametric function of (time-dependent) risk factors and a nonparametric function of time itself, the baseline hazard:

$$\lambda_c(t) = \alpha(t) \exp\left[\sum_{k=1}^{p} \beta_k X_k^c(t)\right] \quad \textbf{(1)}$$

$\alpha(t)$, the baseline hazard, is an arbitrary function reflecting unobserved variables at the system level. The baseline hazard will account for any time trend in the data. $X_k^c(t)$ is a (possibly time-dependent) explanatory variable for country c; β_k is the corresponding regression coefficient; and p is the number of explanatory variables. All legitimate variables are known before t; they must be a part of the history up until immediately before point t. Note that t is calendar time, the number of days since a specific date. This differs from the common use of survival models, in which t is time at risk, which in this context would be the number of days since the last civil war or since the country entered the study.

To execute an analysis with this model, we need a data file constructed in the following way. For each t_w, that is, each day a civil war breaks out somewhere, we take a "snapshot" of the international system. We include the values of the explanatory variables on that particular day, t_w, for all countries that are system members and not already at war. When we do not have data on a daily basis, such as for the ethnic heterogeneity and development variables, we enter the value for the year in which the event occurred.[4] The Cox regression model compares the country that erupted in war at t_w to all countries at risk of doing so. Thus, all information for the time between different war outbreaks is ignored (except when estimating the baseline hazard).

Using the Cox regression model, civil war may be modeled as a function of events as recent as the day before the outbreak, unlike the country-year framework. Since all that happens between the outbreaks of

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[2] Raknerud and Hegre (1997) were concerned with the dyad-year structure, but most of their arguments apply equally to country-years.

[3] A good description of the Cox (1972) model can be found in McCullagh and Nelder 1989 and Collett 1994.
[4] Ideally, these variables also should have been coded on a day-to-day basis. This is not a substantial problem, however, since their values usually do not change dramatically over a short time.

war is ignored, dependence between units caused by consecutive years of peace is not a problem. Finally, possible confounding time trends in the probability of civil war are handled by the nonparametric baseline hazard function.

The parameter β_k can be interpreted as a relative probability of civil war. Assume that countries i and j have the same values on all explanatory variables except for $X_k(t)$. Then, from equation 1, the ratio between the hazard of civil war of country i and country j becomes

$$\frac{\lambda_i(t)\Delta t}{\lambda_j(t)\Delta t} = \exp\left[\beta_k\left(X_k^i(t) - X_k^j(t)\right)\right]. \quad \textbf{(2)}$$

Hence, we have

$$\ln\frac{\lambda_i(t)\Delta t}{\lambda_j(t)\Delta t} = \beta_k\left[X_k^i(t) - X_k^j(t)\right], \quad \textbf{(3)}$$

where $\lambda(t)\Delta t$ is approximately the probability of a transition (from peace to war) in the "small" time interval $(t, t + \Delta t)$. In the ratios above, the time interval Δt cancels out, and the parameter β_k is the log of the relative probability (or the relative risk) between two countries that differ by one unit on the variable $X_k(t)$ and are otherwise identical.

Time Frame

Our core analysis with all the variables makes use of data for 1946 to 1992. A more limited analysis with fewer variables is carried out for the entire COW period, 1816–1992.

The Dependent Variable

The dependent variable is the outbreak of civil war as recorded in the COW project (Singer and Small 1994). Civil war is defined as an internal war in which: "(a) military action was involved, (b) the national government at the time was actively involved, (c) effective resistance (as measured by the ratio of fatalities of the weaker to the stronger forces) occurred on both sides, and (d) at least 1,000 battle deaths resulted" (Singer and Small 1994, part 3). The COW project does not distinguish between different conflicts within the same country; if a civil war breaks out while another continues in a different region of the country, this is not reflected in the data set.

The criteria for coding the start of a COW civil war are potentially problematic. Coders have dated the start to the year in which the threshold of 1,000 deaths was reached, which means that previous months or even years of some wars would not count.[5] Most wars escalate quickly from the first shots to the peak level of severity, but we cannot exclude the possibility that some commence before the regime change that we code as the most recent. The definition of the start day

is important, because a period of low-level domestic turmoil beforehand may undermine the political system, but this is unlikely to affect a large number of civil wars.

Regime Type and Regime Change

For regime type, we use the Polity IIId data set (McLaughlin et al. 1998), which covers our spatial and temporal domain. The democracy-autocracy index used by Jaggers and Gurr (1995) and others is our measure of *Democracy*: -10 = most autocratic, 10 = most democratic. We add *Democracy Squared*, the square of this variable, to allow modeling of the U-curve relationship between level of democracy and conflict.[6]

To model the relationship between the time since regime change and the risk of civil war, we defined *Proximity of Regime Change* as $x = \exp(-\text{days since regime change}/\alpha)$, where α is some chosen divisor. This exponential function has the value 1 when the regime change is proximate and is close to zero when the change occurred a long time ago. It reflects the assumption that the effect of regime change on the probability of civil war decreases at a constant rate.

A weakness of the Polity data set is that an on-going civil war or other political violence in the country may be reflected in the coding of regime characteristics, notably in the indicators that characterize regulation and competitiveness of participation. A country with extensive political violence is unlikely to be coded as a full democracy or a full autocracy. Because there may be an overrepresentation of political violence in the regimes coded intermediate, our results may be confounded somewhat, since a civil war as defined in the COW project (1,000 deaths) may have begun earlier with a lower level of violence. We return to this question in the analysis section.

The Polity III data set (Gurr, Jaggers, and Moore 1989; Jaggers and Gurr 1995) codes regime change only annually. This makes it difficult to pinpoint a change relative to the outbreak of civil war. In Polity IIId the regime change is recorded to the exact day whenever possible, so if one occurred in the same year as the outbreak of a civil war, the newer data set enables us to code the regime score for the day before the outbreak. With these data we could also count the number of days since the last regime change (if any had occurred) for all countries for each time-point with outbreak of civil war (t_w). A regime change is defined as an alteration in an existing state greater than or equal to 2 in the democracy-autocracy index, or as the creation of a new state.[7] Because the range is 20 points,

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[5] We have not found precise coding criteria for war starting dates. Our source here is a personal communication from Melvin Small, June 16, 1998.

[6] A square term is the simplest model of a curvilinear pattern. We also fitted models with democracy as a 7-category and 21-category variable, as well as a model with a cubic term. All these suggested very similar relationships between the level of democracy and the risk of civil war. According to likelihood ratio tests, however, none performed better than the model reported in Table 2.

[7] If the country just entered or left a period of transition (coded in Polity IIId as -66, -77, or -88), the event is *not* coded as a regime change, regardless of what kind of regime the country had before the transition.

this definition is very inclusive, and it captures all political changes that might be related to civil war.

Control Variables

Our model does not attempt to present an inclusive theory of civil war, but level of democracy and political change do not provide a complete explanation. Therefore, we identify a number of control variables—*Development*, *Ethnic Heterogeneity*, *Proximity of Independence*, and *International War in Country*—whose omission might bias the results for the regime change variable. The remaining control variables—*Proximity of Civil War* and *Neighboring Civil War*—are included to model how the hazard of civil war depends on earlier events in the country and the neighborhood. With these controls, we may assume that the units of observations are conditionally independent (cf. Raknerud and Hegre 1997, 386–8).

Civil war occurs more frequently in poor, underdeveloped countries (Hauge and Ellingsen 1998). Referring to modernization theory, Hibbs (1973, 21–3) relates the decline in internal violence to the reduced class conflict in all affluent societies, which renders negotiated outcomes and conciliation more acceptable to all groups. Yet, since class conflicts increase in the early stage of industrialization in traditionally agrarian societies, the relationship between level of development and political violence may be curvilinear. For the poorest countries, development may actually stimulate violence. Hibbs does find evidence for a moderate curvilinear pattern, as do Collier and Hoeffler (1998).

To control for the level of development, we use *Energy Consumption per Capita* (measured as coal-ton equivalents). The variable is log-transformed, since we expect the effect of a unit increase to be larger for a country with a low level on the variable than for a country with a high level. Log-transforming also reduces the skewness of the variable. In addition, we enter the squared term of this variable to capture the curvilinear pattern found by Hibbs (1973). We expect negative estimates in both cases, which would indicate that the risk of civil war grows with development in the poorest countries and decreases in the more developed ones. The data were taken from the COW National Capabilities data set (Singer and Small 1993).

Civil war seems to occur more frequently in countries with a substantial population of one or more ethnic, linguistic, or religious groups (Ellingsen 2000; Vanhanen 1999). We measure *Heterogeneity* by $(1 - s^2)$, where s is the share of the population in the country that belongs to the largest group. We created independent variables for *Linguistic Heterogeneity*, *Religious Heterogeneity*, and *Ethnic Heterogeneity* based on the data set assembled by Ellingsen (2000).

The probability of civil war also depends on the country's conflict history. Hibbs (1973, 163) found internal war (but not collective protest) to be strongly influenced by earlier internal war. We expect, however, that time heals all wounds and construct a variable along the lines of the proximity to regime change variable: Proximity to civil war = exp(− time in days

since the last civil war ended/α). For a country that has never had a civil war, the variable is assigned a 0.[8]

War against another state may engender war within. An international war may provide an opportunity for dissident groups to attack a weakened regime, or another country's government may incite a revolt. Yet, international war may reduce the probability of civil war because the population unites against a common enemy. We remain neutral as to the direction of this relationship. To test it, we include a dichotomous variable, *International War in Country*, which is coded 1 if the country was involved in an interstate war (as defined in the COW Interstate War data set) the day before the day of observation.

Likewise, civil war may spread from one country to nearby areas. The variable *Civil War in Neighboring Country* has the value 1 if there was a civil war in a neighboring country the day before the day of observation.

Finally, we have added the variable *Proximity of Independence*, which equals exp(− time in days since day of independence/α). Political institutions in new states are assumed to be poorly consolidated, which may have implications for their regime type as well as for their modes of conflict resolution. Since the declaration of national independence is coded as all countries' first regime change, this variable is correlated with proximity of regime change, but not very highly (see Appendix A for the correlation matrix for the independent variables). A newly independent country may have many changes of government that are not regime changes in the sense defined here. Another aspect of the unsettled character of new nations is that their borders (e.g., if they are inherited colonial boundaries) may be in dispute and out of alignment with ethnic or religious groupings. This could lead to interstate war or to a war of secession, which would be classified as a civil war in the COW data set. We include this variable to distinguish between these effects and the effects of regime change.

We allowed the proximity of independence, civil war, and regime change variables to have independent values for α. We ran the basic model for all possible combinations of a range of values in this interval.[9] The combination of a half-life of one year for proximity of independence, sixteen years for proximity of civil war, and one year for proximity of regime change maximized the likelihood function for the period 1946–92. The corresponding values for 1816–1992 were half a year and

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[8] A half-life of 16 years means a reduction of the initial effect to 1/8 after 48 years and to 0.015 after 100 years. We have no COW data for conflict history before 1816. This is potentially problematic, since a civil war in 1815 could have a considerable effect on the risk of another in that country for most of the nineteenth century. Without data for the preceding years, the country is assigned a 0 until we know that it has experienced a civil war. The result is a systematic underestimation of the variable as a whole, such that the temporal dependence is not fully accounted for in the first 50 years of our analysis. This problem is negligible after the 1860s.

[9] To be interpretable as dynamic effects, the half-life times were restricted to values between 0.5 and 16 years. These values were α = 263.5 (0.5 years), α = 526.9 (1 year), α = 1053.9 (2 years), α = 2107.8 (4 years), α = 4215.6 (8 years), and α = 8431.1 (16 years).

sixteen years.[10] To ensure comparability, we employed the set of half-life parameters that optimized the shorter period and applied them to the longer period as well. A half-life of one year implies that the contribution to the hazard function is halved in one year, is 1/32 (or 0.03) in five years, and is 0.001 in ten years. Coding the proximity variables for a given date requires that we know the history of the country for some previous years. The Polity data set goes back to 1800 and allows us to know at least sixteen years of regime history before 1816. Since the half-life parameter assumes that the influence of any regime change is reduced to a minuscule fraction of its original effect after sixteen years, the proximity of regime change variable is adequately coded.

ANALYSIS

Level of Democracy and Political Change

We first tested whether intermediate regimes have a shorter expected duration than democracies and autocracies. We computed the Kaplan-Meier estimate of median survival time for polities belonging to the three regime types. The survival time is defined as the period from one regime change to another. As noted earlier, regime change is defined as an alteration greater than or equal to 2 in the democracy-autocracy index, or as the creation of a new state. Table 1 shows that semidemocracies have a significantly shorter median survival time than the other two types. On average, less time has passed since the last regime change in the average semidemocracy than in the other categories. Semidemocracies are the least stable type of regime, which corroborates the point made by Gurr (1974).

Autocracies are estimated to have a shorter median life than democracies, but the difference is not statistically significant. Gates et al. (2000) provide a much more elaborate and extensive investigation of the duration of different regime types. They find democracies to be significantly more durable than autocracies, and both more stable than semidemocracies. This also holds when controlling for development, the political composition of the neighborhood, and changes in regime transition rate over time.

We then tested hypotheses 1–4. The results are presented in Table 2. We conducted parallel analyses of the COW civil war data for 1946–92 with all explanatory variables, and for 1816–1992 without the ethnic heterogeneity and development variables. We only included the days with an outbreak of civil war when we had data for all variables for the country that experienced the outbreak.[11] The number of countries and the number of outbreaks that contribute to the different analyses are reported in the bottom lines of the tables. These figures vary with the availability of data for the different variables.

TABLE 1. Kaplan-Meier Estimate of the Median Life for Different Regime Categories, 1800–1992

Regime Type	Median Life (years)	95% Confidence Interval	N
Autocracies	7.9	(6.7; 9.0)	445
Semidemocracies	5.8	(4.9; 6.6)	452
Democracies	10.0	(7.9; 12.1)	232

Note: An autocracy is a polity with a score in the range −6 to −10 on the democracy-autocracy index. A democracy is a polity within the 6–10 interval. A semidemocracy has a score in the range −5 to 5.

The negative estimate for democracy squared reflects an inverted U-shaped relationship between democracy and civil war. The estimate for the democracy variable is virtually 0. In other words, the estimated inverted U is symmetrical, with the apex at 0 (the intermediate regime), and regimes at the very low end of the democracy-autocracy scale are estimated to be as unlikely to experience civil war as regimes at the very high end. This supports hypothesis 2: Institutionally consistent democracies and stark autocracies are equally unlikely to experience civil war. An intermediate regime is estimated to be four times more prone to civil war than a consistent democracy. The estimates for the proximity of regime change variable are positive, large, and clearly significant. For both periods, the estimates show clearly that the risk of civil war is high after a regime change. Translated into relative risk terms, the partial effect of regime change on the hazard of civil war for the 1946–92 period was estimated at 3.55 times the baseline the day after the regime change, at 1.89 times the baseline after one year, and at 1.02 times the baseline after six years.[12]

Both democracy squared and proximity of regime change are statistically significant, which supports hypothesis 4: Both level of democracy (hypothesis 1) and regime change (hypothesis 3) are necessary to provide a full model of the relationship between regime type and the risk of civil war. In Figure 1, the estimated risk of civil war relative to the baseline is plotted (along the vertical axis) as a function of the level of democracy (the horizontal axis) and the time passed since the latest regime change. The figure shows that the maximum effect of intermediacy and political change are roughly equal when regarded separately. A regime change implies both a deconsolidation and a change in level of democracy. The combined effect can be seen in the figure. For instance, a shift from an old autocracy to a new semidemocracy (a move, say, from −10 to 0 on democratization and from 15 to 0 on years since

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[10] For the long period, we obtained even higher likelihood values when trying half-life times shorter than 0.5 years and longer than 16 years. This was not the case for the short period.

[11] A complete list of the civil wars is given in Appendix B. Additional information is available at our website (http://www.prio.no/cwp/datasets.asp).

[12] To obtain this estimated relative hazard one year after the regime change, we first computed the value for proximity to regime change: exp (−365 days/527) = exp (−0.692) = 0.50. This value was multiplied by β: 0.50 × 1.27 = 0.62, which is this variable's contribution to the linear expression. The exponential of this is exp (0.62) = 1.89, which gives the hazard relative to countries that have not experienced a regime change in a long time but are equal in all other respects.

TABLE 2. Risk of Civil War by Level of Democracy and Proximity of Regime Change

Explanatory Variables	$\hat{\beta}$	s.e.	p-value	Exp($\hat{\beta}$)
A. 1946–92				
Proximity of regime change	1.27	0.47	0.004	3.55
Democracy	−0.002	0.021	0.92	1.00
Democracy squared	−0.012	0.0051	0.009	0.99
Proximity of civil war	1.16	0.97	0.078	3.19
Proximity of independence	1.51	0.97	0.060	4.55
International war in country	0.86	0.59	0.075	2.36
Neighboring civil war	0.097	0.33	0.38	1.10
Development	−0.48	0.16	0.001	0.62
Development squared	−0.066	0.036	0.031	0.94
Ethnic heterogeneity	0.80	0.39	0.019	2.22
Log-likelihood$_{null\ model}$	−292.17			
Log-likelihood$_{model}$	−254.76			
Likelihood ratio index	0.13			
Number of countries	152			
Number of events	63			
B. 1816–1992				
Proximity of regime change	0.98	0.37	0.004	2.68
Democracy	−0.010	0.019	0.29	0.99
Democracy squared	−0.013	0.0027	<0.0005	0.99
Proximity of civil war	1.66	0.25	<0.0005	5.27
Proximity of independence	1.86	0.68	0.003	6.41
International war in country	0.24	0.42	0.28	1.28
Neighboring civil war	0.27	0.27	0.16	1.31
Log-likelihood$_{null\ model}$	−535.69			
Log-likelihood$_{model}$	−484.82			
Likelihood ratio index	0.095			
Number of countries	169			
Number of events	129			

Note: The exponential of the parameter estimate, exp($\hat{\beta}$), is the estimated risk of civil war relative to the baseline hazard if all other explanatory variables are zero (cf. equation 3 above). If some of the variables are nonzero, exp($\hat{\beta}$) is the hazard relative to other countries with similar values for all the other risk factors. The log-likelihood ratio index is computed as $1 - (LL_{model}/LL_{null\ model})$ (Greene 1997, 891). For the democracy variable, the p-value refers to a two-tailed test; $\beta \neq 0$. For democracy squared, development, and development squared, $\beta < 0$ is tested. For the rest of the variables, $\beta > 0$ is tested. All estimates are in the expected direction.

change) increases the risk of civil war almost nine times (from 0.30 to 2.68) relative to the risk before the regime change.

In a Cox regression, all parameter estimates are interpreted relative to the baseline. The baseline hazard $\lambda(t)$ is the nonstationary probability of civil war within a short interval in countries for which all covariates equal zero, that is, countries with a democracy score of 0 that have had no regime changes or civil wars for the last forty years, are not involved in international wars and have no neighbors with civil wars, and have development = 0. In Figure 1, the baseline case is found at the forward end of the figure, at the point marked "baseline case."

In Figure 2, the estimated baseline hazard—the probability of an outbreak of civil war during one year for the baseline case—is plotted for the period 1816–1992 (Table 2B).[13] In contrast to the common use of survival analysis, the time variable (the *x*-axis in the figure) is calendar time. This provides a rough picture of trends in the probability of civil war after accounting for the explanatory variables. The increase in the baseline hazard after World War II demonstrates that assuming a constant baseline probability of civil war is not tenable. As discussed by Raknerud and Hegre (1997, 388–9), statistical models that require the assumption of a constant baseline probability (e.g., logistic regression) are problematic when there are trends both in the explanatory variables (as evident in the level of democracy variable) and in the baseline probability. In some cases, the problem may lead to spuri-

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[13] The baseline was estimated using the procedure described in Collett 1994, 95ff.

FIGURE 1. Relative Risk of Civil War as a Function of Democracy and Time since Most Recent Regime Change, 1816–1992
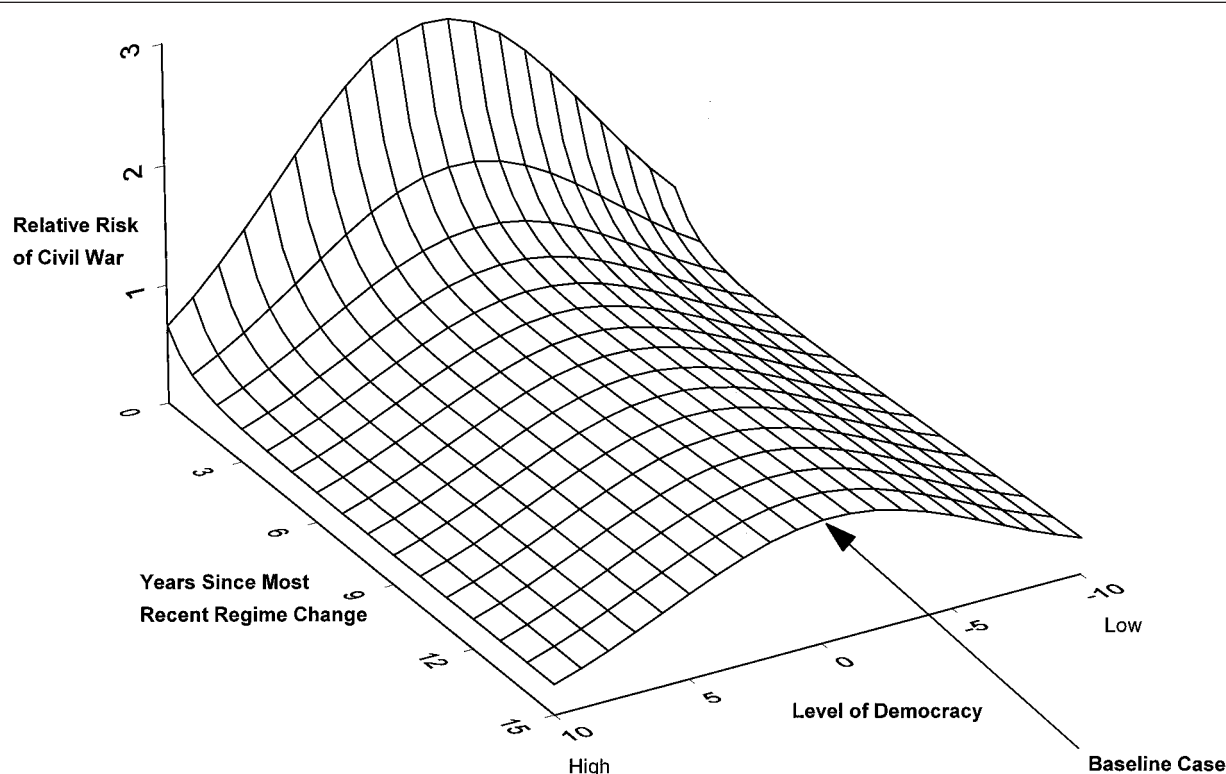
Note: The figure is based on the parameter estimates in Table 2B. The baseline case is an observation with democracy = 0 and proximity of regime change = 0 (15 years since regime change). All risks are plotted relative to this case. For instance, an observation with democracy = 0 and years since most recent regime change = 0 is estimated to have a risk of $\exp(\hat{\beta}_1 \exp(-0/527) + 0\hat{\beta}_2) = \exp(\hat{\beta}_1) = 2.68$ relative to the baseline (cf. note 12).

ous results. The Cox regression model employed here avoids these problems.

Using the more precisely dated Polity IIId data helps address a question raised earlier regarding the sequence of events. Even with Polity IIId, however, there is a danger that the events may be reversed, so that the civil war precedes rather than follows regime change. To test to what extent the estimates for proximity of regime change are influenced by such individual observations, we ran the model reported in Table 2A using only outbreaks that occurred more than 60 days after a new regime. The variable was still significant, with a *p*-value of .035 (one-tailed test). A drop in significance is to be expected, since we removed the five outbreaks with the highest value for proximity of regime change. Consequently, we think our results are quite robust to the problem of a reversed sequence of events.

A reversed sequence creates another potential difficulty. In such cases, the values we use for the level of democracy at the time of the war will be incorrect. To make sure that the analysis is not sensitive to this, we ran the model in Table 2A for all outbreaks that occurred less than one year after a new regime and used the democracy score before the change. Although only 18 civil wars remained in this analysis, the estimate for democracy squared was close to significance (*p* = .065).

The Effect of the Control Variables

Some of the control variables contribute significantly to the model. For 1946–92, the development variable and its squared term have highly significant effects on the probability of civil war. For that period, values under −5 (7 kgs coal-equivalent) are rare. Bhutan in 1946 is the definitively least developed country, with a score of −6.7. The estimated relative risk of civil war increases with development up to somewhere above −4 (e.g., Paraguay or Thailand in 1950, or Mali and Uganda in 1990). When the level of development passes −3 (Bhutan or Haiti around 1990), the relative risk starts decreasing, and it is halved at −0.5 (e.g., Costa Rica in 1990). The industrialized countries in Europe and North America have values around 2 (7.4 coal-ton equivalents) on our development variable. For such values, the estimated relative risk is one-eighth that of the most conflict-prone level of development. The curvilinear relationship is consistent with the findings of Hibbs (1973).

The proximity of independence variable is significant for the longer period, from 1816–1992. For 1946–92, the estimated *p*-value is .060. Ethnic heterogeneity does increase the probability of civil war; it is roughly twice as high in countries where the largest ethnic

FIGURE 2.   Estimated Baseline Hazard of Civil War, 1820–1992
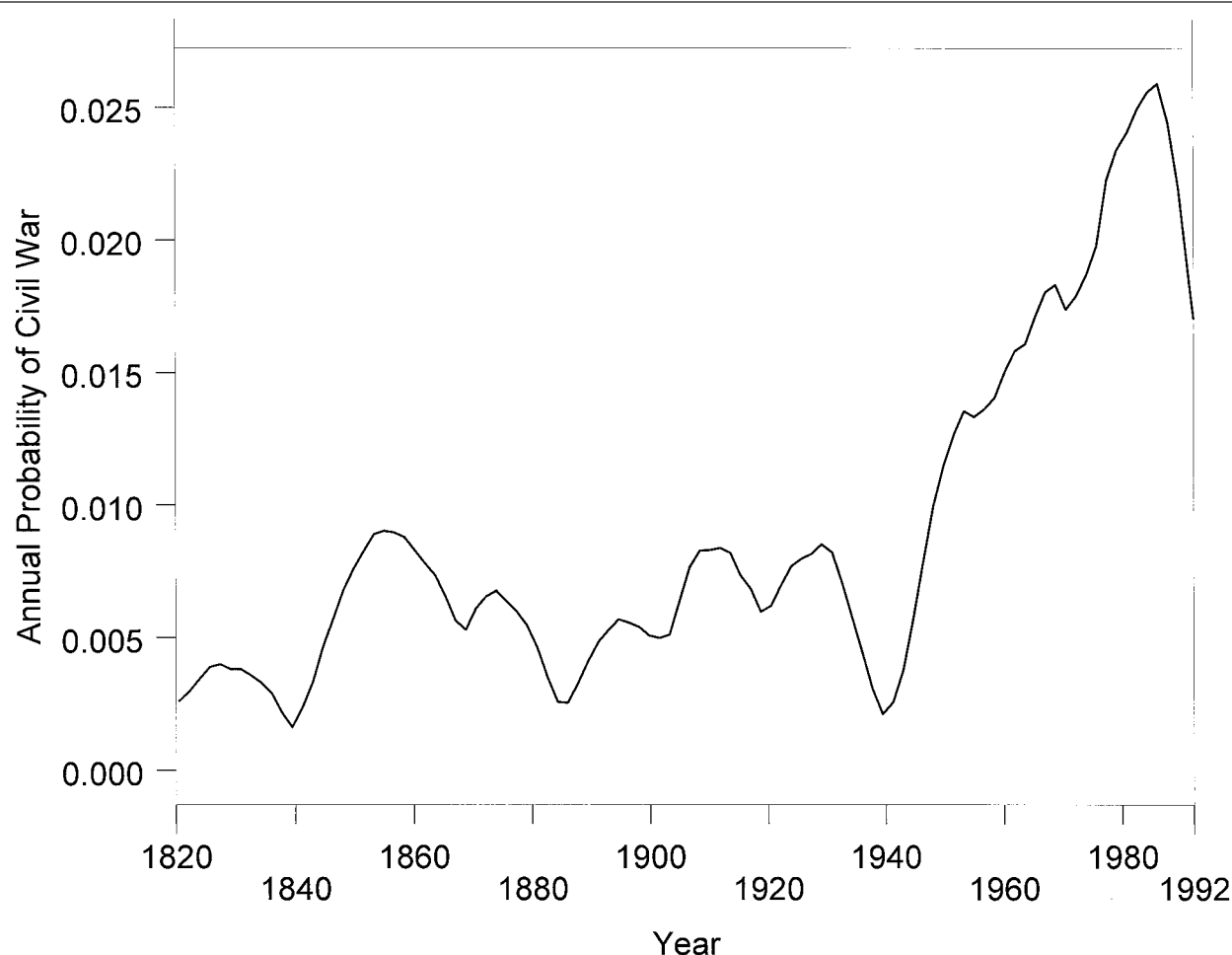
Note: The figure plots the hazard derived during the estimation in Table 2B for the baseline case. The hazard is partly a function of the frequency of civil wars relative to number of countries that are system members, and partly of the distribution of values for the explanatory variables. The low hazard around 1940 reflects the relatively low number of civil wars in that period (see Appendix B). The high hazard in the 1980s reflects a fairly high frequency of civil wars despite relatively low average values for explanatory variables that are estimated to increase the risk of civil war. The baseline is only defined from the first outbreak of civil war in our data set (i.e., from 1820)

group constitutes half the population as in countries where it accounts for 95% of the population.[14] This result is significant at the .05 level. For both periods, countries with a recent civil war have a propensity for renewed violence. For instance, exactly one year after the previous conflict, the country is estimated to have a hazard of civil war 1.8 times higher than the baseline for the 1946–92 period. The parameter estimate is clearly significant, even more so in the longer than the shorter period.

We found only weak support for the idea that countries involved in an international war have a higher probability of civil war ($p = .090$ for 1946–92 was the strongest estimate). This weak result reflects the ambiguous findings of the literature on the internal-external conflict nexus (Heldt 1997; Levy 1989). An international war may be an opportunity for dissenting groups to rebel, but it is also a means for the government to unite the country against an external enemy. The neighboring civil war variable is even less important. We find no clear evidence for the hypothesized diffusion of nearby conflict. Civil war occurs more frequently in some parts of the world than in others, but this is due to the clustering of other factors in the model, mainly development and regime type.

Direction and Magnitude of Regime Change

We have established that the relative risk of civil war is altered as the result of a regime change, but which type of shift has most effect, that is, toward democratization or autocratization? And is a large change more dangerous than a small one? The implications of the earlier results are not straightforward for the issue of direction and magnitude of regime change. Table 2 demonstrates that a new regime increases the risk of

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[14] This figure is calculated by computing the heterogeneity index for the cases: $1 - 0.5^2 = 0.0975$, and $1 - 0.95^2 = 0.75$. The risk of the first relative to the second is the exponential of the difference between the two: $\exp(0.79 \times (0.75 - 0.0975)) = 1.92$.

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civil war when controlling for the level of democracy, but the model assumes that all types of regime change have the same effect on the probability of conflict. This is not necessarily the case.

To explore this issue, we divided proximity of regime change into five proximity variables: *Small/Large Democratization*, *Small/Large Autocratization*, and *Other Regime Change*. A large change is defined as an increase or decrease of six units or more, and a small change as two to five units. For instance, if the most recent shift was toward a much lower level of democracy (i.e., 6 or more units on the scale), the *Proximity of Large Autocratization* variable was set to exp(− days since regime change/α), and the others were set to 0. Throughout, we assume that the parameter α in the formula for the five proximity of regime change variables is independent of the initial risk, such that the half-life of the effect on the risk of civil war is the same for all regime change types. We also assume that the influence of a specific type of regime change is independent of the level of democracy before the change.[15] A small degree of democratization in an autocracy is assumed to have the same effect as a small degree of democratization in an intermediate regime, after we control for the effect of changing from one level to another.

Table 3 reports the results of replacing the simple regime change variable in Table 2 with the subdivided variable. In Table 3B, proximity of other regime change is the only variable that is not positive and significantly larger than zero. This is not surprising, since most of those "other" changes are minor or are accounted for by proximity of independence. In Table 3A, proximity of large democratization is also not significant. Of the remaining variables, large autocratization seems to be associated with the largest change in risk of civil war, but in neither period are the four parameter estimates for proximity of change toward either democracy or autocracy significantly different from one another. Thus, when controlling for the regime type toward which the change leads, there is no significant difference between the effects of democratization and autocratization.[16] As before, the contribution of regime change to the hazard function is greater for the shorter than the longer period. A comparison with Table 2 shows that the estimates for democracy and democracy squared remain virtually unchanged.

Because gaining independence is coded as "other regime change," there is a high correlation between that variable and proximity of independence (cf. Appendix A). The estimates for the latter are substantially higher in Table 3 than in Table 2. This is a result of the separation between the different categories of regime change. The parameter estimates for the other control variables are unchanged, as is the estimate for democracy squared. Distinguishing the different directions or magnitudes of regime change adds very little information to the overall model.

Figure 3 portrays the combined effect of a regime change and an altered level of democracy on the risk of civil war. The relative risk is plotted as a function of the democracy scores before and exactly two years after the regime change. The darker the shade, the higher is the estimated risk. In the "valley" along the main diagonal, from the lower left to upper right corner of the figure, are countries that have had no regime changes. For them, the inverted U-curve at the forward end of Figure 1 describes the relative risk of civil war. Just to the right of this valley are polities that have experienced small democratizations. Farther right are those with large democratizations. The figure demonstrates our estimate that the risk of civil war is increased the most by changes that lead to a semidemocracy, in particular if the shift is a large autocratization (the darkest area, to the left of the valley).[17]

The example of South Korea illustrates how to interpret the figure. Until March 1981, Polity IIId reports South Korea as an autocracy, with a democracy-autocracy score of −8. Apart from a couple of minor alterations, the regime had existed for more than eight years. For our purposes, we treat a polity of this age as equal to one that has existed for an infinite number of years. We indicate that location in the figure as South Korea 1981. The estimated risk of civil war was then .47 relative to the baseline. On March 4, 1981, a small democratization from −8 to −6 took South Korea to the location labeled South Korea 1983, with an estimated risk of civil war of .87 relative to the baseline two years after the change. In 1985, democratization from −6 to −2 moved the location to South Korea 1987. The relative risk of civil war two years later is estimated to be 1.3. Finally, for February 26, 1988, Polity IIId reports South Korea changed from −2 to +10. This large democratization moved the country to the location labeled South Korea 1990, with the risk of civil war reduced to .45 relative to the baseline.

A DEMOCRATIC CIVIL PEACE?

Our analysis clearly confirms that the U-curve defines the relationship between democracy and civil war (hypothesis 1). Regimes that score in the middle range on the democracy-autocracy index have a significantly higher probability of civil war than either democracies or autocracies. As expected, we found no significant difference between the risk of civil war in harsh autocracies and in strong democracies (hypothesis 2). We have also shown that regime change clearly and strongly increases the probability of civil war in the short run (hypothesis 3), using the same control variables for the longer and the shorter period. Yet, regime change alone does not explain the higher level of civil

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[15] This is consistent with our interest in assessing the relative effects of intermediate position and political change.

[16] We also estimated a model with three regime change categories: proximity of democratization, proximity of autocratization, and proximity of other regime change. The estimates for 1946–92 were 1.84 for democratization and 1.49 for autocratization. The corresponding figures for 1816–1992 were 1.14 and 1.52. The merging of categories reduced the estimated standard errors but not sufficiently to assert that autocratization is more conducive to civil war than democratization.

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[17] The difference between parameter estimates for autocratizations and democratizations were not statistically significant, however.

TABLE 3. Risk of Civil War by Level of Democracy and Subdivided Proximity of Regime Change Variable

Explanatory Variables	$\hat{\beta}$	s.e.	p-value	$\text{Exp}(\hat{\beta})$
A. 1946–92				
Proximity of small democratization	1.54	0.67	0.011	4.66
Proximity of large democratization	1.22	0.95	0.10	3.39
Proximity of small autocratization	1.22	0.73	0.048	3.39
Proximity of large autocratization	2.63	0.75	<0.0005	13.9
Proximity of other regime change	0.29	0.62	0.32	1.33
Democracy	0.0016	0.024	0.47	1.002
Democracy squared	−0.012	0.0051	0.011	0.99
Proximity of civil war	1.14	0.34	0.001	3.13
Proximity of independence	2.52	1.06	0.009	12.4
International war in country	0.85	0.53	0.11	2.35
Neighboring civil war	0.16	0.33	0.31	1.18
Development	−0.48	0.16	0.001	0.62
Development squared	−0.066	0.036	0.032	0.94
Ethnic heterogeneity	0.80	0.40	0.022	2.23
Log-likelihood$_{\text{null model}}$	−292.17			
Log-likelihood$_{\text{model}}$	−252.00			
Likelihood ratio index	0.14			
Number of countries	152			
Number of events	63			
B. 1816–1992				
Proximity of small democratization	1.04	0.61	0.044	2.84
Proximity of large democratization	1.37	0.71	0.028	3.93
Proximity of small autocratization	1.44	0.57	0.006	4.21
Proximity of large autocratization	1.91	0.84	0.012	6.73
Proximity of other regime change	0.12	0.46	0.40	1.13
Democracy	−0.010	0.020	0.29	0.99
Democracy squared	−0.013	0.0027	<0.0005	0.99
Proximity of civil war	1.61	0.25	<0.0005	5.00
Proximity of independence	2.52	0.56	<0.0005	12.4
International war in country	0.25	0.41	0.27	1.28
Neighboring civil war	0.30	0.27	0.14	1.35
Log-likelihood$_{\text{null model}}$	−535.67			
Log-likelihood$_{\text{model}}$	−482.00			
Likelihood ratio index	0.10			
Number of countries	169			
Number of events	129			

Note: See note to Table 2.

war in intermediate regimes. The two factors are partly overlapping, yet complementary. The democracy squared variable, which models the U-curve relationship between level of democracy and the risk of civil war, is clearly significant, even when controlling for the time elapsed since the most recent regime change (which supports hypothesis 4).

The hypotheses were tested with long-term data from the COW project (1816–1992), controlling for proximity of independence, civil war, and international war, as well as civil war in a neighboring country. They

were supported by those data and for the post–World War II period (1946–92) with additional controls for economic development and ethnic heterogeneity. The relationships were tested using a more appropriate statistical model than in previous studies, with more reliable estimates for statistical significance.

The direction of change has no discernible influence on the probability of civil war. This is not to say that democratization is as conducive to conflict as autocratization. The short-term effects are the same, but the long-term effects are different. As shown above and

FIGURE 3. Relative Risk of Civil War as Function of Democracy Index before or after Regime Change, 1816–1992
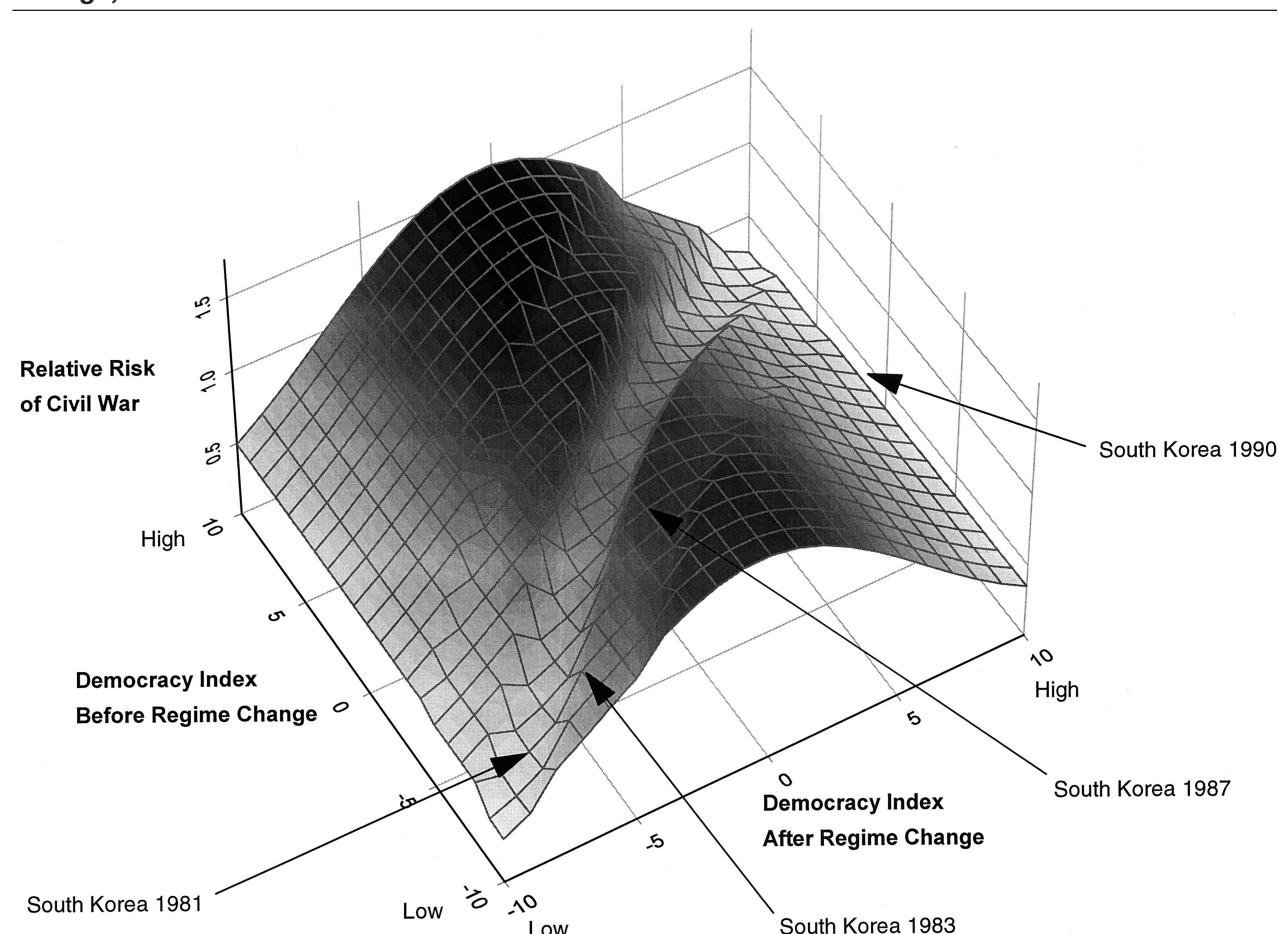
Note: The figure is based on the parameter estimates in Table 3B. The relative risks are calculated for a time two years after the regime change. The various shadings correspond to different ranges of values along the vertical axis. The darker the shading, the higher is the estimated risk of civil war.

noted by Gurr (1974), countries that have moved toward the middle category are the most likely to experience further regime change. Table 1 demonstrates that political stability increases as the democracy-autocracy scores approach both ends of the scale. Among countries that have moved toward the ends, the analysis in Gates et al. (2000) indicates that autocracies are somewhat less stable than democracies and are more likely to experience further change, which exposes them to the more risky middle position. The most reliable path to stable domestic peace in the long run is to democratize as much as possible. A change in that direction ensures the strongest ratchet effect in terms of consolidating political institutions and makes it less likely that the country will slide back into a state in which it is more prone to civil war.

Eventually, then, countries are more likely to end up at the democratic end of the scale. The conflict-generating effect of democratization when moving from autocracy to intermediacy produces violence in the short run only. In the long run these states, too, will attain civil peace, but if semidemocracies experience a succession of transitions in and around the middle

zone, it will take a long time before there is a net decrease in violence. A full assessment of the long-term effect of democratization requires a study of whether sequences of regime change and civil war form certain patterns.

Does the third wave of democracy reduce the specter of violent domestic conflict? The effect of political change depends heavily on the point of departure. In the short run, a democratizing country will have to live through an unsettling period of change. But if we focus on countries that are at least half-way toward complete democracy, the prospects for domestic peace are promising. There *is* a democratic civil peace, and it may be achieved in the short run in some countries. In the long run most states, possibly all, may reach this condition, especially if we take into account the higher survival rate of open societies, which are less likely to move once again through the doubly dangerous zone of intermediate democracy and political change. While totalitarian states may achieve a domestic peace of sorts, which may be characterized as the peace of a zoo, a democratic civil peace is likely not only to be more just but also more durable.

APPENDIX A. Correlation Matrix for Explanatory Variables, Pearson's *r*, 1946–92 Data

	Democracy	Democracy squared	Proximity of regime change	Proximity of small democrati- zation	Proximity of large democrati- zation	Proximity of small autocrati- zation	Proximity of large autocrati- zation	Proxmity of other regime change	Proximity of civil war	Proximity of indepen- dence	Internat- ional war in country	Neighboring civil war	Develop- ment	Develop- ment squared
Democracy squared	0.37													
Proximity of regime change	−0.05	−0.26												
Proximity of small democratization	−0.03	−0.18	0.34											
Proximity of large democratization	0.16	−0.08	0.33	−0.03										
Proximity of small autocratization	−0.08	−0.12	0.29	−0.03	−0.03									
Proximity of large autocratization	−0.11	−0.06	0.23	−0.03	−0.03	−0.02								
Proximity of other regime change	−0.06	−0.11	0.68	−0.07	−0.07	−0.07	−0.05							
Proximity of civil war	−0.14	−0.23	0.08	0.04	0.02	0.12	0.04	−0.01						
Proximity of independence	0.03	−0.09	0.34	−0.03	−0.03	0.00	−0.01	0.48	−0.07					
International war in country	0.00	−0.04	0.01	−0.02	−0.01	0.05	0.02	−0.01	0.09	−0.01				
Neighboring civil war	−0.10	−0.15	0.14	0.06	0.05	0.03	−0.03	0.11	0.07	0.05	0.06			
Development	0.45	0.39	−0.21	−0.07	−0.05	−0.12	−0.08	−0.12	−0.22	−0.12	0.01	−0.14		
Development squared	−0.23	−0.09	0.08	0.04	0.01	0.10	0.01	0.02	0.06	0.10	−0.01	0.03	−0.67	
Ethnic heterogeneity	−0.09	−0.22	0.08	0.05	0.02	0.02	0.01	0.05	0.04	0.03	−0.05	0.09	−0.19	0.15

Note: The correlation matrix refers to all countries observed once for each outbreak of civil war (*n* = 8,262).

APPENDIX B.   List of Civil Wars from the Correlates of War Data

COW Number	Country	Event Date	Democracy Index	Days Since Regime Change	Proximity of Regime Change	Development	Ethnic Heterogeneity
329	Two Sicilies	07.02.1820	−10	1,644	0.04	(Available only after World War II)	
325	Sardinia	03.10.1821	−10	1,895	0.03		
230	Spain	12.01.1821	−4	699	0.27		
640	Ottoman Empire	06.14.1826	−10	3,817	0.00		
235	Portugal	07.01.1829	−3	2,217	0.01		
220	France	07.25.1830	−1	69	0.88		
70	Mexico	01.02.1832	−1	366	0.50		
230	Spain	07.15.1834	−6	3,970	0.00		
100	Colombia	07.15.1840	2	3,059	0.00		
230	Spain	05.15.1847	−2	720	0.26		
329	Two Sicilies	01.12.1848	−10	9,790	0.00		
220	France	02.22.1848	−1	6,490	0.00		
300	Austria-Hungary	03.13.1848	−6	9	0.98		
220	France	01.01.1851	6	1,042	0.14		
155	Chile	09.15.1851	−5	4,640	0.00		
135	Peru	12.21.1853	−1	5,241	0.00		
100	Colombia	04.17.1854	2	8,083	0.00		
135	Peru	10.31.1856	−1	6,286	0.00		
70	Mexico	02.15.1858	−3	3,665	0.00		
101	Venezuela	02.01.1859	−5	6,605	0.00		
710	China	01.01.1860	−6	21,914	0.00		
100	Colombia	05.15.1860	2	10,303	0.00		
2	United States	04.10.1861	8	2,506	0.01		
160	Argentina	04.02.1863	−3	3,622	0.00		
160	Argentina	12.15.1866	−3	4,975	0.00		
101	Venezuela	01.11.1868	−5	9,871	0.00		
160	Argentina	05.20.1870	−3	6,227	0.00		
230	Spain	04.20.1872	1	401	0.47		
160	Argentina	09.01.1874	−3	7,792	0.00		
2	United States	02.01.1876	10	1,676	0.04		
100	Colombia	11.15.1876	8	3,463	0.00		
740	Japan	01.29.1877	1	3,313	0.00		
160	Argentina	06.15.1880	−3	9,906	0.00		
100	Colombia	11.15.1884	8	6,385	0.00		
155	Chile	01.07.1891	5	920	0.17		
140	Brazil	02.02.1893	−3	1,174	0.11		
140	Brazil	09.06.1893	−3	1,390	0.07		
135	Peru	10.15.1894	2	3,059	0.00		
140	Brazil	10.01.1896	−3	823	0.21		
100	Colombia	09.01.1899	−3	4,775	0.00		
165	Uruguay	01.01.1904	−3	8,034	0.00		
365	Russia	01.22.1905	−10	32,528	0.00		
360	Rumania	03.15.1907	−6	2,448	0.01		
600	Morocco	08.01.1907	−6	22,126	0.00		
70	Mexico	11.20.1910	−9	10,945	0.00		
600	Morocco	01.15.1911	−6	23,389	0.00		
150	Paraguay	07.15.1911	−3	2,570	0.01		
710	China	10.11.1911	−6	17,998	0.00		
710	China	07.12.1913	2	488	0.40		
365	Russia/USSR	12.09.1917	−1	44	0.92		
375	Finland	01.28.1918	8	53	0.90		
310	Hungary	03.25.1919	−7	3	0.99		
91	Honduras	02.09.1924	5	1,318	0.08		
700	Afghanistan	03.15.1924	−6	1,680	0.04		
710	China	07.01.1926	−5	4,443	0.00		
70	Mexico	08.31.1926	−3	791	0.22		
700	Afghanistan	11.10.1928	−6	3,381	0.00		
710	China	03.01.1929	−5	5,417	0.00		
710	China	11.15.1930	−5	6,041	0.00		
92	El Salvador	01.22.1932	−9	50	0.91		
230	Spain	10.04.1934	7	1,029	0.14		
230	Spain	07.18.1936	7	1,682	0.04		
710	China	02.28.1947	−5	64	0.89		
150	Paraguay	03.07.1947	−9	2,577	0.01	−4.08	0.14
94	Costa Rica	03.12.1948	10	10,320	0.00	−1.56	0.04
775	Burma	09.15.1948	8	255	0.62	−4.28	0.48
100	Colombia	09.15.1949	−5	524	0.37	−1.58	0.71
850	Indonesia	05.31.1950	3	155	0.75	−2.71	0.82

APPENDIX B.   (Continued)

COW Number	Country	Event Date	Democracy Index	Days Since Regime Change	Proximity of Regime Change	Development	Ethnic Heterogeneity
840	Philippines	09.01.1950	5	62	0.89	−2.29	0.04
145	Bolivia	04.09.1952	−5	5,805	0.00	−2.09	0.86
850	Indonesia	09.20.1953	0	1,131	0.12	−2.36	0.82
90	Guatemala	06.08.1954	2	1,275	0.09	−1.62	0.69
160	Argentina	06.15.1955	−9	2,382	0.01	0.03	0.15
850	Indonesia	12.15.1956	0	2,313	0.01	−1.93	0.82
660	Lebanon	05.09.1958	2	4,268	0.00	−0.62	0.14
40	Cuba	06.15.1958	−9	1,095	0.13	−0.23	0.47
645	Iraq	03.06.1959	−5	234	0.64	−0.70	0.45
817	Vietnam, Rep. of	01.01.1960	−3	1,528	0.06	−2.94	0.24
812	Laos	10.15.1960	−1	288	0.58	−4.02	0.66
615	Algeria	07.28.1962	−8	25	0.95	−1.44	0.00
678	Yemen Arab Rep.	11.15.1962	0	56	0.90	−4.79	0.19
625	Sudan	10.01.1963	−7	1,778	0.03	−2.76	0.76
517	Rwanda	11.15.1963	−5	501	0.39	−4.29	0.19
42	Dominican Republic	04.25.1965	−3	480	0.40	−1.58	0.47
90	Guatemala	10.01.1966	3	208	0.67	−1.57	0.68
710	China	01.15.1967	−9	259	0.61	−1.49	0.12
475	Nigeria	07.06.1967	−7	536	0.36	−2.61	0.65
775	Burma	01.01.1968	−7	1,645	0.04	−2.84	0.48
663	Jordan	09.17.1970	−9	4,935	0.00	−1.08	0.04
90	Guatemala	11.15.1970	1	258	0.61	−1.36	0.68
770	Pakistan	03.25.1971	3	2,272	0.01	−1.85	
780	Sri Lanka	04.06.1971	8	313	0.55	−2.13	0.50
516	Burundi	04.30.1972	−7	1,978	0.02	−4.79	0.29
840	Philippines	10.01.1972	−9	7	0.99	−1.27	0.04
552	Zimbabwe	12.28.1972	4	2,553	0.01	−0.32	0.10
770	Pakistan	01.23.1973	3	2,942	0.00	−1.81	
660	Lebanon	04.13.1975	5	1,699	0.04	−0.02	0.14
90	Guatemala	03.12.1978	−5	6	0.99	−1.46	0.68
700	Afghanistan	06.01.1978	−7	1,779	0.03	−2.79	0.75
630	Iran	09.03.1978	−10	8,582	0.00	0.24	0.71
93	Nicaragua	10.01.1978	−8	15,460	0.00	−0.84	0.51
811	Kampuchea	01.08.1979	−7	1,013	0.15	−6.06	0.15
92	El Salvador	07.01.1979	−6	860	0.20	−1.34	0.19
541	Mozambique	10.21.1979	−8	1,579	0.05	−2.27	0.31
475	Nigeria	12.18.1980	7	443	0.43	−1.98	0.63
630	Iran	06.06.1981	−6	855	0.20	−0.06	0.71
135	Peru	03.04.1982	7	583	0.33	−0.49	0.75
93	Nicaragua	03.18.1982	−5	378	0.49	−1.28	0.52
520	Somalia	04.21.1982	−7	4,564	0.00	−2.27	0.19
775	Burma	02.01.1983	−8	945	0.17	−2.76	0.48
780	Sri Lanka	07.25.1983	3	214	0.67	−1.95	0.45
625	Sudan	11.17.1983	−7	4,418	0.00	−2.49	0.74
475	Nigeria	02.02.1984	−7	32	0.94	−1.52	0.63
100	Colombia	03.15.1984	8	3,507	0.00	−0.20	0.71
750	India	01.01.1985	8	2,741	0.01	−1.38	0.48
645	Iraq	01.01.1985	−9	1,995	0.02	−0.41	0.45
680	Yemen Peoples Rep.	01.13.1986	−8	2,573	0.01		0.26
780	Sri Lanka	09.01.1987	3	1,713	0.04	−2.08	0.45
516	Burundi	08.18.1988	−7	7,932	0.00	−4.02	0.29
450	Liberia	12.01.1989	−6	1,976	0.02	−2.00	0.10
360	Rumania	12.21.1989	−8	4,712	0.00	1.50	0.23
517	Rwanda	09.30.1990	−7	6,295	0.00	−3.51	0.19
365	USSR	04.30.1991	0	321	0.54	1.91	0.73
345	Yugoslavia/Serbia	05.01.1991	−1	465	0.41	0.55	0.87
640	Turkey	07.10.1991	10	607	0.32	0.05	0.26
516	Burundi	11.23.1991	−4	68	0.88	−3.82	0.29
372	Georgia	12.25.1991	2	260	0.61	0.00	0.51
702	Tajikistan	05.01.1992	3	235	0.64	0.00	0.58
540	Angola	10.28.1992	−6	602	0.32	−2.40	0.86

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