The Intrastate Contagion of Ethnic Civil War

Matthew Lane, Pennsylvania State University

Studies of civil war have shown the strategic influence of geography and space on the occurrence of conflict. While civil wars cluster and spread between states in international neighborhoods, ethnic groups within states consider their geography and location in choosing to foment rebellion. In answering why some ethnic groups turn to civil war, I unify and build on these ideas to develop a theory that ethnic civil wars follow patterns of contagion within states. I contend that ongoing conflicts in groups' geographic proximity provides increased logistic and strategic opportunity for successful rebellion. Using spatially weighted regressions, I find evidence that ethnic civil wars are contagious within states and that such intrastate contagion is robust to other intra- and interstate neighborhood effects that may alter groups' calculus of rebellion. These insights consistently demonstrate that accounting for groups' broader strategic surroundings yields important implications for the study of civil war.

A prominent feature of international relations in the twentieth and twenty-first centuries has been the precipitous rise of militant groups and the general trend from interstate to intrastate conflicts, particularly in the post-Cold War era (Fearon and Laitin 2003; Gleditsch et al. 2002; Hegre and Sambanis 2006).[1] A developing literature further details the propensity of civil conflicts to cluster geographically and spread through localized neighborhoods of states around the world (Buhaug and Gleditsch 2008; Sambanis 2001). Such spatial concentrations are readily apparent in the density of civil conflicts in sub-Saharan Africa in the 1990s, the "African World War," or the myriad intrastate disputes in the Middle East during the 2000s.

But the historical record is also rife with instances of conflicts, particularly ethnic conflicts, clustering not only among but also within states involved in periods of civil war. The Indian government, for example, has waged a long series of conflicts against ethnic separatists clustered in its northeast regions. Similarly, Russia's North Caucasus region remains a hot spot of ethnic insurgency and violence. To be sure, ethnic conflicts and ethnic violence have, both anecdotally and empirically, been shown to expand and diffuse within states during the course of conflict (Weidmann 2011; Zhukov 2012).

Best illustrating the ramifications of such intrastate contagion is the birth and growth of the Tigrayan People's Liberation Front (TPLF), the military wing of the Tigray ethnic group, in Ethiopia from 1976 to 1993. During the Ethiopian Marxist coup of 1974, the Eritrean Peoples Liberation Front (EPLF) took advantage of the confusion in the capital to escalate a long-simmering bid for independence in the northeast of the country. Two years later, the TPLF, based in the province of Tigray neighboring Eritrea and with the strategic assistance of the EPLF, launched its own insurgency aimed at overthrowing the military-controlled Derg government and demanding self-determination for all Ethiopian people.

Initially small and relatively ignored by an Ethiopian military involved in multiple civil conflicts, the TPLF gradually grew, eventually becoming the main opposition force in the country. By 1989, the TPLF joined and led an umbrella militant group, the Ethiopian People's Revolutionary Democratic

Matthew Lane (mal5529@psu.edu) is a PhD candidate in the Department of Political Science, Pennsylvania State University, Pond Lab, University Park, PA 16802.

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1. In this article I refer interchangeably to civil wars, civil conflicts, and intrastate conflicts. When using the term "interstate contagion," I refer to the process by which the occurrence of civil war in one state increases the likelihood of civil war in a neighboring state. When using the term "intrastate contagion," I refer to the same underlying process, but between ethnic groups in the same state.

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Front (EPRDM), toppling the Ethiopian government only four years later.

The plethora of localized ethnic conflicts in India, Russia, and Ethiopia anecdotally suggest that ethnic civil wars cluster within certain regions of the state. Motivated by these examples, I ask whether ethnic conflicts systematically follow patterns of concentration and contagion between ethnic groups similar to those witnessed between states. In answering this question, I apply existing theories of civil war contagion to the level of individual ethnic groups and show that the prevalence and geographic proximity of ongoing ethnic conflicts significantly affects individual groups' decisions to engage in conflict. Building further, I contend that this contagion effect is significantly affected by overall levels of conflict in the state, such that ethnic groups take advantage of combined logistic and strategic opportunities afforded by proximate conflicts when deciding to rebel.

I contribute to the literatures on civil war contagion and ethnic conflict in several meaningful ways. First, I show that significant patterns of conflict contagion exist not only between but also within states. Second, I show that there exist strategic interdependencies between ethnic groups in the state, such that the occurrence of ethnic conflict is, at least in some cases, a dynamic and contextual process. Third, I show why some ethnic groups engage in civil war, while others, even those with similar group characteristics, do not. Finally, empirical results indicate that the question of why some ethnic groups rebel is, at least in part, significantly affected by broader substate contexts of ongoing conflict.

I proceed as follows. In the next section I review the pertinent literature on processes of contagion, with a particular emphasis on processes of civil war and conflict contagion. I then briefly review the pertinent literature on ethnic conflict. I synthesize these themes by applying theories of interstate conflict contagion to particular ethnic groups in the state and develop a theory of intrastate conflict contagion centered on logistic and strategic opportunism. Using this theory, I first derive the baseline expectation that ethnic groups are more likely to engage in civil war as ongoing conflicts become more prevalent and geographically proximate. I then expand on this baseline expectation by arguing that processes of intrastate contagion are further influenced by overall levels of conflict within the state. Using spatial weighting techniques, I test the implications of this theory on the onset of ethnic civil war at the level of individual ethnic groups. These empirical results are supplemented with several robustness checks centered on other possible underlying spatial influences. I conclude by examining the results of this research design and discuss implications for the spread and propagation of ethnic civil war.

THE CONTAGION OF CIVIL WAR

Similar to previous studies, I define contagion as the process by which the likelihood of an event in one unit or place is increased by the occurrence of a similar, but uncoordinated event in an interdependent or nearby unit or place (Elkins and Simmons 2005; Strang 1991).[2] Outside of conflict contagion, such processes have been found in the diffusion of similar policies and the spatial clustering of similar regimes, notably democratic regimes, across countries (Elkins and Simmons 2005; Gleditsch and Ward 2000, 2001; Starr 1991).

Recently, scholars have shown the propensity for civil wars to cluster and spread through the international system, creating localized neighborhoods of conflict (Braithwaite 2010; Buhaug and Gleditsch 2008; Gleditsch 2007; Lake and Rothchild 1998; Ward and Gleditsch, 2002).[3] While Sambanis (2001) shows that having a neighbor in conflict is a significant predictor of ethnic war onset, Hegre and Sambanis (2006) show that the total number of neighbors involved in civil conflicts is one of the most robust predictors of civil war onset. That is, states in increasingly conflict-prone regions are more likely to also experience civil war.

But what accounts for these trends of civil conflicts clustering and diffusing through international regions or neighborhoods of states? Perhaps most prominently, accounts of civil war contagion build from the spillover of the negative externalities of ongoing conflicts into neighboring states. For example, civil wars increase the numbers and circulation of arms, many of which may travel across borders into neighboring states, making it comparatively cheaper and easier for potential rebels to take up arms. Furthermore, as suggested by Salehyan and Gleditsch (2006), civil wars also increase flows of refugees throughout regions, which may facilitate the spread of weapons, mercenary fighters, and conflict ideologies to neighboring states. Additionally, as in the case of Sierra Leone and Liberian refugees, displaced persons can exacerbate domestic economic competition and political instability, further increasing the risk of conflict. This latter point is emphasized by Braithwaite (2010), who shows that the risk of civil conflict contagion is most prominent in states with low state capacity.

2. Some studies also use the term "diffusion" to refer to the same process.

3. I use the term "neighborhood" here as a more flexible form of "region." Both terms refer to groups of states or units of interest. However, the term "region" is often used to refer to rather large and time-invariant groupings (i.e., "West Africa" or "Southeast Asia"). To avoid this static and macro aggregation, I prefer the term "neighborhood" to refer to any salient grouping of states or units for particular periods of time. Colloquially, however, the two terms are largely interchangeable.

Beyond the physical spread of violence, civil wars may also spread via strategic emulation by potential rebels after observing rebel groups abroad, especially in structurally equivalent states and states with inconsistent political institutions (Buhaug and Gleditsch 2008; Maves and Braithwaite 2013). Potential rebels may be inspired to pursue conflict against target governments after observing success of similar groups operating in similar conditions. Hill, Rothchild, and Cameron (1998), for example, cite the localized contagion of conflict among the republics of the former Yugoslavia after witnessing the relatively easy secession of Slovenia. Additionally, Forsberg (2008) points out the propensity for ethnic groups in polarized societies to emulate ethnic conflicts in proximate, ethnically polarized states. These notions are paralleled by Ayres and Saideman (2000), who show that minority groups in states are affected both by the experiences of ethnic rebels abroad and at home.

Such emulation effects have also been shown to vary as access and flows of information change in both space and time. Hill and Rothchild (1986), for example, show that simple proximity to ongoing conflicts is not necessarily enough to spark domestic unrest. Rather, the likelihood that conflict will spread between neighboring states is partially dependent on potential rebels' access to information about conflicts abroad. That is, for strategic emulation to affect the spread of civil war, rebels must be able to access and discern meaningful information from ongoing conflicts. These notions are supported by Kuran (1998), who asserts that decreasing costs of information exchange between states exacerbates chances of conflict contagion via emulation.

In sum, these studies point out that the occurrence of civil war is not sufficiently or completely explained by characteristics inherent to individual states. Rather, the onset of conflict is significantly affected by broader neighborhood effects surrounding the state that facilitate the spread of conflict. That is, the occurrence of conflict is partially dependent on interdependencies between political units and their surroundings. Such spread or contagion can be the result of one or several mechanisms, both physical and strategic, that infect surrounding states with domestic hostilities.

EXISTING APPROACHES TO ETHNIC CIVIL WAR

Several studies propose ethnically heterogeneous or polarized states as having a higher likelihood of civil war (Brancati 2006; Ellingsen 2000; Montalvo and Reynal-Querol 2005).[4] When ethnic divisions and public goods provisions lead to unequal distributions of state wealth through ethnic nepotism, increasing levels of ethnic heterogeneity increases the likelihood of civil conflict between governments and excluded ethnic groups (Easterly and Levine 1997; Elbadawi and Sambanis 2000; Vanhanen 1999). Building further, Cederman, Weidmann, and Gleditsch (2011) and Buhaug, Cederman and Gleditsch (2014) show that, at both the state and group levels, the relationship between economic inequality and civil conflict is parabolic; in highly unequal societies, both rich and poor groups fight more often than those with average wealth. That is, groups at the bottom of unequal societies mobilize to forcibly change their disadvantaged circumstances, while groups at the top mobilize to prevent the redistribution of localized wealth. Taken together, these mechanisms make sense; while the conflict between the SPLM/A and the Sudanese government was largely fought over the marginalization of minority border regions, the short-lived Niger delta conflict was fought by the ethnic Ijaw partly over the perceived exploitation of the region's oil wealth.

Paralleling the unequal distribution of wealth in states is the unequal distribution of political power and the exclusion of certain ethnic groups from the domestic political process. Wimmer, Cederman, and Min (2009) show that larger populations excluded from the domestic political process increase a state's likelihood of experiencing civil war. Similarly, Cederman, Wimmer, and Min (2010) and Buhaug, Cederman, and Rød (2008) show that politically excluded groups are more likely to rebel and, additionally, that groups whose political status has been downgraded by the political apparatus are more likely to take up violence to change their circumstances.

More pertinent to this study, Sambanis (2001) argues that ethnic heterogeneity increases the likelihood of conflict since ethnic concentration lowers collective action problems for potential rebels and support bases are territorially defined (Kaufmann 1996), a finding paralleled by Elbadawi and Sambanis (2000) and Ellingsen (2000). Building this logic further, Weidmann (2009) shows that ethnic conflict is driven by the spatial concentration of ethnic groups, since the spatial proximity of co-ethnics provides advantages for strategic coordination. That is, ethnic groups are particularly apt at undertaking rebellion, since well-defined community structures and spatial concentration makes mobilization and coordination easier to achieve.

Aside from questions of motivation for resorting to violence, ethnic groups have also been shown to consider opportunities or feasibility for rebellion (Collier, Hoeffler, and Rohner 2009; Fearon and Laitin 2003). Cederman, Buhaug, and Rød (2009), for instance, show that larger ethnic groups, or those that can more effectively challenge the state when mobilized, are more likely to rebel. Relatedly, they argue that ethnic groups located far from the state political center and operating in regions of rough terrain are more likely

4. Ellingsen (2000) finds support for differing effects, with linear and parabolic relationships with fractionalization and polarization, respectively.

to engage in conflict, since such conditions make counteroffensives by the state more difficult. As such, groups farther from the political center of the state should face higher chances of success than those closer to the capital. This latter finding is similarly detailed across the literature (Buhaug 2010; Buhaug et al. 2008; Buhaug and Rød 2006; Wucherpfennig et al. 2011).[5]

These recent works have done much to advance the relationship between ethnic groups' geographic and strategic considerations and the onset of civil war. They have displayed which ethnic groups are more likely to rebel, demonstrating the importance of geography, location, and access to political and economic power. But these works have, with few exceptions, largely ignored the interdependencies between ethnic groups and their broader strategic environments or contexts. Building on the insights of these works, it is important to determine how groups' broader strategic and political environments shape their decisions to engage in war.

THE INTRASTATE CONTAGION OF ETHNIC CIVIL WAR

Having detailed the pertinent scholarship on ethnic conflict occurrence and the contagion of civil war in the international community, I now synthesize and apply these literatures to develop a theory of ethnic conflict contagion within states.[6] Existing studies have shown a positive relationship between ongoing civil wars and groups' decisions to fight. Ayres and Saideman (2000) and Saideman and Ayres (2000), for instance, argue that ethnic groups' decisions to undergo separatist or irredentist conflicts are significantly shaped by ongoing conflicts in the same state, respectively. Furthermore, Walter (2006, 2009) poignantly shows how the potential for hostilities to spread within the state conditions the strategies and processes of ongoing conflicts. But such studies often treat ongoing conflicts as equally influential, regardless of their spatial or temporal characteristics, and with little regard to the influences of space and geography on such relationships.[7] Broadly, if additional conflicts are caused by the contagion of ethnic conflict, either through physical or strategic mechanisms, then closer conflicts or neighborhoods of violence around particular groups should exert greater influence on groups' conflict calculus. That is, rather than specifying all ongoing conflicts as exerting equal influence on groups' decisions to fight, processes of contagion imply that more proximate conflicts should more heavily influence such decisions.

For states facing finite resources, fighting civil wars requires significant, and zero-sum, expenditures in conflict zones. That is, any increase in attention and resources devoted by governments to fighting domestic conflicts in one region of the state must necessarily be drawn from other regions.[8] In a sense, then, states are faced with opportunity costs for fighting civil conflicts. Several scholars have, either directly or indirectly, referenced this zero-sum opportunity cost of civil war. Ethnic and territorial conflicts, which often occur in remote regions far from the state political center, are particularly salient in terms of requiring increasing state resources to fight since governments must travel farther to face their challengers (Buhaug 2010; Buhaug and Rød 2006; Buhaug et al. 2008; Wucherpfennig et al. 2011). Said another way, ethnic groups on the periphery of the state are likely to benefit most from periods of ongoing conflict, significantly increasing the chances of their successful rebellion.

I argue that such opportunity costs facing states are strategically used by ethnic groups to decide to fight during periods of ongoing conflict. When states are embroiled in civil conflict, they must direct both attention and resources to conflict zones. This necessarily diminishes the amount of resources that can be devoted to subsequent or simultaneous conflicts. Returning to the Tigray example, ongoing conflicts in the Eritrean and Ogaden regions allowed the TPLF to operate largely unencumbered by government forces, facilitating their growth over time. Similarly, as states become involved in conflicts with more ethnic groups, their attentions and resources become increasingly divided, which furthers opportunities for additional armed groups to develop or succeed against the state. That is, potential rebels weigh their utility of fighting against the prospective level of push-back or armed response from government forces. As the number of groups in conflict increases, such that government resources become increasingly divided, this expected level of response diminishes, so potential rebel groups' expected utility of fighting increases.

5. It is worth pointing out, however, that Cederman et al. (2009) show that this distance and rough terrain effect holds only for ethnic territorial conflicts, and that Buhaug and Rød (2006) show this effect for territorial conflicts.

6. While I focus on the contagion of civil war between ethnic groups in the state, this is not to imply that ethnic groups are the only groups potentially affected by the intrastate contagion of conflict. To be sure, myriad groups in the state, such as religious sects, student groups, or nascent political movements, may benefit from the same logistical and strategic benefits derived here. However, widespread data on such potential rebel movements, specifically those potential challengers that do not rebel, remain unavailable. Focusing on ethnic groups then provides some insights into how the spatiality of conflict affects potential challengers' decisions to fight. It is important to note, however, that the results presented here may not extend to other groups at large, and that we should be cautious in extending these conclusions beyond ethnic rebellion. As such, I leave open these avenues for future research.

7. Braithwaite (2005) nicely terms such theoretical exclusions as the "a-spatiality" of the conflict processes literature.

8. Or, as is more likely the case, resources can be drawn from what would have been devoted to other regions.

In addition to this division of resources, periods of conflict involving multiple ethnic groups signals increasingly broad dissatisfaction with the state or underscores widespread views of government illegitimacy (Wimmer et al. 2009). Such broadening dissatisfaction can buttress the resolve of nascent challenger groups. Furthermore, similar to the insights of Tarrow (1998) and Maves and Braithwaite (2013), observing more challengers can compel moderate and undecided segments of the population to join periods of struggle against what is perceived as an increasingly weakened and divided state, thereby increasing chances for emulation. Ethnic groups, in particular, are uniquely positioned to take advantage of states' increasingly limited resources and the disarray of ongoing conflict, since they are able to mobilize combatants relatively quickly and easily (Ellingsen 2000; Kaufmann 1996; Weidmann 2009). Applying these insights, I derive my first hypothesis, which tests for a relationship between the number of groups in conflict and ethnic groups' decisions to engage in conflict:

H1. Ethnic groups are more likely to engage in civil war as the number of other groups in ongoing conflicts against the same state increases.

In isolation, however, this strategic opportunism by potential rebels can only explain that ethnic groups take up arms but not where or why particular groups choose to fight. Why should we expect groups to take up arms when conflicts are nearby, as opposed to when they are far away in the state? To be sure, if strategic opportunism, that groups wait until the state's resources are divided and diverted, is the only mechanism of contagion, then it may in fact be in groups' best interest to fight when ongoing conflicts are far away, such that these divisions of resources become most pronounced. I contend, however, that such opportunity to rebel operates in conjunction with an ethnic group's proximity to conflict in two important ways.

First, whereas ongoing conflicts offer opportunistic rebels an increased strategic chance to successfully fight against the state, nearby conflicts lower the barriers to entry into conflict by increasing local supplies of weapons and military logistics to ethnic groups in the neighborhood. Salehyan and Gleditsch (2006), in the context of the interstate contagion of civil war, argue that increased flows of weapons and combatants in regions of conflict make taking up arms easier and cheaper for potential rebels. That is, fighting nearby lowers the logistical barriers to entry into civil conflict for those seeking forcible change. Similarly, several studies have detailed the expansion of conflict zones by the spatial diffusion of violence. (O'Loughlin and Witmer 2011; Schutte and Weidmann 2011; Zhukov 2012). Over time, such expanding conflict zones entail that the tools and logistics of war are increasingly available to proximate populations.

It is reasonable that these same mechanisms work to spread conflict between ethnic groups in conflict and nearby ethnic groups who may seek to challenge the state. Proximity to conflict zones should lower the barriers to entry for potential domestic challengers by increasing the availability of weapons, supplies, and recruits and, subsequently, lowering their cost of acquisition. As in the case of the Tigray in Ethiopia, proximity to an ongoing conflict facilitated the transfer and acquisition of weapons, as well as increased opportunities for coordination with other rebels (Akcinaroglu 2012). At the same time, the expansion of ongoing conflict zones by the diffusion of violence may gradually engulf nearby ethnic groups, such that they join ongoing hostilities either willingly or by necessity (Humphreys and Weinstein 2008; Kalyvas and Kocher 2007). That is, conflict zones produce intrastate spillover effects between ethnic groups, which can increase the fighting capacity of nearby groups relative to the state.[9]

Aside from such spillover effects, nearby conflicts also provide increased flows of information to surrounding groups. Broadly, conflicts are characterized by information asymmetries (Fearon 1995; Powell 2002, 2006) and, especially in periods of civil war, breakdowns in infrastructure and flows of information. Such information asymmetries produce significant uncertainty over the distribution of capabilities and the potential outcomes of conflict. Potential challengers can, perhaps, partially overcome these information asymmetries by observing and gleaning information from ongoing conflicts. Comparatively, nearby conflicts likely produce more timely and exact information than distant conflicts, since the distance such information must travel to observers and potential challengers diminishes. That is, similar to the relationship between conflict information and emulation between states, ethnic groups learn more about how to fight the state from nearby challengers as opposed to distant ones. Taken together, these spillover and informational effects form my second hypothesis, which posits a contagion effect of conflict between ethnic groups:

H2. Ethnic groups are more likely to engage in civil war as the level of conflict among other ethnic groups in their immediate geographic neighborhood increases.

9. There is also a corollary argument that when such barriers to conflict are lowered, ethnic groups take up arms either against or to defend themselves from nearby hostile ethnic groups in an effort to bolster their own intergroup security (Hardin 1995; Petersen 2002; Posen 1993). Since this article exclusively considers the intrastate contagion of conflict aimed against the state, and not between ethnic groups, I leave this question to future work.

Finally, I argue that the intrastate contagion of ethnic conflict is exacerbated by the presence of multiple groups in conflict. As ongoing conflicts become increasingly close, chances of spillover effects and information transfers increase, lowering logistical barriers to entry and increasing chances of emulation. Similarly, when multiple groups in an ethnic group's neighborhood are in conflict, such spillover effects are likely to increase, since there are multiple sources of weapons, logistics, and so forth, as well as multiple sources of information of government fighting capacity and, perhaps, successful strategies against the state. Relatedly, multiple proximate groups in conflict further signals a broader willingness to fight against the state, rather than a single group's divergence into conflict. That is, multiple groups in conflict may more effectively sway nascent rebel groups to foment rebellion as underlying sentiments of anger and a desire to force change appear increasingly common. Taken together, this suggests that the likelihood that proximate conflicts spread to neighboring ethnic groups increases as more groups engage in conflict, leading to my final hypothesis:

> **H3.** Ethnic groups are more likely to engage in civil war as the level of conflict involving other ethnic groups in their geographic neighborhood increases and the number of groups engaged in ongoing conflicts increases.

DATA AND RESEARCH DESIGN

In testing this theory of intrastate ethnic conflict contagion, I rely on spatial lag logit regressions of group-level ethnic conflict onset.[10] To populate the universe of ethnic groups, I utilize the GeoEPR data set, which details the geographic locations of all major ethnic groups around the world (Wucherpfennig et al. 2011).[11] These geolocated data are necessary for mapping the proximity of individual groups to ongoing conflicts. The data provide 588 distinct ethnic groups with an average lifespan of 43 years, totaling roughly 25,000 group-years.[12] To account for the hierarchical nature of the data, group-years nested in groups nested in states, I employ a multilevel modeling framework in which the intercepts vary as a function of clustered group and country-level variables.[13]

The main dependent variable is a dichotomous indicator of whether a particular ethnic group begins a civil war against the state in a given year, taken from the UCDP/PRIO Armed Conflict Data Set and the Ethnic Power Relations Data Set (Gleditsch et al. 2002; Harbom and Wallensteen 2010; Wimmer et al. 2009).[14] In addition, I use a second dichotomous measure of whether a particular ethnic group begins a civil war in a given year, contingent on the state already being in conflict with another ethnic group in that year. Thus, this second dependent variable is the exact same construction as the main dependent variable but specifically captures when a given ethnic group is the second or later group to take up arms. I term the onset of such engagements "parallel conflicts." Together, these measures allow me to test for significant intrastate contagion effects for all groups, and specifically for groups during periods of ongoing conflict.[15]

Although similar, it is important to test both dependent variables separately. Logically, civil wars occurring due to the spatial contagion of ongoing conflicts, at least in the case of intrastate contagion, must be parallel civil wars. As such, limiting analyses to groups in periods of ongoing civil war is necessary to better reveal the "true" effect, if any, of intrastate conflict contagion. Similarly, testing the first hypothesis concerning the number of groups in conflict necessarily requires that much of any significant effect relate to parallel conflicts. At the same time, however, we might wish to examine the comparative significance of these conflict characteristics against the broader spectrum of characteristics that lead to civil war for all groups that could potentially rebel against the state. Said another way, modeling the effects of these conflict characteristics on all groups, even those in states not experiencing ongoing conflicts, offers

10. Descriptive statistics of all relevant covariates appear in the appendix, available online.

11. Some ethnic groups in the data set are large enough and geographically ubiquitous throughout the state, such that they are not coded with geographic specificity. Following previous works, I exclude these groups from the analyses, leaving 588 ethnic groups for analyses.

12. For purposes of consistency, the data utilize ethnic groups from all countries in the EPR data set, even those countries with only a single geolocated ethnic group. Replicating the analyses to exclude these countries does not change the substantive conclusions.

13. Specifically, the multilevel model is a three-level mixed effects logit model. The group-level covariates detailing group size and distance to capital city affect the level-2 intercept. The country-level covariates specifying excluded population size, population size, GDP per capita, and mountainous terrain affect the level-3 intercept. Alternatively, substantive conclusions derived from nonnested rare events logit regressions remain unchanged.

14. Thus, the main dependent variables use the 25 battle-related deaths threshold. The appendix also provides alternate model specifications using a higher intensity threshold (1,000 battle-related deaths) for conflict onset.

15. As presented, the second dependent variable could also be described as "subsequent conflict onsets." It is also possible, however, that multiple conflict onsets in a given year are parallel onsets, regardless of their sequencing. That is, groups beginning the first conflict in a year may take up arms partly because of an expectation that other groups will subsequently take up arms. To briefly account for this possible relationship, analyses were also conducted classifying all instances of multiple conflict onsets in a given year as "parallel onsets." Substantive results using this alternative dependent variable construction remain unchanged.

some comparative justification as to their substantive impact in the full universe of characteristics leading ethnic groups to civil war.[16]

In testing the above hypotheses, I employ two explanatory variables and an interaction effect to capture the effects of intrastate contagion. The first explanatory variable is a count of the number of ethnic groups in the country engaged in civil war in a given year. This measure specifically tests the effects of hypothesis 1.

To test hypothesis 2, that there exists a significant contagion effect of conflict between ethnic groups, I build a spatial lag variable for each ethnic group. More precisely, this spatial lag variable is a spatial weights matrix, W, specifying the prevalence and proximity of ethnic civil war around a particular ethnic group. In scalar notation, this spatial lag variable formally takes the form:

$$W_{ijt} = \sum_{j=1}^{n} \left(\frac{1}{d_{ijt}} \times y_{jt} \right).$$

The spatial weights matrix is first generated as an $N \times N$ connectivity matrix, which pairs each ethnic group i with all other ethnic groups in the same state j.[17] To fill the cells of the matrix, the inverse distance between each group pair, measured in kilometers from the centroid of each group's geographic area, is calculated, such that groups closer together have higher cell values than groups farther apart.[18] Each inverse distance between group i and a group j is then weighted by multiplying the value of the dependent variable for group j, y_{jt}, which, in this case, can take on a value of either 0 or 1 for whether each j group is in conflict in a given year. This creates the spatially-weighted lag of conflict occurrences. Finally, the matrix is collapsed into a scalar by summing the weighted inverse distances between group i and the other groups j for each year.[19]

The spatial lag variable then represents the weighted sum of the distance between group i and all other groups in conflict in the state in a given year. That is, the value of the spatial lag increases as the distance between group i and all other groups in conflict j decreases, capturing the proximity or geographic closeness of conflict surrounding each ethnic group. This measure is similar to the spatial lags employed by other studies of civil war contagion (Braithwaite 2010; Buhaug and Gleditsch 2008; Maves and Braithwaite 2013). The key difference here is that the spatial lags used in previous studies represent the row-standardized weighted averages of proximate conflict, rather than weighted sums. Since the theorized mechanisms of conflict contagion, logistic and informational spread, occur over physical distance, use of the weighted sum is appropriate since it captures the raw effect of geographic proximity. I also choose the weighted sum, rather than the weighted average, to better account for the varying numbers of ethnic groups in each country, as well as to allow for more meaningful testing of the interaction effect.[20]

To test hypothesis 3, I interact this spatial lag with the number of ethnic groups in ongoing conflicts. This interaction allows for greater capturing of the prevalence and proximity characteristics of the conflict contagion effect. As

16. Methodologically, it might also be the case that the large number of zeros in the explanatory variables of interest, in the case of all groups, could lead to a situation in which even small changes in the explanatory variable lead to significant effects in the empirical model. As such, subsetting the data to years of ongoing conflicts offers a partial check against this problem.

17. For example, in a country with 17 ethnic groups, the connectivity matrix is 17 × 17. By convention, the connectivity matrix is block-diagonal, with the diagonal elements being set to zero, so that only the connections between distinct groups are measured.

18. For simple coefficient scaling purposes, the distances calculated in this project are scaled by 100 when taking the inverse. Hence the distance being placed under 100, rather than under 1. However, as Plümper and Neumayer (2010) point out, in absence of specific theory about the nature of the distance function, it is important to test several possible functional forms for robustness of the spatial dependency. The substantive results in this project are robust to several distance functions in W, including $1/d_{ijt}$, $1/\ln(d_{ijt})$, and $1/\sqrt{(d_{ijt})}$, as well as d_{ijt}, though in the latter case the signs of the coefficients are reversed since distance is increasing for groups farther apart.

19. The spatial lag is used to measure the contagion of conflict among ethnic groups within the state. In practice, however, the spatial lag measures the spatial dependency of conflict; whether conflict in one location is systematically affected by conflict in other locations. In line with theory, this spatial dependence is interpreted as evidence of a contagion process within the state. However, this apparent spatial dependence, and apparent contagion of conflict, may actually be caused by spatial heterogeneity—the spatial clustering of the underlying causes of conflict—that is not captured by the model specification. To account for this possible spatial heterogeneity, the robustness checks section highlights and tests two other possible spatial effects. In addition, the conclusion briefly offers insights into other possible spatial mechanisms that may be driving the spatial dependence of conflict within the state. I leave further consideration of these other possible spatial effects to future projects. See Buhaug and Gleditsch (2008) and Neumayer and Plümper (2010) for examples of empirical attempts to distinguish between spatial contagion and spatial heterogeneity in conflict studies.

20. However, as a test of robustness, the appendix provides model specifications using the row-standardized spatial lag and a brief discussion of their interpretation. All substantive conclusions remain the same. See Neumayer and Plümper (2012, 2016) for full discussion about the theoretical distinction between employing weighted average and weighted sum spatial lags. In this case, under a weighted average spatial lag, the influence exerted by surrounding groups in conflict is relative to the total number of groups in the state. Said another way, countries with fewer groups exert greater influence between groups than countries with more ethnic groups, which can be problematic for testing the geographic contagion effect of conflict across states of varying sizes.

the spatial lag increases, the proximity of an ethnic group to groups in conflict increases. At the same time, as the number of groups in conflict increases, the prevalence of ethnic conflict in the state increases. This interaction is important in distinguishing any combined conflict prevalence and proximity effects in terms of intrastate contagion.

The interaction effect then tests for the effect of heterogeneous exposure in the spatial dependence of conflict. It is worth noting that the use of this interaction effect is appropriate here because of a somewhat unique construction of the spatial lag variable. Many studies of spatial contagion rely on a single reference neighborhood for all units of observation, generating a single spatial weights matrix. Recall that the reference neighborhood for each ethnic group here is bounded within its own state, necessitating multiple unique spatial weights matrices only shared by ethnic groups in the same state. Since the ethnic and geographic composition of each state and, by extension, each group's reference neighborhood, varies, it is possible for two ethnic groups to have equal values of the spatial lag but be surrounded by vastly different numbers of ethnic groups in conflict. This substantive difference amounts to heterogeneity of exposue; that two ethnic groups in the data, in two separate reference neighborhoods, can have equal values of the spatial lag but exist in significantly different conflict environments. The interaction effect tests whether this heterogeneous exposure among groups in differing reference neighborhoods is significant.[21]

I also include in all model specifications a series of group-level and country-level control variables. At the group level, I first control for whether the ethnic group is excluded from the state political system. I also include a dichotomous indicator of whether the political status of the ethnic group has been recently downgraded (Cederman et al. 2010). I also include the natural log of the ethnic group's relative population size, which has been shown to positively affect groups' propensities for conflict (Cederman et al. 2010; Weidmann 2009). Finally, to measure an ethnic group's distance to the political center of the state, I include the geographic distance from the ethnic group to the state's capital city (Buhaug et al. 2008; Wucherpfennig et al. 2011).

At the country level, I control for the natural log of GDP per capita and the natural log of the state population, which have been consistently shown to affect the onset of conflict, as well as the natural log of the size of the state's excluded population (Hegre and Sambanis 2006; Wimmer et al. 2009). I also control for the natural log of the percentage of the state covered in rough or mountainous terrain (Fearon and Laitin 2003). To control for the possible varying effects of ethnic conflict counts in states of varying sizes, I include a count of the "remaining" ethnic groups, which is simply a count of the total number of ethnic groups minus the number of groups currently in conflict. Finally, I include a counter of group-level peace years and include squared and cubed polynomials to account for time dependence and temporal nonmonotonicity in the data (Carter and Signorino 2010).

RESULTS AND SUBSTANTIVE FINDINGS

The results of the spatial regression models are detailed in table 1.[22] To reiterate, we are interested in three main effects: the effect of multiple ethnic groups in conflict, a group's spatial proximity to groups in conflict, and the interaction effects of these conflict prevalence and proximity measures. To that end, model 1 details the baseline model of conflict prevalence and proximity on ethnic conflict onset for all relevant ethnic groups. Model 2 includes the multiplicative interaction effect of the spatial weighting variable (measuring groups' spatial proximity to conflict) and the number of groups in conflict (measuring the prevalence of ethnic conflict in the state). Model 3 and model 4 provide the same model specifications but exclusively analyze periods of ongoing conflict in the state through parallel conflict onset. That is, models 1 and 3 test for the independent effects of groups in conflict and the spatial contagion of conflict, respectively. Models 2 and 4 examine whether these effects are in fact directly influenced or exacerbated by each other, as hypothesized by theory. Regarding model fit, likelihood ratio tests of the null model for each scenario strongly support the multilevel specification framework over the completely pooled approach. About 25% and 20% of the unexplained error variance is captured at the group and country levels for each scenario, respectively.

21. In contrast, use of this interaction effect is not necessarily appropriate if the scope and composition of the reference neighborhood is the same for each group. For instance, in studying the spatial dependence of conflict for states in the international system, all states share the same reference neighborhood, namely the international community. As such, the number of other states in conflict in the world is equivalent for all states, so there is no heterogeneity of exposure to be compared.

22. The methodological approach used here, relying on a logit regression with a spatial lag of civil conflict, largely conforms to previous studies of conflict contagion (Braithwaite 2010; Buhaug and Gleditsch 2008; Maves and Braithwaite 2013). However, this approach can lead to inefficient estimates of the parameters of interest (Anselin 1988). See Ward and Gleditsch (2002) for a Bayesian autologistic approach to more closely approximating estimates of spatial dependence in international relations, and Hughes, Haran and Caragea (2011) for a comparison of methodological approaches for approximating estimates of spatial dependence.

Table 1. Intrastate Neighborhood Conflict Effects on the Likelihood of Ethnic Group Conflict Onset, 1946–2008

	(1) All Group Conflict Onsets	(2) All Group Conflict Onsets	(3) Parallel Group Conflict Onsets	(4) Parallel Group Conflict Onsets
No. of groups in conflict	.298***	.256***	.252***	.085
	(.050)	(.055)	(.074)	(.089)
Neighborhood conflict (w.s.)	.329***	.205***	.428***	.010
	(.048)	(.074)	(.087)	(.125)
No. of groups in conflict x Neighborhood conflict (w.s.)		.032**		.078***
		(.014)		(.023)
Excluded group	.819***	.754***	1.558***	1.172***
	(.207)	(.207)	(.413)	(.399)
Group downgraded	1.431***	1.441***	1.083**	1.269**
	(.278)	(.277)	(.529)	(.512)
ln(group size)	1.596***	1.524***	2.641***	2.102**
	(.420)	(.418)	(.955)	(.871)
ln(distance to capital)	.123	.117	.040	.037
	(.123)	(.123)	(.259)	(.232)
ln(excluded population)	1.138**	1.168**	.279	−.488
	(.545)	(.540)	(1.297)	(.914)
ln(population)	.016	−.002	−.244	−.336*
	(.102)	(.101)	(.240)	(.192)
ln(mountainous terrain)	.093	.120	.354	.381**
	(.091)	(.091)	(.244)	(.182)
ln(GDP per capita)	−.318***	−.320***	−.856**	−.834***
	(.122)	(.121)	(.365)	(.270)
No. of remaining groups	−.036**	−.033**	.034	.039
	(.016)	(.016)	(.031)	(.025)
Constant	−4.228***	−3.966***	.418	2.595
	(1.354)	(1.349)	(3.766)	(2.932)
σ(*Group*)	.470	.457	.715	.645
σ(*Country*)	.528	.524	.954	.425
Log pseudo-likelihood	−1,020.46	−1,017.744	−393.759	−386.765
AIC	2,074.92	2,071.489	821.517	809.530
Observations	22,444	22,444	4,736	4,736
Number of groups	567	567	322	322
Number of countries	118	118	57	57

Note. Standard errors in parentheses. Models include linear, squared, and cubic polynomials of Group Peace Years (n.s.). Significance levels (two-tailed).

*** $p < .01$.

** $p < .05$.

* $p < .1$.

Broadly, the results of the multivariate analyses strongly support all salient aspects derived from the theory of intrastate contagion. Regarding hypothesis 1, the coefficients on the number of ethnic groups in conflict in models 1 and 3 are both positive and significant. This implies that as more ethnic groups in the state take up arms, additional groups in the state also face a higher likelihood of engaging in conflict.

Importantly, this significant effect applies even when groups in conflict are geographically distant. The coefficient for the number of groups in conflict is positive and significant in model 2, suggesting a significant impact on the likelihood of ethnic civil war even for distant groups. To be sure, interpreting constitutive terms in interaction models is dangerous when the data do not include a "true" zero

value (Braumoeller 2004). Since model 2 covers all possible groups, however, both constitutive terms do contain zero points.[23] Cautiously, I infer that, as the value for the spatial lag of conflict approaches zero, such that groups in ongoing conflicts are increasingly distant, there is still a significant effect of increasing the number of groups in conflict on the likelihood that an additional group will take up arms, further supporting hypothesis 1.[24] In terms of theoretical implications, this finding supports the notion that ethnic groups respond to the broader strategic setting of the state and take up arms when they sense an increased opportunity for success.

Continuing to hypothesis 2, the empirical results support the existence of an independent spatial contagion effect between ethnic groups in conflict. In line with the theory presented, we should expect the likelihood of ethnic groups rebelling to increase as their proximity to ongoing conflict increases, since physical and informational spillover lowers the logistic and strategic barriers to entry. The coefficient on neighborhood conflict is positive and significant, supporting the notion of a spatial contagion effect within the state. As the proximity of groups in conflict increases, such that ongoing ethnic conflicts become closer, ethnic groups are more likely to take up arms against the state. Again, we can cautiously infer from the constitutive term in model 2 that this intrastate contagion effect remains significant even when there are few surrounding groups in conflict. That is, the mere presence of nearby conflict facilitates ethnic groups' ability to take up arms against the state.

It is often difficult to draw more meaningful substantive implications from simple coefficients in nonlinear models. To interpret the substantive implications of this contagion effect, figure 1 provides the predicted probabilities of ethnic group conflict as the value of the spatial lag increases. To provide the distribution of the spatial lag in the data, figure 1 also includes a rug plot of the actual values of the spatial lag. The first plot in figure 1 provides the predicted probabilities for all groups, derived from model 1. The second plot in figure 1 provides the predicted probabilities for parallel conflict onsets, derived from model 3. In both plots, all other continuous and dichotomous variables are held at their mean and modal values, respectively.

In line with theory, as other ethnic groups in ongoing conflicts become increasing close, the likelihood that an ethnic group will take up arms dramatically increases. Importantly, this increasing effect occurs, albeit modestly, even when groups are relatively far from ongoing conflicts, such that, even in minor terms, conflict begets conflict. Seemingly enough, this effect is especially important when considering the onset of parallel ethnic conflicts, as the predicted probability of parallel conflict onset increases to as much as 0.33. That is, when ethnic conflict follows a contagion process within the state and groups are more likely to take up arms when conflicts are nearby, regions of the state can potentially spiral into cyclical patterns of parallel onsets as conflict spreads or shifts between proximate groups.

Taken together, the results thus far reveal two important characteristics of ethnic conflict. First, ethnic groups appear to strategically take advantage of the broader conflict environment facing the state. Second, there exists a seemingly substantial contagion effect between ethnic groups in conflict; ethnic groups close to groups in ongoing conflicts are significantly more likely to rebel than groups far from ongoing hostilities.

Moving beyond these baseline expectations, figure 2 provides the substantive effects of the multiplicative interaction between the intrastate contagion effect and the number of ethnic groups in ongoing conflicts in the state. The first plot in figure 2 corresponds to model 2, while the second plot in figure 2 corresponds to model 4. Paralleling figure 1, both plots provide the density of the spatial lag found in the data, and all other continuous and dichtomous covariates are held at their mean and modal values, respectively. To visualize the interaction effect, the *y*-axis of figure 2 presents the marginal effect, the difference in the predicted probability of conflict onset, when the number of ethnic groups in conflict is increased from 1 to 3. This difference is provided for all presented values of the spatial lag.

The coefficient of the interaction term is positive and significant in models 2 and 4, providing empirical support for the supposed exacerbating effect of the two covariates of interest. Importantly, the marginal effect, the difference in the predicted probability of conflict, resulting from a change from 1 to 3 groups in conflict is always positive and significant. This implies that, even when relatively far from ongoing conflicts, ethnic groups are slightly more likely to take up arms as more groups enter conflict, such that, even in minor terms, conflict begets conflict. This difference in the likelihood of conflict onset exacerbates as more groups in conflict become increasingly proximate. When examining all

23. However, while the data in model 2 do contain values of zero, their interpretation is somewhat difficult. For instance, a value of zero in the spatial weighting variable could mean that there are no ongoing conflicts. Alternatively, it could mean that there are ongoing conflicts, but, in theory, they are infinitely far away from the group in question. To circumvent this confounding issue, I carefully make inferences on the constitutive terms as they approach zero, rather than at their absolute zero values.

24. Conversely, since the data supplied for model 4 do not contain true zero values, I do not interpret the constitutive terms for that interaction.

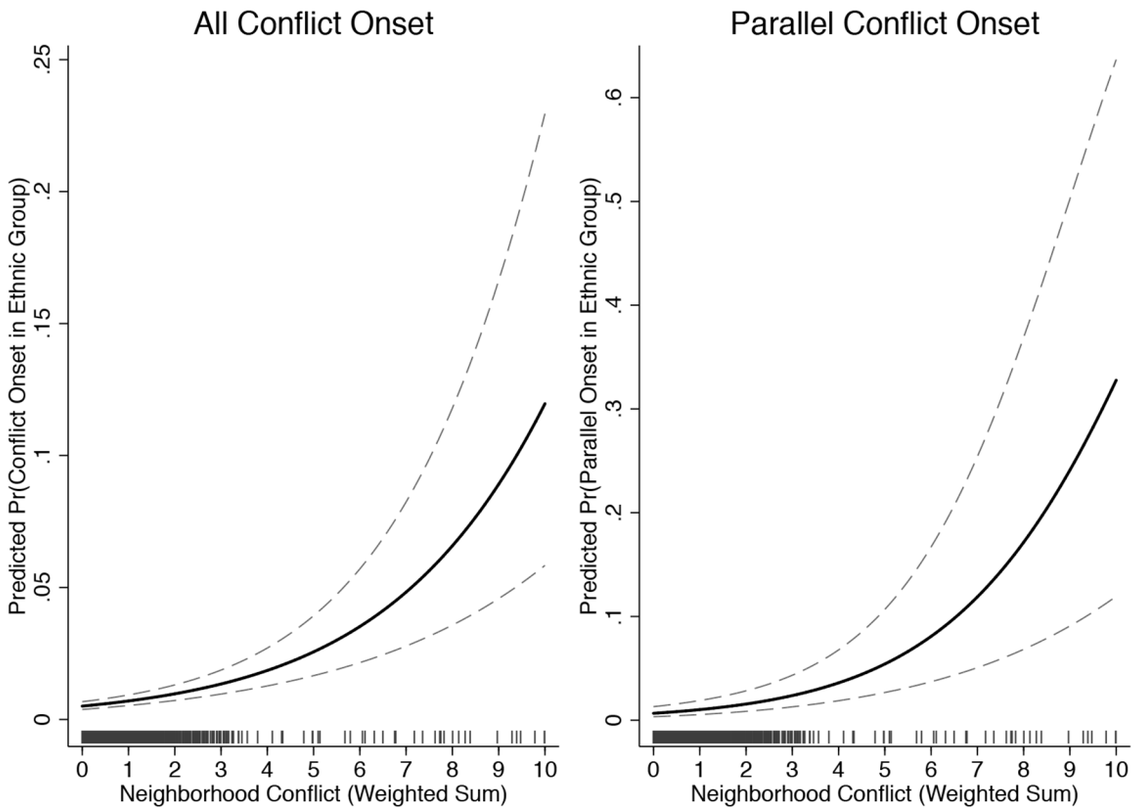

Figure 1. Predicted probability of ethnic civil war onset as neighborhood conflict changes. Predicted probability plots correspond to model 1 and model 3, respectively. All other continuous covariates are held at their mean values, and all other dichotomous variables are held at their modal value. Plots show the predicted probability of conflict onset in an ethnic group as the value of the spatial lag increases. Rug plots show the distribution of the spatial lag in the data.

ethnic groups in figure 2, increasing the number of groups from 1 to 3 groups in conflict increases the predicted probability of conflict by an average of 0.034 over the range of the spatial lag, and by a difference of as much as 0.11 at the maximum value of the spatial lag. Similarly, with regard to the onset of parallel ethnic conflicts, increasing the number of groups in conflict from 1 to 3 results in an average increase of 0.034 over the range of the spatial lag, and a maximum difference of 0.10 in the predicted probability of parallel conflict. In sum, figure 2 provides strong support for the argument that the contagion of ethnic conflict is exacerbated by the presence of multiple sources of contagion.

As a whole, these findings are very important from the perspective of understanding the relationship between groups' strategic situations and decisions to rebel. In line with the theory presented, multiple groups in conflict signal an increasingly divided state, such that the opportunity for successful rebellion increases. At the same time, proximate conflicts offer increases in weapons, fighters, and information, lowering both the physical and strategic barriers to entry into civil conflict for ethnic groups. When these factors converge, such that there are multiple proximate groups in conflict, ethnic groups hold several paths to acquiring diverse logistics and information, as well as the means to rally additional supporters under the banner of broader rebellion against a state increasingly under siege.

NEIGHBORHOOD AND CONTAGION ROBUSTNESS CHECKS

Following the arguments of Buhaug and Gleditsch (2008), it could be that the seeming clustering and intrastate contagion of ethnic civil war is in fact driven by other underlying neighborhood effects that are spatially correlated with ethnic conflict. To account for such additional spatial effects, I recreate the previous model specifications with two group and country-level neighborhood effects that may influence the group-level onset of ethnic conflict.

First, the group-level occurrence of ethnic conflict may simply result from the spatial clustering of politically excluded groups within the state. One of the strongest predictors of group-level conflict onset is the degree of political exclusion facing an ethnic group (Buhaug et al. 2008; Cederman et al. 2010). Theoretically, ethnic groups may take up arms when they witness broader localized exclusion; choosing to fight on behalf of the broader excluded population. This suggests that ethnic groups should care about

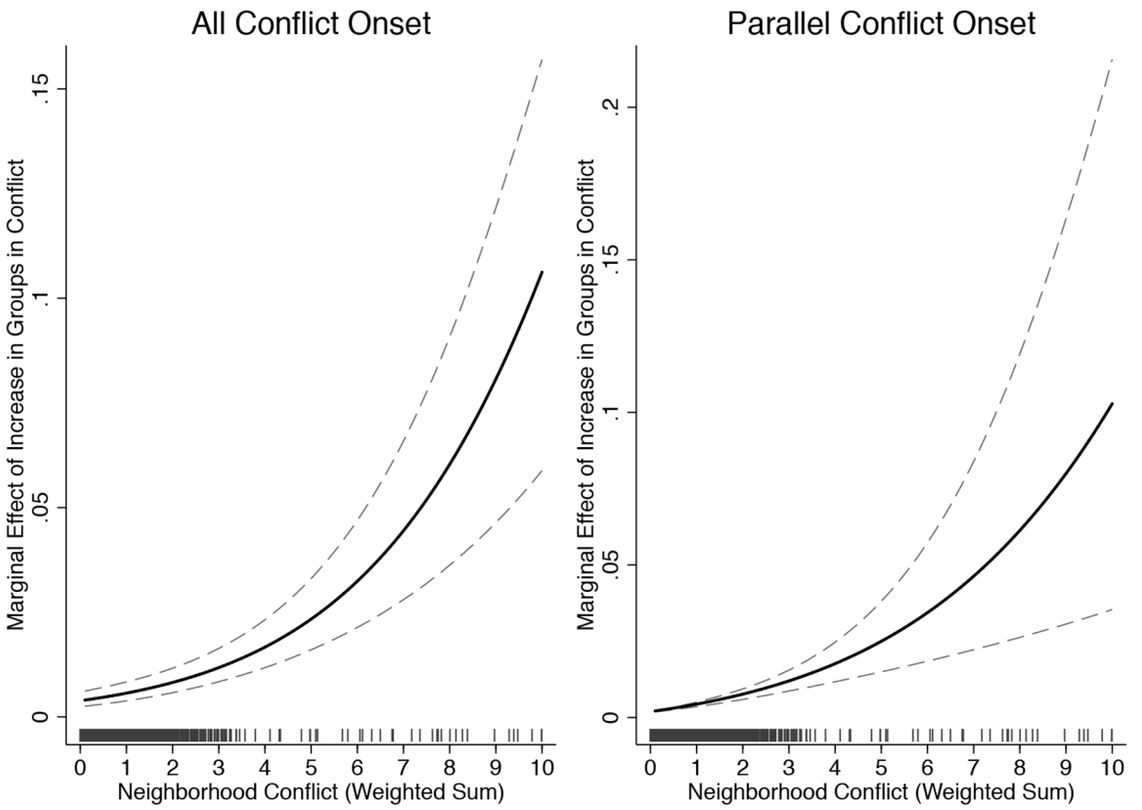

Figure 2. Conditional effects of neighborhood conflict and number of groups in conflict on ethnic civil war onset. Marginal effects plots correspond to model 2 and model 4, respectively. All other continuous covariates are held at their mean values, and all other dichotomous variables are held at their modal value. The *y*-axis of each plot shows the difference in the predicted probability of conflict onset following a change from 1 to 3 groups in conflict over the neighborhood conflict spatial lag. Rug plots show the distribution of the spatial lag in the data.

broader levels of relative political exclusion in their surroundings. Alternatively, the clustering of ethnic conflict could simply arise from the clustering of several excluded groups. To that end, I construct a row-standardized weighted average spatial lag measuring the relative levels of political exclusion surrounding ethnic groups. Ranging from 0 to 1, this measure captures the spatially weighted degree of political exclusion surrounding each ethnic group.[25]

In addition, groups may be positively affected by levels of civil war outside the state. By limiting the analyses to the effects of intrastate contagion exclusively, the analyses presented may fail to account for broader international neighborhoods of conflict, thus missing the influence of civil wars in the states surrounding the ethnic group. To account for this potential outside-in contagion effect, I employ the weighted-average of intrastate conflict used by previous studies of interstate civil war contagion (Braithwaite 2010; Buhaug and Gleditsch 2008; Maves and Braithwaite 2013).

As a test of robustness, table 2 replicates models 2 and 4 and includes each of these neighborhood effects.[26] Relative levels of political exclusion in groups' neighborhoods do not affect the onset of ethnic civil war. In contrast, when examining all ethnic groups, broader international neighborhoods of civil war significantly increase the likelihood that a group will engage in civil war. This effect, however, becomes insignificant when exclusively examining the decision by groups to rebel during periods of ongoing conflict in model 6, suggesting, perhaps, that the influence of civil war in the states' neighborhood impacts initial, rather than parallel, ethnic conflicts in the state.[27]

The intrastate contagion effects remain significant even when controlling for these additional underlying neighborhood effects. The logistic and informational spread from

25. This weighted average spatial lag is constructed in the same way as the weighted average spatial lag of conflict occurrence used in the appendix.

26. For purposes of brevity, the presented models exclude the group and country-level control variables. All significant effects of the control variables remain unchanged.

27. I make this claim cautiously since, to my knowledge, few studies have systematically examined whether the same factors facilitate the onset of first and subsequent civil wars in the states.

Table 2. Broader Neighborhood Effects and Ethnic Group Conflict Onset, 1946–2008

	(5) All Group Conflict Onsets	(6) Parallel Group Conflict Onsets
No. of groups in conflict	.251***	.083
	(.057)	(.089)
Neighborhood conflict (w.s.)	.201***	.006
	(.075)	(.132)
No. of groups in conflict x Neighborhood conflict (w.s.)	.034**	.080***
	(.015)	(.024)
Neighborhood political Exclusion (w.a.)	−.305	.031
	(.277)	(.618)
Country-level Neighborhood conflict (w.a.)	.582*	.458
	(.326)	(.505)
σ(*Group*)	.480	.647
σ(*Country*)	.536	.473
Log-likelihood	−998.220	−86.091
AIC	2036.441	812.181
Observations	22,255	4,728
Number of groups	566	322
Number of countries	118	57

Note. Standard errors in parentheses. Models include standard group and country-level controls, as well as linear, squared, and cubic polynomials of group peace years (n.s.). Significance levels (two-tailed).
*** $p < .01$.
** $p < .05$.
* $p < .1$.

ongoing conflicts significantly increase the chances that a group will take up arms, rather than the simple clustering of multiple excluded groups. Furthermore, even when partially controlling for the influence of groups outside the state, proximate conflicts in the same state substantively increase the risk of conflict. Taken together, these additional findings further support the notion of an intrastate contagion effect between ethnic groups in conflict separate from additional structural conditions surrounding individual groups.

CONCLUSION AND FUTURE RESEARCH

The aims of this article have been straightforward. Civil wars have been shown in the literature to cluster and spread between states in localized neighborhoods. In a parallel process, the analyses presented here show that these same patterns of contagion also exist within states. In line with previous works, I have shown that ethnic groups are more likely to take up arms when the state is already facing domestic challengers. Building on this insight, the results have shown robustly that ethnic groups close to ongoing conflicts and in particularly conflict-ridden regions of the state are more likely to become "infected" by neighboring conflicts and take up arms against the state.

But how does such intrastate contagion occur? In line with theory, ethnic conflicts spread within the state as the spread of arms and information lower the logistic and strategic barriers to entry for ethnic groups. Ongoing conflicts provide nascent rebels with the necessary supplies to wage war. Additionally, proximate conflicts provide important information about fighting the state, as well as displaying broader willingness to challenge the incumbent political regime. This latter point is increasingly important as political entrepreneurs attempt to rally moderate or passive ethnic supporters to fight. While multiple ongoing conflicts divide the state, opening opportunities for recruitment and perhaps eventual success, proximity to ongoing conflicts provides the resources necessary to fight more effectively.

The theory developed here is one of logistical spread and strategic calculations by potential actors. There is perhaps a salient avenue to be pursued regarding how shared characteristics between groups facilitates or hinders the contagion of conflict. Buhaug and Gleditsch (2008), for instance, provide some support that ethnic linkages to ongoing conflicts in neighboring states increases the likelihood that a state will experience civil war. Building on this insight, do shared ethnic histories, either positive or negative, between groups alter the likelihood of conflict spreading?

This is not to say, however, that these mechanisms are the only paths by which civil wars spread within the state. To be sure, proximate civil wars may worsen the economic situations of nearby groups as infrastructure is damaged or business opportunities are constrained. As such, proximate ethnic groups may take up arms, not for strategic reasons, but simply to improve their diminished economic situations brought about by ongoing conflicts. Alternatively, the government itself may spread conflict within the state. That is, governments engaged in violent conflict may use the opportunity to target proximate ethnic groups, either to collectively punish potential challengers or signal violent reprisals to other groups in the country. As such, the apparent spread of conflict within the state may be the result of the contagion of state-sponsored repression under the guise of civil war.

What stands, however, is a clear spatial contagion effect of ethnic conflict within states. Ethnic groups close to ongoing fighting are significantly more likely to take up arms than groups far from ongoing conflict. The importance of these findings cannot be understated. While the extant lit-

erature has pointed out how characteristics inherent to particular groups affects the onset of hostilities, these results consistently show that ethnic groups are clearly shaped by their broader strategic surroundings. Furthermore, these findings point out the important interdependencies between groups in conflict and that such interactions must continue to be accounted for in future studies of civil war.

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