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### A Review of Recent Advances and Future Directions in the Quantitative Literature on Civil War

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## **A REVIEW OF RECENT ADVANCES AND FUTURE DIRECTIONS IN THE QUANTITATIVE LITERATURE ON CIVIL WAR**

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This paper reviews the booming literature on civil war. It presents the major theoretical perspectives and key empirical results on the determinants of civil war. The paper identifies controversies in the field and suggests ways to improve and organize our research. The conclusion outlines possible future directions for research on civil wars.

*Keywords:* Civil war; Poverty; Democracy; Ethnicity; Insurgency

### **INTRODUCTION**

Why is it important to study civil war? Five reasons have been suggested: “[civil war] is widespread; it causes tremendous suffering; it almost always affects and involves neighboring states, thereby undermining regional stability; it often engages the interests of distant powers and international organizations; and efforts to deal with the problems posed by internal conflict are in the process of being reassessed by policymakers at the national level and in regional and international organizations” (Brown, 1996, p. 3).

Some of the reasons are certainly valid and provide good motivations for the study of civil war. It is certainly true that civil wars do engage the interests of distant powers and they sometimes engage the efforts of international and regional organizations. It is also true that they cause massive human suffering and impact negatively on economic development and political stability. However, it is interesting to note that the common perception of civil wars as widespread is less true today than several decades ago. Peaking interest in the academic study of civil war has coincided with a sharp decline in the incidence of new civil wars globally, as shown in Figures 1a and 1b. While some wars have lasted several decades, new civil war starts have dropped appreciably since 1994. All major regions of the world have roughly followed this pattern with a peak in civil war occurrence around 1994.<sup>1</sup>

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Note, however, that many civil wars that started prior to 1994 continue past that date, which makes the prevalence of civil war a pressing policy concern.

Civil war is the problem of the poor. For most of the post-World War II period, the probability of civil war onset in any one country and any given year has been minimal (less than 5% of all country-years in a population of 161 countries over a period of 40 years). Typically, well-established democracies with high levels of per capita income are highly unlikely to have a civil war. This is not to say that rich countries are immune from civil violence, however, as the troubles in Northern Ireland and the Basque region of Spain reveal. Civil war, however, is a much more present danger in less economically developed countries and these countries are frequently not at the top of the foreign policy agendas of the major powers. Table I presents a breakdown of war events by region, including summary statistics for war duration (some wars were ongoing at the time of writing), deaths and displacements (refugees and internally displaced persons). The region most affected by civil violence is Sub-Saharan Africa, with Asia (especially South-east Asia) and the Middle East (including North Africa) following in some distance. With the possible exception of Yugoslavia and a few other countries, civil wars tend to take place without attracting attention from Western camera lenses or involving the strategic interests of major powers (examples are the wars in Algeria, Angola, Sierra Leone, Sudan, and

Fig 1a Mean War Prevalence & War Onset by Five-Year Period

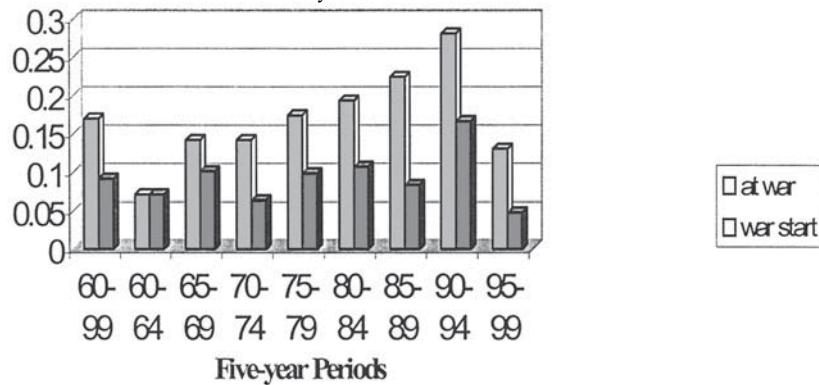
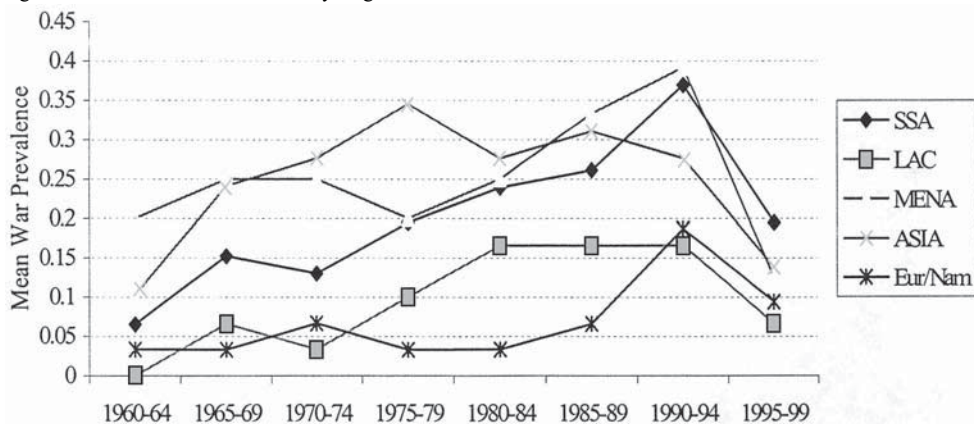


Fig 1b Mean Prevalence Civil War by Region\*



\*Regional acronyms: SSA: Sun-Saharan Africa; LAC: Latin America & the Carribean; MENA: Middle East and North Africa; ASIA: East-Central and South-East Asia; Eur/Nam: Europe and North America

TABLE I Civil War Outbreaks and Related Statistics by Region &amp; Period. \*(War starts refers to new war episodes that were initiated within the relevant period.)

	<i>Europe and North America</i>	<i>Latin America and Carrib.</i>	<i>Middle East-N. Africa</i>	<i>Asia (incl. South)</i>	<i>Sub-Saharan Africa (incl. Sudan)</i>
1945–1999					
War starts	10	18	27	32	40
Dead	15000	4000	20000	30000	65000
Displaced	305000	90500	500000	74500	182500
Duration (months)	15.5	18	36	51.5	54
1989–1999					
War Starts	6	3	8	1	13
Dead	27500	3000	13750	12589	10000
Displaced	353000	52000	250000	150000	300000
Duration (months)	15.5	24	30	60	36
1994–1999					
War starts	2	1	1	0	2
Dead	45000	3000	2000	0	125250
Displaced	393000	52000	0	0	385350
Duration (months)	15	12	6	0	18

\*Values for deaths, displacements, and duration are medians for each region for wars starting in each period. Source: Doyle and Sambanis (2000)

Turkey). Although these wars have not attracted interest from the major powers due to strategic considerations, they do have important security and economic implications for neighboring states and they influence the stability of entire regions. As such, civil wars have significant security externalities that demand the attention of international relations scholars and policy analysts. As the figures on deaths and displacements suggest, wars cause massive human suffering, though there are certainly more deaths due to communicable diseases (malaria, AIDS) in less developing countries than are deaths due to civil violence. Political scientists have not focused on health policy with anywhere near the same tenacity as they have focused their efforts on war prevention, but recent efforts suggest that war has significant and long-lasting negative health effects in less developed countries (Ghobarah, Huth, and Russett, 2001).

As Brown (1996) noted, civil wars have important regional contagion or diffusion effects, making civil war an important problem in the field of international relations.<sup>2</sup> There are also huge economic costs to civil war. Civil war is both more likely in poor countries and, in turn, exacerbates economic problems by destroying economic capacity and reducing growth.<sup>3</sup> Perhaps the most important reason that political scientists should study civil war is that it represents the most poorly understood system failure in domestic political processes. It is a disruption of social norms that is unparalleled in domestic politics and has important implications for the stability of regional systems and the maintenance of international security. As such, civil war is a phenomenon that must be well understood with a view to designing prevention and management strategies. The study of civil war therefore is fertile ground for inter-disciplinary social science research.

In this paper, I review recent advances in the political-economic literatures on civil war. This survey cannot possibly be exhaustive, as the literatures on conflict and violence are enormous. I do not cover writings on social movements, riots or non-violent protest, the links between environmental and political conflict, democratic peace theory and international militarized disputes, or a number of other research areas that have not been directly linked to the political-economic formal and quantitative analysis of civil war. I turn next to a review of prominent theoretical explanations of civil war. I then discuss recent empirical results and

address methodological issues in the empirical literature. In closing, I suggest an agenda for future research.

## THEORETICAL PERSPECTIVES ON CIVIL WAR

A civil war is an armed conflict which (a) causes more than one thousand deaths (typically in at least the first year the war is coded); (b) challenges the sovereignty of an internationally recognized state; (c) occurs within the recognized boundaries of that state; (d) involves the state or state-claimants as a principal combatant; and (e) involves rebels with the ability to mount organized armed opposition to the state (Doyle and Sambanis, 2000, pp. 779–802).<sup>4</sup> This broad definition results in the coding of 127 civil war events in the post-World War II period. Table II (reproduced with changes from Doyle and Sambanis, 2000) lists these events.<sup>5</sup>

It is useful to organize the literature along a distinction between the three main phases of war: onset, duration, and post-war transition. Most studies fall in one of these categories, though studies of war prevalence look at both war initiation and duration and studies of

TABLE II Cases of Civil War, 1944–1999.

<i>Country name where civil war took place</i>	<i>Year war started</i>	<i>Year war ended</i>
Afghanistan	1978	1992
Afghanistan	1993	Ongoing
Algeria	1962	1963
Algeria	1992	1997
Angola	1975	1991
Angola	1992	Ongoing
Argentina	1955	1955
Azerbaijan	1988	1996
Bangladesh	1973	1994
Bolivia	1952	1952
Burma	1948	1951
Burma	1968	1982
Burma	1983	1995
Burundi	1965	1969
Burundi	1972	1973
Burundi	1988	1988
Burundi	1991	Ongoing
Cambodia	1970	1975
Cambodia	1979	1991
Central Africa	1995	1997
Chad	1965	1979
Chad	1980	1994
China	1947	1947
China	1950	1951
China	1967	1968
Colombia	1948	1962
Colombia	1978	Ongoing
Congo Brazzaville	1992	1996
Congo/Zaire	1960	1965
Congo/Zaire	1967	1967
Congo/Shabba*	1975	1979
Congo/Zaire	1996	1997
Costa Rica	1948	1948
Cuba	1958	1959
Cyprus	1963	1964
Cyprus	1974	1974

TABLE II (Continued)

Djibouti	1991	1995
Dominican Rep.	1965	1965
El Salvador	1979	1992
Ethiopia/Eritrea	1974	1991
Ethiopia/Ogaden	1977	1985
Ethiopia/Tigrean	1974	1991
Georgia/Abkhazia	1991	1993
Georgia/Ossetia	1992	1994
Greece	1944	1949
Guatemala	1954	1954
Guatemala	1966	1972
Guatemala	1974	1994
Haiti	1991	1994
Haiti	1995	1996
India/Partition	1946	1948
India/Kashmir	1965	1965
India/Kashmir	1989	1994
India/Sikh	1984	1994
Indonesia/Mol.	1950	1950
Indonesia/Dar.	1953	1953
Indonesia	1956	1960
Indonesia/E.Timor	1975	1982
Indonesia	1986	1986
Iran	1978	1979
Iran	1981	1982
Iraq/Shammar	1959	1959
Iraq/Kurds	1961	1975
Iraq/Kurds	1988	1994
Iraq/Shijtes	1991	1994
Israel/Palestine*	1947	1997
Jordan	1971	1971
Kenya*	1991	1993
Korea	1950	1953
Laos	1960	1975
Lebanon	1958	1958
Lebanon	1975	1978
Lebanon	1982	1992
Liberia	1989	1992
Liberia	1993	1996
Malaysia	1948	1959
Mali	1990	1995
Mexico*	1992	1994
Moldova	1992	1994
Mor./W.Sahara	1975	1989
Mozambique	1979	1992
Namibia*	1965	1989
Nicaragua	1978	1979
Nicaragua	1981	1989
Nigeria	1967	1970
Nigeria	1980	1984
Northern Ireland*	1968	1994
Pakistan/Bangladesh.	1971	1971
Pakistan/Baluchistan	1973	1977
Papua New Guinea	1988	1991
Paraguay	1947	1947
Peru*	1980	1996
Philippines	1950	1952
Philippines	1972	1996
Philippines	1972	1992
Romania*	1989	1989
Russia/Chechnya	1994	1996
Rwanda	1963	1964
Rwanda	1990	1994
Sierra Leone	1991	1996

TABLE II (Continued)

<i>Country name where civil war took place</i>	<i>Year war started</i>	<i>Year war ended</i>
Somalia	1988	1991
Somalia	1992	1999
South Africa*	1976	1994
Sri Lanka/JVP	1971	1971
Sri Lanka/Tamil	1983	Ongoing
Sri Lanka/JVP	1987	1989
Sudan	1963	1972
Sudan	1983	Ongoing
Tajikistan	1992	1994
Thailand*	1967	1985
Turkey	1984	1999
Uganda	1966	1966
Uganda	1978	1979
Uganda	1980	1986
Vietnam, Rep.	1960	1975
Yemen	1948	1948
Yemen	1994	1994
Yemen, North	1962	1969
Yemen, South	1986	1987
Yug./Bosnia	1992	1995
Yug./Croatia	1991	1991
Yug./Croatia	1995	1995
Zimbabwe	1972	1980
Zimbabwe	1984	1984

peacebuilding look at war termination and the risk of war recurrence. There are important questions that cut across all stages of war: the role of external intervention; the impact of foreign aid; the influence of United Nations peace operations. However, as an organizing principle, distinguishing between war onset, duration, and postwar peacebuilding can assist us in identifying the particularities of each of these processes.

I start by reviewing the four main theoretical paradigms applied to study civil war onset: economic theory of war; political rational choice theory; I.R. theory (neorealism and neoliberalism); and constructivism. Most researchers have focused on war onset, but I discuss studies of war duration and post-war peacebuilding where appropriate.

### **Economic Theories of Civil War**

Economic theories of conflict can be divided into two generations. First generation theories emphasized the impact of economic modernization (rapid growth rates and structural changes to the economy) on the mobilization of social groups for conflict. Rapid socio-economic change could accelerate and intensify group competition for scarce resources. According to Newman (1991, p. 452), "The process of modernization explains not only the origins of ethnic conflict but also the form of that conflict, and the success or failure of specific ethnic political movements." Both Marxist and non-Marxist variants of modernization theory argue that modernization causes revolutionary social changes that lead threatened people to identify more closely with their ethnic groups and re-ignite old conflicts. One can see a link between modernization theory and the theory of ethnic networks and entrepreneurs. Ethnic network theory argues that group affiliation serves as an enforcement mechanism to prevent cheating and sanction contracts (Congleton, 1995). Ethnic ties can facilitate coordination and increase trust, reducing the costs of enforcement and the likelihood of defection

from agreements. If this ethnic basis for business interaction is cultivated, it creates ethnically based networks that reduce available opportunity for excluded groups, increasing resentment and conflict. Interethnic conflict in such a scenario may result as an accident or a suboptimal equilibrium in a coordination game.

Modernization theory is convincing as an explanation for specific wars, but it clearly does not apply to all civil wars. As Horowitz (1985) points out, ethnic conflict often occurs in countries with very low economic modernization (*e.g.* Chad, Sudan).

The second generation of economic theories, however, is more easily generalizable and is based on rational choice theory and economic theories of criminal behavior. Classic references include Grossman (1995) and Hirschleifer (1995), who focus on the economic trade-offs that allow the outbreak of conflict and on the consequences of conflict on economic growth. Grossman (1995) theorized about the state's decision on how much to tax or appropriate from its subjects, given an expectation that insurrection may result from too much taxation and resources will then have to be shifted to the protection of the state (reducing the net value of these rents to the state). Hirschleifer (1995) noted that fighting is almost always Pareto-inefficient and tried to explain why we so frequently observe such seemingly irrational behavior. He explained that violence is the product of "three interacting determinants: *preferences, opportunities, and perceptions*" (Hirschleifer, 1995, p. 172) and developed a model of conflict in which the parties' divergent preferences and capabilities develop opportunities for conflict. The perception of the likelihood of a successful outcome in a conflict enters the calculation of net expected benefits from conflict and can result in a party choosing to use violence as a strategy to satisfy its preferences. This explanation focuses on informational (and perceptual) problems in explaining violence and presages the rational choice theory of war in the international relations literature (Fearon, 1995).

Advances in the economic theories of civil war were presented in the December 2000 special issue of the *Journal of Conflict Resolution*. Authors in that collection of essays analyzed violent conflict as the result of rational rent-seeking behavior (Sandler, 2000, pp. 723–729). One theoretical contribution of the volume comes from the paper by Garfinkel and Skaperdas (2000), who depart from the standard rational choice explanation of violence as the outcome of informational asymmetries or the inability to credibly commit to a peaceful resolution of conflict (Fearon, 1995; Lake and Rothschild, 1996). Garfinkel and Skaperdas (2000) show that incomplete information is not a necessary condition for conflict in a long-run model if the short-run costs to fighting are less than the long-term gains of weakening potential opponents so that they cannot pose threats in the future. Moreover, in conflicts motivated by greed for material resources, it may be the case that no enforceable, credible, or time-consistent bargain can be made between the rebels and the government and the rebels may always be able to acquire more goods by using force (Collier, 2000a, pp. 838–52).

Two recent and prominent applications of economic theory to explain civil war onset are Collier and Hoeffler (2000) and Fearon and Laitin (2001). Both studies utilize similar frameworks to explain rebellion as the outcome of rational decision-making, subject to the constraints of the rebel "labor market." The demand and supply of rebellion will be influenced by the expected costs and benefits of violence, including the opportunity cost of rebellion (determined as earnings foregone by rebels who might be otherwise engaged in productive economic activity). The expected utility of rebellion is also a function of the probability of victory, which is a negative function of the per capita taxable base of the country, since the authors assume that the greater the tax base, the greater the ability of the state to defend itself against the rebels. At the same time, a greater tax base implies greater rewards from capturing the state, which should increase the expected utility of rebellion. Collier and Hoeffler (2000) theorize that the expected gains from rebellion are an increasing function of the size of the population, since the authors theorize that a large population will be more



likely to include secession-seeking rebellions by population sub-groups. They also argue that the probability of a war diminishes in GDP per capita and in the war's expected duration, since the richer the country and the longer the war, the greater the rebels' economic opportunity costs from fighting. Finally, there are transaction and coordination costs to rebellion, which the authors approximate by the degree of ethno-linguistic fractionalization (ELF). Following much of the literature on ethnicity and kinship, Collier and Hoeffler (2000) argue that ethnically-defined kin groups facilitate within-group coordination and hinder cross-group coordination. Thus, they hypothesize that coordination for rebellion is easier at low levels of ELF and it becomes harder as ethnic diversity increases. Thus, they argue that more diverse societies are less likely to experience a civil war.<sup>6</sup>

Fearon and Laitin (2001) model a one-shot reduced-form game of insurgency, based on the interaction between the government and insurgents (rebels). The size of rebellion is influenced by the government's effort as well as by the scale of the initial rebellion. Rebels estimate their expected gains from rebellion and compare them to the expected losses (probability of being captured times its costs). The model focuses both on the likelihood of an insurgency and on the size of the insurgency, operationalized by a measure of the number deaths due to the war. The authors explain that the likelihood of observing an insurgency and the determinants of the size of the insurgency are influenced by the initial "demand" for insurgency, by the government's response, and the level of available "technology" for insurgency (terrain, financing, etc). These constraints shape the opportunity structure for insurgency.

These and other theories of civil war onset have also been applied to explain civil war duration and post-conflict peacebuilding (Collier, 2000b; Fearon, 2001). The main interest in these exercises is to find out if the root causes of the war can also explain war duration and termination. Additionally, researchers have analyzed the dynamics of violence during war (Kalyvas, 2001a, 2001b) and path-dependent effects of conflict, which may lead to patterns of war recurrence (Doyle and Sambanis, 2000). Some other major research questions relevant to civil war duration and post-war transitions are the impact of partial external intervention, the effects of multilateral peace operations, and significance of ethnic fragmentation for the stability of post-war political structures.

Expanding on their economic theory of war onset, Collier, Hoeffler, and Soderbom (2001) test their core model against patterns of war duration and find that none of the variables that are significant for predicting war onset can significantly predict war duration. They do find a positive, non-monotonic relationship between civil war duration and the level of ethnic fractionalization. The explanation is that polarized societies have longer wars because they face lower within-group costs of coordinating a rebellion as compared to the same costs in highly diverse societies. They argue that civil war onset and duration are distinct processes that should be studied separately. Fearon (2001) also supports this argument in a study of civil war duration that covers more years (1945–2000) and more cases (he adds to his sample all colonial and imperial wars). Fearon's (2001) results are preliminary and based on an ongoing project, but they are markedly different from those of Collier, Hoeffler, and Soderbom (2001). He proposes a war typology that distinguishes between five major civil war categories and shows that these typologies are the only significant determinants of war duration. The hardest wars to end are wars between "a peripheral ethnic minority and state-supported migrants of a dominant ethnic group" (Fearon, 2001, p. 3).

Elbadawi and Sambanis (2000a) have expanded the theory of civil war duration by modeling the dynamics of external military intervention and war duration. They argue that external intervention in favor of the rebels may reduce the cost of sustaining a rebellion by a small ethnic group and that, without such intervention, the rebellion may quickly be crushed by the government. Therefore, external intervention may imply that social polarization is not a

necessary cause of longer-lasting civil wars. Rather, external intervention could reduce the cost of coordinating a rebellion for a given level of ethnic fractionalization, thereby increasing the ease of sustaining a rebellion across levels of ethnic fragmentation. Intervention may also directly lower the rebels' costs of fighting a rebellion if it increases the likelihood of success, thereby attracting more rebel recruits and discouraging defections. Elbadawi and Sambanis (2000a) explain that these effects should be influenced by the type of polity. External intervention against extremely autocratic states – which may otherwise be in a better position to repress a rebellion – should prolong civil wars.

### Political Rational Choice Theories of Civil War

Rational choice theories of civil war in political science focus on political oppression, collapsing institutions, system transition, or informational problems as causes of civil war. These theories draw on expected utility theory as much as on classic sources on rebel organization, social movements, and protest (e.g. Gurr, 1970; Tilly, 1978). Rebellion is explained as a way to redress grievance, and grievance may be due to either political or economic factors, or both.

Most political scientists would agree that the lack of political rights generates grievance. However, it is also important to explain more fully how grievance is translated into mass-level political violence. Such violence, aimed at overthrowing the government, cannot spontaneously arise since it is in effect a public good (or public bad, depending on which side one is supporting). As such, political violence will be under-supplied unless the cost of such violence is low. Low cost provides opportunity for violence. The net expected cost of violence includes both actual costs (e.g. expected deaths) and opportunity costs (e.g. the gains that an otherwise occupied rebel might be able to realize in a peaceful economy).

A good example of a political theory of civil war is Hegre *et al.* (2001). The authors model civil war as the result of opportunity for violence, given levels of grievance with the pre-war state of affairs. The probability of civil war is a function of a host of factors that reduce the net expected costs of political violence and generate an expectation that violence will resolve prior grievances. The authors focus on political instability and regime transition: both exacerbate grievance and create opportunity for violence. Empirical tests show that countries at the middle of the autocracy–democracy spectrum are most at risk of civil war because they are neither autocratic enough to preclude the opportunity of rebellion, nor democratic enough to prevent significant grievance. Additionally, autocracies are at greater risk because they are less stable than democracies and hence more likely to undergo a risk-augmenting political transition. The Hegre *et al.* (2001) study has its roots in earlier studies of political protest. Lichbach (1987), for example, argues that protesters' proneness to use violence depends on the likelihood of state repression (which reduces the use of violent protest). Gupta, Singh and Sprague (1993) are closer to the Hegre *et al.* (2001) theory as they focus on the distinction between democracies and non-democracies and argue that both high and low levels of state repression will discourage protest in non-democracies, whereas the opposite is true in democracies. Rasler (1996) instead argues that, in the short-run, repression deters protest, while it encourages protest in the long-run. Moore (1998) tests these three theories of violent protest using event data for several case studies and is able to confirm Lichbach's (1987) theory.

Consistent with the macro-level studies of civil war, are studies that examine the micro-level motives of those who actually commit violence in civil war. Kalyvas's (2001a; 2001b) detailed study of the Greek civil war sets the standard for such analyses. His micro-level analysis adds two important dimensions to our theories of civil war: first, an emphasis on the informational dynamics in local populations and how they influence participation in civil war; and, second, a focus on the patterns of violence committed across

time and space. He distinguishes between the need to understand how wars start and the need to explain how wars are fought. Theories of civil war onset do not tell us what type of violence we are more likely to observe or how intense that violence may be. Kalyvas explores the link between political ideology, ethnic divisions, and informational dynamics and the level and intensity of violence. He argues that during civil war, access to and control of civilians are central to the military effort by both the insurgents and the government. Thus, as war progresses violence becomes selective and indiscriminate violence is counter-productive. Kalyvas (2001a, 11) argues that selective violence must be “*jointly* produced by insiders and outsiders, locals and non-locals, civilians and soldiers . . . [and this] requires institutions.” Institutions that govern the distribution of information between organizations and local people and the frequency of denunciations are critical, as are institutions that determine the likelihood and severity of retaliations for denunciations.

Along the lines of Kalyvas’s inquiry is a study by Gates (2002), which explores the problem of rebel recruitment. Gates models the competition between the rebel organization and the government and assumes that, other things being equal, rebel recruitment will be easier the closer the ‘distance’ between the rebels and the leader. Distance can be defined culturally (on the basis of ethnic or religious identities), ideologically, or geographically. To avoid defection, the leader must compensate rebel recruits and find ways to meet the rebel organization’s financial constraints. Gates’ analysis is pertinent both to the initiation of war and its duration and provides a useful bridge between the macro-econometric studies of civil war (*e.g.* Collier and Hoeffler, 2000) and the micro-economic foundations of individual behavior in civil war.

There is still much work to be done linking macro-level theories of conflict to a theoretical treatment of individuals’ motives and actions. A recent trend in theory development is to emphasize the economic or other material benefits that elites stand to gain from civil war. An important theoretical distinction has been drawn between so-called “greed-driven” and “grievance-driven” rebellions (Collier and Hoeffler, 2000; Collier, 2001; Berdal and Malone, 2000). Both economists and political scientists have argued that financial motives and constraints may be the key determinants of civil war (Mueller, 2000).<sup>7</sup> Critics of the validity of such a distinction do exist, however (Herbst, 2000a; Kalyvas, 2001c). They argue that the greed-grievance distinction may not be as clear as the proponents of economic theories of civil war might suggest (Berdal and Malone, 2000). Indeed, we often cannot distinguish between “war loot” that serves as a means to sustain the war effort and “loot” that is the ultimate aim of the war. Furthermore, even if the financial constraint of mounting an effective rebellion is the most important determinant of the likelihood of rebellion, this need not imply that all underlying motivations for rebellion are subsumed to greed. As Herbst (2000a) points out, the motives for rebellion are many and interlinked and pure economic motives are not consistent with the behavior of many rebel leaders, as in several cases of African wars. The struggle for power, the persuasiveness and persistence of ideological beliefs, and political and other forms of inequality must be considered in thinking about the many possible motives for political violence.

Prominent among competing macro-level political explanations of civil war is Gurr (2000), who cites four main determinants of civil war: (a) the salience of ethnocultural identity, as it relates to other types of socio-economic identities; (b) the level of grievance (actual or expected); (c) the capacity of ethnopolitical groups to mobilize (a function of their cohesion); and (d) the available opportunities for political action by each group. He finds that well-established democracy significantly reduces the risk of ethnopolitical action by providing opportunities for non-violent conflict resolution. This work on political violence is consistent with the rational choice approach, since Gurr (2000) discusses rational uses of violence to redress political grievance. However, it is also consistent with constructivist approaches that focus on the political mobilization of elites by political entrepreneurs and the social

construction of identity that is often used as a mobilization device. Gurr's focus on group-level interactions implicitly assumes that group-level identities are important in forging shared preferences that dictate specific strategies that are rational for the group.

Political theories of civil war are especially relevant to the analysis of post-war peacebuilding. As economic theories find that war onset and termination are quite different processes, analysts interested in post-conflict peace must try to understand both the root causes of conflict and the factors that drive and intensify conflict after its initiation. Many of these factors and processes are political, such as war-related hostility, institutional failure, loss of government legitimacy, and the intensification of previously existing political cleavages.

Much of the peacebuilding literature to date has been devoted to case-studies of particular wars and postwar transitions and of the institutions that might support peacebuilding (good examples include Doyle *et al.*, 1997; Durch, 1993). Recently, the number of more theoretically ambitious large-N quantitative studies of war recurrence and peacebuilding has grown. The literature was jump-started by Licklider's (1993, 1995) civil war termination data set and comparative case-study project. Mason and Fett (1996) published quantitative findings that suggested that a negotiated settlement was more likely after long civil war wars (the war-weariness effect) and where the government's military was small. A related analysis by Walter (1997) explained the observed difficulties in reaching lasting peace settlements of civil wars as a result of the time inconsistency of peace agreements, as governments can easily renege on their promises after the rebels have disarmed. Another study that combined a theory of peacebuilding with empirical testing on the population of post-World War II civil wars was Doyle and Sambanis (2000). The authors argued that the space for post-war peace is determined by the interaction of the root causes of the war, the local capacities for change, and the magnitude and type of international assistance. They defined peacebuilding success as an end to the fighting, uncontested sovereignty, and a modest measure of political openness. While significant human suffering and a large number of hostile factions reduce the likelihood of successful peacebuilding after civil war, the probability of success increases with the level of economic development and with the deployment of well-prepared and properly mandated UN peace operations. The Doyle and Sambanis (2000) statistical model addresses the links between civil war termination and root economic causes, building on economic theories of civil war. It also places the debate on civil war termination in the context of I.R. theory, as it considers ways in which action by the international community might alleviate post-civil war risk.

### **International Relations Theories of Civil War**

The two main I.R. theories – neorealism and neoliberalism – cannot provide a sufficiently rich theoretical framework to explain the outbreak, duration, and termination of civil violence (see David, 1997 for a review focusing on this question). Neorealism would be relevant if systemic variables – the Cold War or bipolarity – were systematically related to the likelihood of civil violence. However, no such evidence has yet been presented. Neorealism cannot explain why ethnic, religious, or class-based divisions occur in the first place – since it assumes that the state is a unitary actor – and cannot analyze the impact of these actors on the onset of war. It is true that state failure, which is frequently associated with civil war, parallels the anarchic international system, which makes neorealism relevant to the analysis of the dynamics of civil war. However, a major difference is that anarchy emerges endogenously in civil war and is not a preexisting structural constant as in the international system. Thus, neorealism is insufficient as an explanation of the forces that lead to domestic anarchy (ethnic divisions, institutional failure) and cannot explain cases of civil war that take place in countries whose governments have not collapsed – *i.e.* in countries with small peripheral

insurgencies. Finally, neorealism cannot explain the role of leadership in mobilizing ethnic groups (more on this in the discussion on constructivism later).

Neoliberalism is better able to explain why war occurs in the first place or how political institutions that increase government legitimacy can prevent war by defusing the potential for violent conflict. It is also better at explaining the role of non-state ethnic networks and of the ideological and affective motives in ethnic conflict. It offers a better explanation of economic motives in civil war since it does not share neorealism's hierarchy of interests and does not prioritize security as a motive for violent conflict.

Neorealist theory has been useful in explaining how information inefficiencies, political failures, and external interference can lead to state collapse and conditions of emerging anarchy, thereby exacerbating the so-called security dilemma (Posen, 1993). This dilemma is essentially a vicious circle where one ethnic group's attempts to increase its own security are perceived as a threat to nearby groups. This dynamic increases the risk of conflict escalation and pre-emptive war. To date, scholars have presented little quantitative evidence of an ethnic security dilemma. However, the theory is plausible and allows us to merge neorealism, neoliberalism and constructivism, by considering how non-state actors, political institutions, or ethnic entrepreneurs influence the security dilemma to mobilize people to use violence.

I.R. theory can be useful in explaining neighborhood effects. We do not yet know how civil violence is transmitted across borders or across population groups within the same borders. Among the first researchers to tackle these questions were Midlarsky (2000) and Lake and Rothchild (1998). Midlarsky considered the implications of various types of collective identity and their role in regional civil conflicts. Lake and Rothchild explained that there are two mechanisms of international transmission of civil violence: diffusion and contagion. "Diffusion occurs largely through information flows that condition the beliefs of ethnic groups in other societies. Escalation [or contagion] is driven by alliances between transnational kin groups as well as by intentional or unintentional spillovers, . . . or by predatory states that seek to take advantage of the internal weaknesses of others" (Lake and Rothchild, 1998, p. 5). This theory is adapted and applied to the context of ethnic war in Sambanis (2001), who explores the implications of living in "bad" neighborhoods – *i.e.* neighborhoods with undemocratic countries and countries experiencing ethnic wars of their own. Living in bad neighborhoods can triple a country's chance of having an ethnic war (Sambanis, 2001).

An important gap in the theoretical and empirical I.R. literature is the relative dearth of studies on the links between international and internal war. To some extent, this is addressed by studies of external intervention in civil war and we find that many civil wars become internationalized through such intervention. However, to date, we have no integrated theory of war (international and internal) and the closest we come to such integrated approach is in studies that focus on one type of war while controlling for the occurrence of the other type of war (Raknerud and Hegre, 1997; Hegre *et al.*, 2001; Woodwell, 2001; Blomberg and Hess, 2002). A systematic study of the links between external and internal conflict and their impact on economic activity is Blomberg and Hess (2002), who find that the conjunction of recession and external conflict maximizes the risk of internal violence. As they also find that conflict causes further deterioration of the economy, the authors are able to outline the ingredients for a conflict trap, a cycle of economic deterioration and repeat conflict, which threatens less developed countries.

### **Constructivist Theories of Civil War**

Constructivism is part of I.R. theory but is considered here separately because it does not rise to the level of a political philosophy of international relations (as do neorealism and neoliberalism) and because the main propositions and applications of constructivism go beyond

I.R. and spread into the field of comparative politics. Constructivism refutes many of the underlying assumptions and premises of neorealism and neoliberalism and consists of a set of propositions that focus on the political and social influences in the construction of beliefs, preferences, and identities. It is relevant to the study of civil war as there are several constructivist theories that attempt to explain ethnic violence (see Horowitz, 1998; 1985). Primordialists view ethnicity as an exceptionally strong affiliation that charges inter-ethnic interactions with the potential for violence. Believers in ancient group hatred argue that ethnic conflict is rooted in old sources of enmity and memories of past atrocities that make violence hard to avoid. Proponents of primordial sociality theory argue that the strength of kinship ties promotes altruism in favor of the genetic evolution of the group. Those that accept the clash of civilizations hypothesis argue that there are irreconcilable cultural differences that cause fear and violence between opposing groups. Modernization theory is also relevant and related to constructivism as economic and social change can accelerate and intensify group competition for scarce resources, solidifying group identities and promoting conflict. This explanation may be particularly relevant where class cleavages and ethnic cleavages overlap. Finally, ethnic conflict may be the result of mobilization of ethnic groups by ethnic entrepreneurs or elites pursuing private interests and capitalizing on the availability of ethnic networks—*i.e.* ethnically defined groups that reduce transaction costs and uncertainty with respect to the enforcement of contracts. Elites may also socially construct ethnic identities or reinforce racial, religious, or linguistic cleavages in such a way as to produce new sources of friction and conflict. According to Brown (1996), “bad leaders” are the most important proximate cause of civil war.

Constructivist approaches try to explain the link between the social construction of identity, the political mobilization of that identity, and civil violence as the outcome of that process. Constructivism differs from primordialism mainly by considering identity as not inherently conflictual and focusing on the molding of identity by leaders, social systems, or circumstance. The bulk of the effort in constructivist literature on civil violence is to identify the social origins of identity and establish patterns of evolution of identity as a result of social interactions, linking specific social systems and pathological patterns of identity evolution to the outbreak of civil violence (Anderson, 1983; Brubaker, 1995). Constructivists also focus on the role of elites in manipulating ethnic, religious, or class identity to pursue private goals often through violent means (*e.g.*, Brass, 1985; Rothschild, 1986). In a useful review of constructivist theories of ethnic identity and violence, Fearon and Laitin (2000b, 847) distinguish three categories of explanations of how conflictual identities are formed: “those based on discursive logics, those based on the strategic actions of elites, and those based on the strategic actions of the masses.” The category of identity formation and conflict based on discursive logics is more compatible with pure constructivist explanations rather than instrumentalist views that focus on elite action or other agency in engineering conflict. I will return to this category of explanation later, when I discuss the definition and implications of ethnicity.

I turn next to the distinction between elites’ and masses’ preferences and strategies, the other two main categories of constructivist literature on social conflict.

### ***Elites vs. Masses***

The idea that motives for civil violence can be socially constructed is not exclusively explored by constructivists, but also by rational choice scholars. De Figueiredo and Weingast (1999) were among the first to model the idea that rational actors may act inefficiently and support civil war if self-serving leaders manipulate the actors’ latent fears and urge them to

use violence. Given asymmetrical information, ailing leaders can exploit citizens' uncertainty about the likelihood of victimization at the hands of a perceived hostile group and can motivate the preemptive use of violence.

This rational choice approach has one significant problem, which it shares with most constructivist studies. It suggests that conflict is not inherent in ethnic identity and that war is caused by corrupt leadership, deteriorating institutions, or external shock. However, De Figueiredo and Weingast's conclusion depends on the existence of a critical probability of victimization and, as the stakes of victimization rise relative to peace, the critical probability of victimization that would support mobilization for violence can be close to 0. Thus, people act on the basis of their perceptions of how likely is their victimization. However, by assuming an underlying positive level of fear and distrust, the authors indirectly support primordialist views of conflict. De Figueiredo and Weingast do not explain why people would not doubt their leaders' intentions given the strong bias that exists in most societies against the use of mass violence. The masses do not update their beliefs that their leaders may be manipulating their fears and are positively predisposed to violence. That assumption may cause the model to over-predict violent outcomes and creates ample opportunity for the leaders to strike a match and light the fire of a rebellion. But if rebellion is so easy to motivate, then the distinction between the leadership's marginal impact and the people's own predisposition becomes small and the relative importance of primordial passions is greater than the authors would admit. The distinction is at best one between proximate and permissive causes of violence, but this distinction is hard to measure empirically and therefore hard to prove as significant in determining civil war outcomes.

An additional problem with the constructivist approach to the elites-masses distinction is that the distinction may fade in the intermediate or advanced stages of a conflict. It is fair to assume that elites have private goals that differ from the goals of the masses (although this aggregation of all social groups into a single category may in itself be problematic). However, once constructed and used to mobilize people to war, ethnic identities may become rigid and are the focal point for retaliation by members of opposing groups. Once people are targeted because of their identity, their identity would tend to solidify their dedication to the struggle. If people cannot escape their identity in an escalating struggle, then even if their original preferences were non-violent, war would cause a preference shock that would equalize leaders' and followers' preferences. Thus, constructivist analyses of elite mobilization must distinguish between stages of conflict.

### ***Ethnicity and Conflict***

"Ethnic groups are defined by ascriptive differences, whether the indicum is color, appearance, language, religion, some other indicator of common origin, or some combination thereof" (Horowitz, 1985, pp. 17–18). Ethnicity "covers 'tribes,' 'races,' 'nationalities,' and casts" (Horowitz, 1985, p. 53). Ethnicity creates trust and facilitates the coordination and enforcement of agreements in the presence of incomplete information or uncertainty about motives. Thus, the concept of ethnicity is compatible with rational choice theory as it can help explain the negotiation and enforcement of agreements across ethnic groups. Ethnic fragmentation will make the negotiation of a rebellion harder. Rebellion can be viewed as a public good to the rebels and their supporters (and a public bad to everyone else). Thus, the usual collective action problems associated with public good provision apply to this case. The more ethnically fragmented the society, the more complicated the collective action problems, since the negotiation of the rebellion's cost-sharing is harder, as is the monitoring and enforcement of contracts between rebels and their leaders.

Group-level discrimination and grievance often coincides with ethnic or religious divisions and it is thus possible to define ethnic conflict as conflict between governments and national, ethnic, religious, or other communal minorities in which the challengers seek major changes in their status (Esty *et al.*, 1995; 1998). In such conflicts, constructivists would see individuals drawn to the conflict by virtue of their identity. Members of the group define their identity in opposition to other groups, so once the group becomes involved in violent conflict, participation in the conflict is difficult to avoid when the conflict threatens the survival of the group's identity. However, the relationship between ethnic division and violent conflict is not straight-forward and may actually be non-linear. The greatest risk of violence may occur at a critical threshold of ethnic polarization. Societies dominated by two large groups may be inherently more dangerous than extremely diverse societies, where the risk of war is reduced by the high coordination costs of rebellion (Horowitz, 1985; Rothschild and Foley, 1988).

## EMPIRICAL FINDINGS

I now turn to a discussion of empirical results on the determinants of war onset, prevalence, duration/termination, recurrence, and post-conflict peacebuilding. In what follows, I try to distinguish between results that are generally accepted and results that are still debated in the literature.

There is no consensus on a comprehensive set of causes of civil war, though some findings seem robust. The following relationships are generally accepted: first, poverty exacerbates the risk of civil violence; second, ethnic diversity need not increase the risk of civil violence and may actually decrease it; third, excessive dependence on easily lootable natural resources increases the risk of conflict; fourth, mountainous or heavily forested terrain facilitates insurgency.

A number of possible causes of civil war are still being debated: the role of political grievance and lack of democracy; the impact of regime change; the role of ethnic diasporas; the impact of economic inequality; the particularities of ethnic and religious wars; the existence of security dilemmas; the presence of contagion or diffusion effects; and the significance of systemic effects or regional characteristics.

### Poverty and Slow Economic Growth

The economic studies of civil war have successfully identified an empirically robust relationship between poverty, slow growth, and an increased likelihood of civil war onset and prevalence. These relationships are discussed at length in a collection of papers in the February 2002 special issue of the *Journal of Conflict Resolution* (Collier and Sambanis, 2002). Collier and Hoeffler (2000) and Fearon and Laitin (2001) both find evidence that high poverty levels and slow economic growth are the two most salient determinants of insurgency. These results are robust to different econometric methods and apply to different time periods. Using spatial econometric methods, Murdoch and Sandler (2002) estimate the impact of civil war on economic growth patterns and measure the regional spillover effects of civil wars. They find significant direct and spillover effects that are more intense in the short run, while civil wars of greater magnitude tend to have longer-lasting effects.

To further explore the relationship between the economy and civil violence, researchers could design direct tests of modernization theory, focusing on the relationship between the



speed of structural economic change and civil violence. This has not yet been done. Economic theories might also explore further the link between adverse price or trade shocks or other disturbances and civil violence – such events might cause political change, which may in turn cause violence.

The link between poverty and violence is confirmed by Collier and Hoeffler's (2000) finding of a significant relationship between war onset and low education levels and by the State Failure Task Force's finding that infant mortality is one of three most important correlates of state failure (Esty *et al.*, 1995; 1998; Gurr and Harff, 1997). Education and infant mortality are of course correlated with income per capita, which suggests that the risk of civil war will be significantly reduced by economic policies that raise per capita income and, by extension, also raise education levels and improve public health. Collier and Hoeffler (2000, p. 23) actually measure this effect and suggest that increasing secondary school enrollment for males by 10% above the global median reduces the risk of war onset by 30% from the median risk of war.

### **Ethnic Diversity and Polarization**

One of the most striking results in the empirical literature is that ethnic diversity is not linked to a higher risk of civil violence, but may in fact reduce that risk. Popular discourse would suggest a negative effect of diversity, but Collier and Hoeffler (2000) find that ethnic dominance, not diversity, is more likely to increase the risk of war. In fact, countries with very high levels of ethnic diversity may be as safe as ethnically homogeneous countries. Elbadawi and Sambanis (2000b) confirm that there is a significant parabolic relationship between ethnic diversity and the risk of civil war. Fearon and Laitin (2001) do not find any statistically significant relationship. In a study of civil violence in newly independent republics of the former USSR, Laitin (2001) tested the relevance of long-standing cultural antipathies in inciting violence and found no significance in ethnic cleavages and the outbreak of secessionist violence. Bates (1999), by contrast, studied the relationship between ethnicity, economic modernization, political participation, and civil violence in 46 African countries during the period 1970–1995 and found that ethnic dominance increases the risk of war, while diversity may reduce that risk. Looking specifically at ethnic wars, Reynal–Querrol (2002) finds that polarized religious cleavages are positively correlated with the prevalence of ethnic civil war. This argument follows along the line of work by Ellingsen (2000), who finds ethnic divisions to be potentially conflictual.

These empirical results are clearly mixed, though some of the variance can be explained by the different periods and regions covered and differences in the operationalization of the dependent and independent variables. These results, however, do suggest a more complicated relationship between ethnic divisions and civil war than was previously assumed. To fully understand the relationship between civil violence and ethnic diversity, we need to expand the literature in three ways. First, we should explore any systematic differences across war types. Sambanis (2001a) presents some evidence that suggest that identity (ethnic and religious) wars have different causes than revolutionary and other wars. This is only the beginning in that research agenda, but a quite robust result is that ethnic heterogeneity is positively associated with the risk of onset of identity wars, whereas a parabolic or non-significant relationship exists with non-identity wars (Sambanis, 2001a).

Second, we should explore various measures of ethnic diversity and polarization. The most commonly used measure is ethno-linguistic fractionalization, but religious, racial, or other ascriptive differences may be equally important in determining degrees of division that may cause conflict.<sup>8</sup> Moreover, we need to clearly distinguish between measures of ethnic dominance, polarization, and fragmentation and interpret the results of models that use

each of those measures in ways that are consistent with the theoretical implications of the measure used. Clearly, a positive association between civil war and ethnic polarization has a different interpretation than an association between war and ethnic diversity. Thus, the concept of ethnicity must be unpacked and analyzed carefully.

Third, we should try to code time-variant measures of ethnic diversity. The constructivist literature has shown that the strength of group identification is a function of the socio-political environment and changes over time. Thus, patterns of increasing ethnic identification may be accurate predictors of outbreaks of violence. Moreover, such measures would allow us to better study the differences between ethnic division and initial war risk as opposed to the risk of war recurrence. There are several arguments in the theoretical literature suggesting that war solidifies ethnic identities and makes reconciliation difficult even in states where diversity was well managed previously to the outbreak of the war (Kaufmann, 1996; 1998). The empirical evidence from large-N studies to date does not allow us to fully contrast the implications of ethnic diversity pre-war and post-war.

### Natural Resources

Collier and Hoeffler (2000) were among the first authors to identify a significant positive relationship between natural resource dependence and civil war risk (see also Berdal and Malone, 2000). Natural resource predation can be pivotal in that it allows a rebel movement to finance its purchases of arms, food, and labor. The looting of natural resources may also serve as an ultimate goal of some rebellions. Hence, for a given level of grievance, we should expect to see more rebellions in countries with an abundance of natural resources (Collier and Hoeffler, 2000).

This argument is certainly plausible, though it is difficult to discern from empirical studies to date if the looting of natural resources is the ultimate goal of rebellion or if it is only a means to sustain a differently motivated rebellion. Testing for the significance of natural resources is also difficult. The most commonly used measure of natural resource dependence is the ratio of primary commodity exports over GDP. Collier and Hoeffler (2000) used available data and identified a significant parabolic relationship between the risk of war onset and natural resource dependence. They find that the risk of war onset is maximized when the share of primary commodity exports to GDP is around 25%. This is a useful result, but we should note that the proxy variable does not capture the essence of all "lootable" resources since it includes agricultural commodities that are not easy to loot (unless the rebels gain control of the state and can control revenues from export trade). Perhaps this explains why Fearon and Laitin (2001) do not find evidence of a significant relationship between primary commodity exports and civil war risk. Furthermore, currently available data on primary commodities are missing for about half of the total number of observations in most data sets. This may cause statistical bias if the reason that the data are missing is related to the dependent variable (civil war). In addition to addressing these concerns, it is important to disaggregate the components of the primary commodity exports and focus on more easily lootable resources, such as diamonds and other precious commodities.

Natural resource dependence was not shown to be significant in major studies of civil war duration (Collier, Hoeffler, and Soderbom, 2001; Fearon, 2001). However, other researchers, motivated by the same hypotheses regarding the effects of natural resources, have identified that countries with a high dependence on natural resources face greater difficulties in post-war peacebuilding (Doyle and Sambanis, 2001) and the implementation of peace agreements is harder in those countries (Stedman, 2001).

### **Ethnic Diasporas**

An interesting and provocative finding is that rebel movements are more likely if they are supported by ethnic diasporas. Although a new finding in quantitative studies of civil war, it has long been known that diaspora communities have financed political movements in their countries of origin. Fearon and Laitin (2001) and Collier and Hoeffler (2000) have added to their models rough indicators of possible diaspora support and have found that large diasporas increase the risk of civil war in the countries of origin. These results certainly conform to public evidence on, for example, the Irish Americans' support of the IRA, the Canadian Tamils' support of the LTTE, or the support of the KLA by Albanians living in Germany.

This is an important result, as it may lead us to rethink migration policy in the OECD countries. The first order of business is to explore the relationship more carefully. In Collier and Hoeffler's paper, the "diaspora" variable is the ratio of nationals of the war-affected country living in the U.S. over the national population living at home (with a statistical correction to account for the possible endogeneity of the size of the diaspora). While this is a useful shortcut to use in the first large-N study to consider the role of diasporas in civil wars, the proxy variable includes no information about actual financing of rebels by diasporas. Rather, it captures differences between large and small immigrant populations in the U.S. and OECD countries. One might try to combine the existing measure of the size of the diaspora with measures of the unilateral transfers to the home country as well as other available information on the extent of involvement of the diaspora in a war effort at home. Finally, there may be two additional complicating factors. First, the existence of a large diaspora may be the result of a protracted civil war (*e.g.* Eritreans in the U.S., Cypriots in the U.K., Kurds in Germany) and we need to think harder about the direction of causality between the size of the diaspora and civil war. A question that we must answer includes if diasporas that grow during civil war situations (*i.e.* refugee populations) are as potentially dangerous as diasporas that have lived for long periods overseas. Second, diasporas are not monolithic communities. They can include populations with conflicting ideologies and party affiliations and may also support their home state if it is engaged in a civil war. Certainly, such support may even be unintentional, especially if unilateral transfers from diasporas are taxed by the state and the revenue is used partly to fund military expenditure.

### **Geographical Dispersion, Rough Terrain, and Security Dilemmas**

Recent studies have focused on what can loosely be termed the "technology" of insurgency *i.e.* conditions facilitating the operations of a rebel movement. Geographical terrain is an important part of this technology. Fearon and Laitin (1999; 2001) were among the first to test statistically the insight from counterinsurgency studies that a country's geography may facilitate insurgency. Rebels can hide in mountains and forests, whereas there is little cover in plains or deserts. They find a statistically significant relationship between the risk of civil war onset and prevalence and geographic fractionalization or rough terrain. The result, however, may not be very robust, as Collier and Hoeffler (2000) find no significance in the relationship between mountainous terrain and civil war onset. They do, however, find a negative significant relationship between the degree of geographic dispersion of the population and war outbreaks (and the degree of dispersion may be a function of geography). A highly concentrated population is associated with fewer civil war outbreaks in Collier and Hoeffler's (2000) model. Herbst (2000) has argued that civil wars in Africa may occur largely as a result of the state's inability to enforce its rule in highly dispersed populations living in inaccessible peripheral regions. Collier and Hoeffler (2000) provide preliminary

support for this proposition, though a more direct test of Herbst's (2000) argument would be one that measured population concentrations in peripheral inaccessible regions (the current dispersion statistic does not distinguish between the geographical location of densely populated regions and these regions may well be at the center of the country).

The security dilemma hypothesis is also related to political geography. If ethnic groups live intermingled, the vulnerability of minorities increases, which may lead to pre-emptive war at times of socio-economic change. By contrast, if ethnic groups live dispersed and are densely concentrated in regions protected by natural boundaries, they may be less prone to the security dilemma. Rough terrain may be considered as part of the defensive technology that mitigates the security dilemma. To date, however, there is only anecdotal evidence of such relationships. Population density data are not fully available at the ethnic group level (except partly in the MAR database) or the sub-regional level. More data collection on the territorial concentration of ethnic groups should allow systematic tests of the security dilemma hypothesis.

### **Democracy: Level and Change**

The major economic studies on civil war have argued that there is no significant relationship between lack of democracy – which approximates political grievance – and the likelihood of civil war onset or prevalence. According to Collier and Hoeffler (2000), “most of the proxies for objective grievance are insignificant and the best-performing grievance model has very low explanatory power” (p. 26). Fearon and Laitin (2001) agree with these findings, though they do find a correlation between political instability and civil war.

On the other side of the debate are Gurr (2000), Elbadawi and Sambanis (2000a; 2002), Reynal–Querrol (2002), Esty *et al.* (1995; 1998) and Hegre *et al.* (2001). Gurr (2000) argues that political grievance is the primary motive for civil violence. He classifies countries in four regime categories: old democracies; new democracies; transitional regimes; and autocracies. He finds that roughly equal numbers of ethnopolitical groups live under each type of regime and shows that “Ethnopolitical groups in democratic societies are more likely to use strategies of protest than rebellion . . . Ethnopolitical groups in nondemocratic societies are more likely to use rebellion as a strategy than protest (Gurr, 2000 154–6)”. He finds that well-established democracies are least likely to produce grievance and violence.

Elbadawi and Sambanis (2002; 2000b) provide econometric evidence in support of Gurr's conclusions. They identify the determinants of civil war prevalence in more than 150 countries between 1960–1999. They find that democracy levels are significantly associated with lower risk of civil war. In African countries especially, where high levels of ethnic fragmentation and polarization may increase the risk of civil war, Elbadawi and Sambanis (2000b) find that democracy is particularly effective in defusing conflicts. Sambanis (2001a) also finds that democracy is significantly and negatively correlated with the onset of ethnic wars and this relationship is more robust than the relationship between ethnic war and economic variables. Reynal–Querrol (2002) also finds that political rights – in particular representation – are significant determinants of civil war outcomes and she goes beyond the use of democracy indices in testing the significance of different types of political systems (proportional representation as compared to presidential systems) as they influence civil war risk. Her paper is a springboard to a promising research agenda that goes beyond the use of blanket proxy variables and uses measures that are closer to the theoretically significant variables.

Hegre *et al.* (2001) conduct an econometric analysis that shows an inverted U-shaped relationship between the level of democracy and the risk of onset of civil war. Their model focuses heavily on political variables and is not fully specified so the reader cannot easily gauge the robustness of the results. Nevertheless, the authors were among the first

to try to disentangle the effects of democracy levels and regime change on civil war. They argue that regime transitions of any kind are potentially dangerous, but that autocracies are much more likely to have a transition (*i.e.* they are less stable than democracies). Thus, the level effects of democracy (which are more robustly positive in that they decrease the underlying risk of civil war) outweigh the risks of a regime transition towards more democracy. This line of research is quite promising and confidence in the Hegre *et al.* (2001) results will be strengthened by expanding the model specification and controlling for possible endogeneity problems. Another interesting extension of this work would be to study any overlap between the inverted U-shaped relationship when using the level of democracy as an explanatory variable and the effects of transitional regime transitions on civil war, as we do not yet know how many states in the middle range of the democracy-autocracy scale are states undergoing transitions.

Some of the most extensive analyses of the link between regime change and violent conflict have been conducted in the context of the democratic peace theory, which focuses on international war (Russett and Oneal, 2001: ch. 3; Ward and Gleditsch, 1998). In the context of internal violence, Gurr (2000, pp. 156–7) writes that “Successful democratic transitions are often followed by substantial increases in ethnopolitical protest . . . [and they have] inconsistent effects on ethnorebellion . . . Partial and failed democratic transitions are usually followed by substantial increases in ethnopolitical protest”. Other authors claim a stronger relationship between democratic transitions and the risk of war, though most of the quantitative large-N literature on war and regime change has concentrated on international wars (Mansfield and Snyder, 1995; Snyder, 2000; Russett, Oneal and Cox, 2000). There is no clear evidence yet on the effects of democratization and the likelihood of civil war (see Sambanis, 2001a). We need better theoretical models and more systematic empirical work on this important question. First, we must distinguish changes toward more democracy from changes toward more autocracy using the Polity data. Second, we should place these political transitions in the context of countries’ recent war histories and obtain an estimate of the “size” of the transition in relation to the country’s average polity score for the past 5–10 years. Third, we should distinguish between transitions that occur as a result of war from those that occur within normal political processes. Finally, empirical models of war onset or recurrence should control for democratic/autocratic change while studying the impact of levels of democracy on the likelihood of war.

### **Ethnic vs. Revolutionary Wars**

Civil wars are frequently classified into ethnic/religious (identity) and non-identity (revolutionary and other) types. There is no consensus in the literature on the theoretical validity and empirical applicability of these classifications. Some researchers argue that there are systematic differences between ethnic and/or religious wars and other types of civil war (Horowitz, 1985; Gurr, 2000; and Sambanis, 2001). Ethnic/religious wars may demand particular organization of rebel forces (*i.e.* along ethnic lines) or they may aspire to goals that are group-specific (*e.g.* linguistic and religious rights; or regional autonomy). Critics argue either that the distinction is not empirically significant in explaining war outcomes (Walter, 1997; Fearon, 2001) or that, even if this was a valid distinction, it would be hard to identify and classify ethnic/religious wars (Fearon and Laitin, 1999; 2001; Collier and Hoeffler, 2000).

Fearon and Laitin (1999, p. 2), who argue against the reliability of the concept of ethnic war, adopt a classification rule that separates “wars of secession or autonomy” from “violent contests over a recognized state apparatus”. This is one of many other classifications proposed by different authors, but is not readily clear that it is easier to identify a war of secession than a religious war. First, most wars of secession are ethnic wars – *i.e.* they are

waged by an ethnic group that seeks self-determination. Second, secession may be the unwelcome result of a war that did not initiate with secession in mind (*e.g.* the Korean civil war). Third, to the extent that secession suggests an ideology and clearly defined goals for the rebellion, it can also be a misrepresented ideology.

Nevertheless, wars of secession is a well-established typology and seem to be the predominant form of civil war since 1945 in Licklider's (1995) and Gurr's (2000) data. Fearon and Laitin (1999) use the Minorities at Risk (MAR) data to analyze the determinants of these wars and reach results that are broadly consistent with their research that utilizes the country-year as the unit of analysis. The MAR dataset is based on a research project developed by Gurr (1993) and includes information on more than 200 minority groups that are at risk. While we need to look closer at group-level interactions, it is not yet possible to conduct studies of *ex ante* risk of civil war at the group level, since the MAR database does not include information on groups with very low or negligible risk of war. Moreover, ethnic group representations in government parties are not coded, which makes it hard to obtain a full picture of the ethnic cleavages in the country. In recent work, Fearon and Laitin are expanding the MAR database by adding information on 40 new groups that are not at risk of civil war. This may make it possible to focus on the group level in assessing underlying civil war risk. Certainly, this will also improve our ability to study secessionist violence at the group level.

### External Intervention in Civil Wars

In addition to forces of disintegration from within (*i.e.* secessionist movements), external pressures are also significant in explaining war outcomes. Elbadawi and Sambanis (2000a) model the relationship between civil war duration and external intervention. They focus on unilateral intervention[s] by one (or more) government(s) in the form of military, economic or mixed assistance in favor of either the government or a rebel movement involved in a civil war. Out of 190 interventions only 57 have led to an end in the fighting. They conduct empirical tests using an ordered probit model of war duration and combining the data set used by Collier, Hoeffler, and Soderbom (2001) with data on intervention developed by Regan (1996, 2000, 2002). They endogenize external intervention to a model of war duration and use an estimate of expected intervention in the model of civil war duration. The expectation of intervention should influence the rebels' and government's calculations. The authors find that expected intervention has a robustly positive and highly significant association with civil war duration. This negative impact of external intervention more than outweighs any positive interaction effects of intervention with other variables: the net effect of external intervention is to increase war duration. Only the interaction with ethno-linguistic fractionalization is robustly significant with a negative coefficient. The direct effect of extreme autocracy is negative and significant, suggesting that more autocratic regimes can more easily quell rebellions. At the same time the lagged interaction term between external intervention and extreme autocracies is positive and significant, so interventions in wars against extremely autocratic governments have the effect of lengthening the war's duration.

Regan (2000; 2002) has conducted an extensive study of external intervention in civil war. His conclusions are in line with Elbadawi and Sambanis (2000a) and he empirically confirms three logical explanations for the occurrence of external intervention: they occur when (a) there is a reasonable expectation of success; (b) the projected time horizon for intervention is short; and (c) domestic opposition to intervention is minimal. He finds that the probability of an intervention and of its success are functions of: (1) the strategic environment in which the conflict is being waged; (2) the existence of a humanitarian crisis associated with the conflict; (3) the number of fatalities; and (4) the intensity of the conflict. Regan distinguishes

between targets of intervention (government or rebels) and types of intervention (economic, military or mixed). He finds that interventions are successful in achieving their goals in some occasions. Military intervention in favor of government is 50% successful in religious wars; 48% in ethnic wars; and 46% in ideological wars; in favor of rebels it is successful 0% in religious wars; 13% in ethnic wars; and 17% in ideological wars. Economic intervention seems very rarely successful except in ethnic wars in favor of rebels.

We do not yet know much about the relationship between external intervention and civil war onset. New data must precede such analysis, as we must identify those cases where intervention actually occurred prior to the onset of a civil war. The most extensive data available today (Regan, 2002) does not allow such studies, as it has identified only interventions in civil war countries. Progress in the analysis of this question will also bridge quantitative studies of international war, militarized interstate disputes, and civil violence.

### Post-war Peacebuilding and War Recurrence

Economic theories of civil war have not yet made much headway on the topic of post-war peacebuilding. There is an obvious need for economic policy to rebuild economies after war, but there is also a clear need to guide and assist democratic transitions and the rebuilding of political institutions that were destroyed by the war. The focus of the literature on post-war political development has been dual: first to explain the importance of addressing political causes of the war and, second, to explain how to manage the negative political consequences of civil war.

In the tradition of qualitative research in conflict studies, authors have advanced the so-called “basic needs” approach, which predicts that, following a violent conflict, there cannot be a negotiated settlement if all parties do not attain sufficient power and resources to meet their basic human needs (Azar and Burton, 1986; Azar, 1990). The state must demonstrate respect for the minorities’ demands and fears, helping them achieve their interests (Gurr, 2000). Economic theorists of conflict may dispute the need for such an approach, as they have found that the risk of war onset (that also subsumes the risk of war recurrence) is not significantly determined by political conditions (Collier and Hoeffler, 2000; Fearon and Laitin, 2001). The primary goal of post-war peacebuilding may be to ensure that the conditions that favor insurgency are controlled.

Most authors who have studied actual cases of post-war transitions, however, never fail to note the need to rebuild political institutions (Doyle and Sambanis, 2000). One way to manage conflicting pressures and claims on the state is to create various types of power-sharing arrangements (Hampson, 1996; Rothschild, 2000). However, power-sharing can backfire if elites do not interact with each other as necessary (Zartman, 1998). Elections can help increase intergroup collaboration, but they may also mobilize ethnic and nationalist competition and democratic institutions may be manipulated by corrupt elites in states with insufficiently developed institutions to support a modern democracy (Mansfield and Snyder, 1995; Snyder, 2000). Successful elections must not be rushed and should follow a substantive peacebuilding process, preferably with the help of multilateral organizations (Doyle, 1997). Elections should also be linked with other types of political institutions (*e.g.* regional autonomy) to be effective and all groups should have a chance to be represented, especially after inter-ethnic conflict. Regional autonomy (Gurr, 2000) and federalism (Rothschild, 2000) can be useful in containing conflict by promoting confidence among ethnic groups that their agreement with the state will not be violated. One lesson seems to emerge from all this: that while various democratic solutions exist to post-war transition problems, each of those solutions may also harbor dangers. The literature on peacebuilding is making first steps in explaining how some of these dangers can be controlled (Doyle, 2001).

Less democratic solutions to civil war also exist. Oppression by the state may establish peace and, in the long run, lead the way to a more open political system as suggested by the example of the Greek civil war (Iatrides, 1993). Partial external intervention in favor of the stronger side is another strategy that some might argue can be effective in ending the violence (Betts, 1994). The morality of such actions can be the subject of a long and complicated discussion.

Another solution that is gaining support in recent years is territorial partition. Some authors have advocated this as the only way to end ethnic wars and prevent their recurrence (Kaufmann, 1998; 1996). In some cases, partition may work, but it can also backfire by transforming internal to international war and cause human suffering greater than that caused by the war (Kumar, 1997; Schaeffer, 1990). Empirical tests of the theory of partition have revealed that partition does not outperform all other solutions to civil war taken together in terms of the likelihood of war recurrence (Sambanis, 2000). More research is needed to compare partition to other specific war outcomes and explore the difference between partition combined with sovereignty and cases of *de facto*, or informal partition.

Finally, multilateral peace operations can be quite helpful in war-to-peace transitions, if they have the right mandate and sufficient resources. There is a sizable literature on UN operations and other third-party (unilateral and regional) operations. The conclusions of that literature are variable and usually based on case-studies (hence not readily generalizable). Doyle and Sambanis (2000) conducted the first wide-ranging statistical study of the relationship between peace operations and peacebuilding outcomes. They find that peace operations must address the local roots of hostility; the local capacities for change; and the (net) specific degree of international commitment available to assist change. On the whole, only United Nations multidimensional peacekeeping operations can make a positive difference. These types of operations, which are predicated on the parties' signing of a treaty that outlines the parameters of a settlement, are shown to support democratization processes after civil war and prevent war recurrence in most cases. By contrast, multilateral enforcement operations are usually successful in ending the violence, but cannot assist countries with higher-order peacebuilding (*i.e.*, a rebuilding of the regime and a minimum standard of democratization). The authors find that higher-order peacebuilding is more likely after non-identity wars, after long and not very costly wars, in countries with relatively higher development levels and where UN multidimensional peace operations and substantial financial assistance are available. Lower-order peacebuilding – an end to the violence – is more dependent on muscular third-party intervention and on low hostility levels rather than on the breadth of local capacities. International capacities in the form of multilateral peace operations and economic assistance can foster peace by substituting for limited local capacities and alleviating deep hostility factors, but only if peace operations are appropriately designed. Purely enforcement operations can end the violence; but they cannot promote higher-order peace. By contrast, consent-based peacekeeping operations (PKOs) with civilian functions (multidimensional PKOs) usually do not have the mandate or power to end the violence if parties do not cooperate. But, with a peace treaty and the cooperation of the parties, PKOs can assist higher-order peacebuilding – the institutional and political reform that helps secure longer term peace.

## METHODOLOGICAL ISSUES

The foremost concern in the quantitative literature on civil war is to establish clear definitions of key concepts to facilitate the comparison of results from different studies. To date, there is little agreement on common definitions and measures and disagreement starts with the very definition of a civil war.



### Dependent Variable

Idiosyncratic definitions of the dependent variable complicate the comparison of empirical findings, but facilitate robustness tests. The association between poverty, slow economic growth and civil war in Collier and Hoeffler (2000) seems more robust as it is confirmed by Fearon and Laitin (2001), who use different data and estimation methods and differently operationalized dependent variables. While we should strive to reach robust conclusions, we should also try to establish common definitions and shared measures that form the basis of cumulative knowledge. In this regard, defining the concept of a civil war clearly is critical.

### Deaths/Year as Basis for Coding

There is controversy regarding the definition of a civil war. Some argue that all episodes of large-scale communal violence may qualify as civil wars (Singer and Sarkees, 2001). Most political scientists, however, would argue that a civil war should involve the government or a government-claimant as a principal combatant. This characteristic would differentiate civil wars from other forms of civil violence. An improvement upon the Correlates of War setup is Gleditsch *et al.* (2001) who have compiled a dataset of armed conflicts for the period 1945–2000 and distinguish between small conflicts (with fewer than 25 deaths per year) and large conflicts (with more than 1,000 deaths per year). Problems deriving from the death threshold used to code civil wars are discussed in some detail in Sambanis (2001b).

The core of the debate is centered on the use of a death threshold to code wars. All quantitative studies to date have used an absolute number of deaths as a threshold (usually 1,000 and typically concentrating on battle-deaths). This may cause problems. For example, one of the largest marginal effects on the likelihood of war onset in Collier and Hoeffler (2000) is the effect of population size. This may be theoretically consistent since, if we were to combine all the world's population in one country, we would be maximizing the risk of civil war between the government and any one group in that country. However, the 1,000-death threshold used here may be introducing a selection problem, picking up violence in more populous countries where the likelihood of 1,000 casualties is larger, *ceteris paribus*. We could correct this problem by creating a per capita deaths measure, which would involve back-coding all cases – a daunting research task. An alternative would be to start coding such a variable today and back-coding the variable for only a reasonable period (*e.g.* for the past 30 years). This would affect the number of war events in our data sets and may influence our empirical results. We could use currently available models to conduct out-of sample tests using the different coding of war events and establish if the 1,000-death threshold influences the state of the debate.

### Endogeneity Problems

Another important problem with most studies of civil war is that they typically ignore the endogeneity of some key “independent” variables (Sambanis, 2001a; Doyle and Sambanis, 2000; Elbadawi and Sambanis, 2002; Hess and Blomberg, 2002). Some studies attempt to correct this by using lags of right-hand-side variables, but they still assume a specific direction of causality. Given that civil war has economic and political consequences, it is important to test and control for the potential endogeneity of explanatory variables by estimating the appropriate econometric models.

### **Country-Level or Region-Level Studies or Minorities as Unit of Analysis?**

In some cases, civil wars last many years and affect most of the population of a country, while in other cases they are isolated to certain regions and are of little significance to the majority of the population. This has so far been neglected, possibly because of the lack of reliable data to inform us of the spatial elements of civil war over time. However, it is important to consider the differences in the likelihood of post-war peacebuilding that may result from different war intensity or duration. Doyle and Sambanis (2000) make such a first attempt, but a fuller treatment of this important question would have to depend on more precise data on the war's magnitude with specific details on the relative size of the affected territory and population. Such analysis would allow us to develop either country-wide or region-specific strategies of war prevention and termination.

### **Time-Variant Explanatory Variables of Social Fragmentation**

Most quantitative studies of civil war utilize panel data. However, much of the potentially useful explanatory power of panel estimators is lost due to the fact that many important explanatory variables are time-invariant. Ethnic diversity indices are a good example, as they are typically measured at a single year. Measures of democracy are also highly invariant over time. Moreover, annual data on deaths and displacements are not available for most civil wars, making it difficult to study conflict escalation and impossible to study conflict intensity. Thus, a concerted effort to improve the quality of our data is much needed and we must focus on identifying and measuring variables over time and for the highest frequency possible.

### **CONCLUSION: FUTURE RESEARCH AND UNANSWERED QUESTIONS**

Recent studies of civil war have made significant advances. We now have a better understanding of the macro-technology and micro-behavior of conflict and have empirical evidence on a host of correlates of civil war occurrence and recurrence.

The theory of civil violence can go further to develop a closer fit between macro-level and micro-level theory. We need to contrast different forms of civil violence; integrate the theory of civil violence with political-economic theories of institutions and cooperation and with the theory of bargaining. Modeling the outbreak or duration of civil war as a bargaining game between the government and the rebels can help us import ideas from other sub-fields of international relations, comparative politics, and industrial organization. We must also explore the links between war termination and root causes as well as the different incentive structures that may underpin wars of different types.

The empirical literature must also be further developed. Civil violence is real and should not be studied abstractly without a conscious effort to link theory to reality. Ultimately, our research can inform policy both at the macro level – *i.e.* should the international community prioritize conflict prevention or conflict management efforts? – and at the micro level – which policies are better at reducing the risk of violence and in which order should they be implemented? With respect to conflict resolution, we need more evidence on the conditions under which different strategies are likely to succeed so that we know when to choose territorial partition as opposed to federalism or other forms of power-sharing. And we need to identify the right mix of economic, political, and military means to implement peacebuilding strategies. While the average probability of civil war onset is small for developed countries, the risk of being victimized by political violence is real for the poor of the world. Understanding how to prevent, manage, or resolve civil war is therefore not only valuable for policy, but also

fruitful as a field of inter-disciplinary research on international relations, comparative politics and economics.

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## ENDNOTES

- <sup>1</sup> There may have been an increase in the incidence of war in the past 2–3 years. New data sets are under development showing a small increase in war incidence. See Gleditsch *et al.* (2001) and Sarkees and Singer (2001).
- <sup>2</sup> A frequently cited study that attempts to theorize about regional influences in civil war is Lake and Rothschild (1998). The first empirical evidence of diffusion or contagion effects in civil war is presented in Sambanis (2001).
- <sup>3</sup> The World Bank's interest in civil war signifies its importance as a development problem. For a collection of World Bank papers on civil war, see: <http://www.worldbank.org/research/conflict/papers.htm>.
- <sup>4</sup> Doyle-Sambanis (2000) differ from Singer and Small (1994) and Licklider (1995) with respect to the periodization of wars. Doyle and Sambanis code a war as having ended when a peace treaty is signed or one side has achieved victory, or when there is a substantial period (at least 2–3 years) with no armed conflict between the parties. The war must have caused at least 1,000 deaths (total deaths, not just battle-related deaths) in its first year. A separate war event is coded if violence erupts after the parties have signed a peace treaty, following a prolonged cease-fire or if the parties and/or issues in the war change after such a cease-fire. Sources and details on each war event are online: <http://www.worldbank.org/research/conflict/papers/peacebuilding/index.htm>.
- <sup>5</sup> Asterisks denote cases that may not have caused 1,000 deaths every year of the war, but have caused 1,000 deaths in at least one year. Ongoing research will result in a refinement of the coded start- and end-dates of several wars. Kenya may be better characterized as inter-communal violence (Regan, 1996 codes this as a civil war). Romania may not have reached the 1,000 death threshold in 1989. Several anti-colonial wars in the 1950s and 1960s should probably be added to this list; they are not coded here because the prevailing coding practice is still to exclude extra-systemic wars. Wars that started in 1999 are not coded (*e.g.* the second Chechnyan war). The Casamance conflict in Senegal could probably be classified as a civil war (Fearon, 2001 codes this as a war). Gleditsch *et al.* (2001) are coding civil wars in the former USSR in the 1940s–1950s.
- <sup>6</sup> That hypothesis refers to the onset (initiation) of civil war. Other authors show that ethnic diversity has a non-monotonic (parabolic) association with the overall amount (incidence) of civil war and that the probability of observing an event of civil war in any time period is highest in ethnically polarized societies (see Elbadawi and Sambanis, 2002).
- <sup>7</sup> For a theoretical discussion of economic and other micro-level motives for rebellion, see Lichbach (1995). Lichbach argues that preference falsification is likely in rebellion, as do Collier and Hoeffler (2000), who dismiss in this way the argument that the stated objectives of the rebels can inform us about the true aim of the rebellion.
- <sup>8</sup> A different measure, that combines racial, linguistic, and religious division presented in Vanhanen (1999).