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A Case of Mistaken (Ethnic) Identity: Rethinking Civil War Duration, Ethnic Saliency, Terrorism, and the Real Factors Discouraging Resolution

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A CASE OF MISTAKEN (ETHNIC) IDENTITY: RETHINKING CIVIL WAR DURATION, ETHNIC SALIENCY, TERRORISM, AND THE REAL FACTORS DISCOURAGING RESOLUTION

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Abstract

The field of political violence has consistently emphasized understanding the way that civil wars end, with less emphasis placed on the circumstances which elicit extended civil war duration. This analysis shifts the focus of study on to the internal factors of civil war, following the question: *What are the domestic factors of civil war that cause some wars to be more durable and resistant to resolution than others?* Building off of several prominent theories within the field of political violence and the anthropological study of ethnic saliency, I hypothesize that civil wars that are characterized as identity based will be more susceptible to a renewed security dilemma in the face of terrorism, resulting in more durable conflicts. Using a series of regressions and hazard models to analyze data on civil wars and terrorist events from 1970 to 2014, I test my primary hypothesis, as well as my secondary hypothesis which asserts that identity based civil wars will experience terrorism at a higher frequency than their non-identity based counterparts. The results do not provide support for my hypothesis regarding civil war type, but instead demonstrate a significant link between terrorism, particularly a form a terrorism known as spoiling, and the extended duration of civil wars. My findings overwhelmingly suggest that spoiling is likely a highly predictive indicator of war durability, while civil war type does not seem to be having a significant impact on duration or on the frequency of spoiling. I conclude with a brief look into the implications for future research and policy, emphasizing the need for a better understanding of this overlap between terrorism and civil war.

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Introduction

Since the end of World War II, the world has witnessed a remarkable shift in the trends of war and world conflict: the rapid decline in the frequency of interstate conflicts with the frequency of civil wars rising steadily in their place. This puzzle of conflict development has drawn interest from academics in the field of political science as a whole, particularly from scholars of political violence, who have constructed a robust literature regarding the processes of civil war and the way that civil wars end. Civil war has very quickly become widely known as a distinctly violent and costly form of conflict, often coexisting with countless other forms of political violence (Mason & Mitchell 2016). Given this volatile and troubling nature of civil wars, there is a vested interest in better understanding these conflicts, particularly how they end.

The large majority of scholarship on the resolution of civil wars has focused primarily on the type of resolutions that are most successful or on the ways in which factors outside of the domestic dynamics of the civil war impact its likelihood of resolution. Despite this robust and extensive research regarding the way that wars end, the field has neglected to pursue significant study regarding the factors that work to actually make civil wars harder to resolve. This study works to target this gap by asking the question: *What are the domestic factors of civil war that cause some wars to be more durable and resistant to resolution than others?* This question is an attempt to shift the lens of study towards the internal mechanisms and dynamics affecting civil wars in order to better understand their processes and what keeps them from resolution.

Over the course of this study, I argue that the internal factors of a conflict, particularly the civil war type, are the most influential factors influencing war duration; to be specific, I argue that identity based civil wars, wars centered around ethnic, religious, or linguistic identity, will be more resistant to resolution than other non-identity based wars. Working with pre-existing

theories in the field, specifically relative deprivation and the security dilemma, I work to incorporate a more holistic understand of the way civil war processes vary by closely examining the comorbidities of civil war and another prominent form of political violence: terrorism. I believe that, by understanding the way that terrorism occurs and varies across civil war types, we can gain a better understanding of why some wars tend to be more durable than others as well as begin to target the precise relationships that are eluding resolution.

In this analysis, I work to better understand the interaction of political violence within the context of civil war, pushing back on the implicit frame that prior research has employed which treats terrorism and civil war as perfectly independent occurrences despite the significant overlap that is found between them (Findley & Young 2012). I advance two hypotheses regarding the interaction between three variables of interest: war type, terrorism, and the duration of civil wars. My primary hypothesis, referred to as the Polarized Identity hypothesis, asserts that wars that can be characterized as identity based will be more impacted by terrorism events that non-identity based wars, resulting in extended war duration for identity based conflicts. My second hypothesis suggests simply that events of terrorism will be more common and more frequent in identity based wars than in their non-identity based counterparts. This hypothesis come out of the literature's understanding of the ethnic security dilemma and the way that terrorism operates outside of the context of conflicts. While these theories center around terrorism as the driving force behind extended war duration, I argue firmly that it is the underlying war type which determines the extent to which terrorism will impact the war's resistance to resolution.

I begin this study in Chapter 2 with a review of the relevant literature of civil war, the factors that we know impact conflict duration, terrorism, as well as theories of ethnicity and communal conflict. I draw literature primarily from the field of political violence to best

understand the process of civil war and the conceptualizations of terrorism. It is in this chapter that I also decide to narrow my focus from the larger concept of terrorism to the subcategory of spoiling, a form of terrorism which seeks to spoil attempts at peace (Kydd & Walter 2006). In order to best understand the ways in which identity impacts conflict, I supplement my discussion on ethnicity and communal conflict with anthropological and sociological research that allows for a more well-rounded conceptualization of identity based conflict and the way that identity can become increasingly salient in the face of civil war. After addressing some of the gaps currently existing in the literature, I work to apply the theoretical frameworks of the field to my question, and I propose my theoretical explanations and my two aforementioned hypotheses.

In Chapter 3, I work to carefully construct a quantitative study, modeled after prior research done in the field, in order to test my hypothesis as directly as possible. I begin by explaining and justifying my decision to pursue a quantitative analysis, pointing to the precedent set by the field. I proceed by operationalizing my variables based on their previous use in the field, defining my coding processes, and introducing my data sources. Additionally, I lay out the datasets assembled for the purpose of this study and explain the tentative process of my empirical analysis. Finally, I address some of the methodological limitations of my study and the general expectations of my analysis.

To put my hypotheses to the test, I utilize a series of models to examine every aspect of my hypotheses over the course of Chapter 4. I begin by summarizing my data and pulling out relevant significant correlations that carry weight in respect to my hypotheses. Next, I run a series of Chi^2 correlation tests, negative binomial regressions, and Cox proportional hazard models; then, I interpret these results in terms of the impact, or rather lack thereof, that war type has on duration of war and magnitude of spoiling. I close this chapter by reevaluating my

original hypotheses in light of my results and illustrating these findings using a brief comparative case study of two prominent civil wars within my data.

Finally, I conclude my study in Chapter 5 by offering a brief overview of my original theoretical framework and summarizing my overall findings, which suggest that it is spoiling alone, not war type, that significantly increases the duration of civil wars. I quickly touch on the methodological difficulties within this study before proceeding to highlight the implications that my results have both on future research in this field and on the general policy regarding civil war resolution and the handling of terrorism within civil conflict. Finally, I conclude by rejecting my original Polarized Identity hypothesis and offering my final thoughts on the intersection of civil war and spoiling, as well as the ways in which this overlap should be handled in future study.

Chapter 2: Review of the Literature and Theoretical Frameworks

Introduction

In order to tackle the question of interest in my study, I will begin by examining the existing literature on civil war, terrorism and ethnicity. Specifically, I review the literature on factors that affect war duration and resolution, then I focus my study on the spoiling subcategory of terrorism. Finally, I review the prominent theories in the study of civil war and ethnic saliency and further apply that to my question in order to pose my theoretical explanation and hypotheses.

Literature Review

On civil war

Given the complexities of modern civil conflict, one of the first hurdles for academics is managing to consistently operationalize crucial events. In the development of political violence as a field, much of the literature has focused prominently on how events and terms are conceptualized with distinct benchmarks to capture the target event. Civil war has been defined by the field through four basic parameters: (1) an armed conflict occurring within a single state (2) involving active participation from the incumbent government and (3) effective resistance from both sides of the conflict (4) with at least 1,000 battle deaths accumulated within a calendar year (Sambanis 2004; Small & Singer 1982). Controversy surrounding certain aspects of this definition certainly exists, particularly surrounding the death threshold and the concept of effective resistance; however, this conceptualization has established long-lasting precedence in the field and is therefore the most reliable measure of civil conflict.

Several prominent theories have emerged among scholars to explain why civil conflict occurs and how it unfolds. The theory of relative deprivation, as popularized by Ted Gurr in his book *Why Men Rebel,* quickly became a hallmark of the field in the early years. Emerging

alongside many post-colonial theories, this theory suggests that violent collective action is most likely to occur when a group or individual believes they are receiving less than they should reasonably expect from the circumstances of the state (Gurr 1970; Mason & Mitchell 2016). Subsequent scholars would later expand on this theory, using newer terminology of vertical and horizontal inequality. "Vertical inequality" has been used to refer to the inequalities between individuals among a polity, whereas "horizontal inequality" refers to the broader context of inequality across groups and communities within the polity. Leaning on the theoretical foundations of relative deprivation, the literature has suggested that high levels of horizontal inequality combined with social polarization are positively correlated with the outbreak of intrastate conflict (Ostby 2008).

Other prominent theories of civil war onset are the greed and grievance hypothesis set forth of Paul Collier and Anke Hoeffler. The greed theory of civil war considers rebellions to be similar in nature to organized crime, particularly in that they profit off of the extortion of another party. Through this lens, the theory puts forward an examination of the cost-benefit analysis of violence, looking particularly at potential for start-up funding, potential gains of victory, and the access to diaspora or other non-domestic sources of aid (Collier & Hoeffler 2004). Closer in nature to relative deprivation, the grievance theory suggests that rebellions may be similar to protest movements that have taken a different path of progression, focusing on the presence of grievances such as communal conflict, political exclusion, and previous history of conflict and violence. The consensus among scholars has been that these perspectives are most applicable when utilized together; "greed rebellions need to generate grievance for military cohesion, [and] grievance rebellions might be driven to predation to raise finance" (Collier & Hoeffler 2004).

Moving beyond the onset of civil conflict, the literature generally agrees that civil wars tend to be longer, more pervasive, and more difficult to end than interstate wars. Trends in organized violence associated with civil war have shown that the number of fatalities related to organized violence have dropped for several consecutive years while the number of active conflicts continues to increase, with this puzzling trend attributed to the fact that modern civil conflicts are becoming harder and harder to solve (Pettersson, Högbladh, and Öberg 2019). Scholars have posited that the increasing challenges in solving intrastate conflict may be related to the increase in explicit religious claims involved in wars and the increase in the internationalization of such wars.

Other findings have also suggested that low per capita income, high levels of inequality (measured by the Gini coefficient), and moderate ethnic divisions (measured on a scale of 1 to 100) are all positively correlated with war duration (Collier, Hoeffler, and Soderbom 2004). Other studies have advanced that the perceived cost of fighting is an additional influential factor in determining the duration of war, suggesting that wars last longer when at least one warring party perceives that cost of war to be relatively low and when they perceive their likelihood of winning optimistically (Cunningham 2017). The literature has also found that weaker states may be more prone to extended war duration (Cunningham 2017). A variety of explanations for the troubling prolongation of civil wars exist, however, there is not currently a firm consensus on what factors are most influential in triggering the causal sequence of war duration.

When civil wars do finally end, it is often through a negotiated settlement; thus, when factors within the war, such as high levels of fractionalization or multiple rebel groups, make bargaining more difficult, negotiation becomes less likely and war duration increases (Cunningham 2017). Scholars have identified three approaches to civil war which are likely to

impact the peace process: rebellion as investment, rebellion as business, and rebellion as mistake. Rebellion as investment refers to an approach to conflict in which the critical incentive of rebellion in the post-conflict payoff, making this the sole approach of the three that is receptive to negotiation. Rebellion as business, in which the incentive is pay-off during the conflict, and rebellion as mistake, in which one side's military optimism blocks receptivity to any potential agreement, are both antagonistic to negotiation and tend to result in prolonged duration of war (Collier, Hoeffler, & Soderbom 2004).

Additional studies have examined civil wars from a rational choice perspective, advancing a utility model which looks at the choice between seeking immediate settlement or continuing to fight. Findings have suggested that a negotiated settlement becomes less likely the larger a government's army becomes and more likely the longer the war goes on, while other variables such as potential payoffs and the costs of war had no impact (Mason and Fett 1996). Other studies have found that when war extends beyond the first year, the overall likelihood of a negotiated peace in subsequent years tends to decline (Elbadawi & Sambanis 2000). Conventional wisdom would suggest that this decline in likelihood of a negotiated peace after the first year of conflict stems from the cost benefit analyses of the warring parties. After the first year of conflict, parties may perceive more potential gains from a military victory or continued fighting than they would from a negotiated peace. Additionally, rebel groups may grow more radicalized or gain access to additional resources over the course of that first year that would lower the costs of war. There are several plausible arguments that may explain why the likelihood of settlements decreases after the first year of conflict, but the field has yet to lower the magnifying glass on this particular issue in order for us to substantiate any one theory.

The current literature has yet to put forth a concise, singular understanding of how and when civil wars end, but even disputed findings have consistently held that civil war is durable and evasive to resolution across all contexts. Even the causes for that finding are largely argued in the field; however, there is some semblance of agreement regarding what variables exacerbate the duration of civil war, with third-party intervention rankings at the very top of that list.

Across the literature, third party or foreign intervention has been defined as any and all involvement, including humanitarian aid, monetary support, conflict management, or military involvement, of a third party outside of the state and its participating combatants or rebel groups (Balch-Lindsay, Enterline, & Joyce 2008; Mason & Mitchell 2016). Beyond this general understanding, scholars have further established a typology of intervention: (1) those that attempt to influence the structure of the relationship among combatants and (2) those that attempt to manipulate the information that these actors hold (Regan and Aydin 2006). Following this typology, the argument emerges that the first type will increase war duration, while the second will decrease duration, with the findings suggesting that diplomatic interventions increase the likelihood that the conflict ends in the next month, but the effort of diplomacy degrades over time (Regan and Aydin 2006). Regardless of what the effect of intervention is, the literature suggests that its effect degrades over time.

In terms of what the effects of intervention are, several important studies have established several notable trends in the way intervention unfolds over the course of civil wars. The field widely accepts foreign intervention as a factor that inherently prolongs the duration of war, with this finding corroborated in several studies (Elbadawi & Sambanis 2000; Mason & Mitchell 2016; Narang 2014). More specific findings have suggested that there may be further stipulations regarding the effect on balanced and imbalanced intervention. In a comprehensive study

regarding the intervention process, the outcome of civil war was found to vary based on the side supported by a third party, concluding that (1) one sided intervention leads to higher likelihood of military victory for the supported party, (2) one sided support for the incumbent government increases likelihood of negotiated settlement, and (3) dual sided intervention decreases likelihood of both negotiated settlement and military victory, thus, increasing war duration (Balch-Lindsay, Enterline, & Joyce 2008). Findings have also suggested that when ethnic conflict and intervention coexist, the duration of war increases significantly (Elbadawi & Sambanis 2000).

The literature tells us in significant uniformity that intervention is precarious even under the best conditions, with dozens of variables impacting the success – or lack thereof – of an intervening party. We know very little about how and why the processes of foreign intervention behave in civil wars and we know even less about how intervention interacts with other elements of civil war including war type and war related terrorism. In order to best understand the way that outside actors impact the dynamics of intrastate warfare, it is essential to first understand the domestic factors that influence and extend duration, beginning with the effect that identity based conflict can have, particularly as it interacts with other variables.

On terrorism and spoiling

While typically studied as an independent concept within the field of political violence, much research has suggested that terrorism and civil war may be much more intertwined than the scholarship reflects. Recent data has shown a significant degree of overlap in occurrences of terrorism within ongoing civil wars, as well as notable occurrences of terrorism immediately preceding or following civil wars (Findely and Young 2012). This suggests that, in order to foster a holistic understanding of both terrorism and civil war, the field as a whole may need to converge in its research and exploration of this complex interaction.

Within the field of political violence, terrorism has been broadly defined as "the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation" (GTD Codebook 2019). In order to be officially coded as a terrorism event, the event must intentional, entail a threat or act of violence, and be committed by sub-national actors. Further scholarship has identified five primary goals of terrorism, including regime change, territorial change, policy change, social control, and status quo maintenance, and further divided the broader category of terrorism into subdivisions based on the target and goal of the event (Kydd and Walter 2006). Terrorism targeting an enemy typically falls into the category of either attrition or spoiling, whereas terrorism employed against the actor's own population is categorized as intimidation, outbidding, or provocation.

Looking closer at each of these strategies, it can be argued that acts of terrorism serve at least partially as a master class in persuasion. Attrition involves a group inflicting serious and severe costs on the enemy in order to present a credible threat and persuade the targeted enemy that the terrorist group is strong, resolute, and unyielding, often resulting in an unwinnable battle of wills (Kydd and Walter 2006). In a similar strain, spoiling involves staging an attack in order to deter a potential peace deal by playing on the re-existing mistrust between moderates at the bargaining table (Kydd and Walter 2006). This strategy operates by convincing the opposition that the moderates seeking peace will not be able to keep their own followers in check reliably enough to uphold the peace deal. Both of these strategies seek to persuade the opposition that the group utilizing terrorism has more power and influence than the may realistically possess.

Turning to the strategies that target the actor's own group, this assumption of inherent persuasion generally holds. Intimidation is typically understood as a strategy of deterrence, in

which a group uses threats and acts of violence as costly signals to the power that the group has to punish any dissent (Kydd and Walter 2006). Not only does this strategy work to persuade the population of the group's resolve and commitment, and to suggest that the government is powerless to intervene. On the other hand, outbidding occurs when there are two competing groups, and the population is unsure which would best serve its interests. A group may use a terrorist attack to signal that they have greater militant strength and are more capable of pursuing the greater conflict than the opposing group. Finally, provocation is typically used to shift the support of the population away from the incumbent government and to the rebel group wherein the rebel group uses violence to goad the government into a militant response that will inevitably harm civilians (Kydd and Walter 2006). Much like the strategies targeting the enemy, these strategies also work as tactics of persuasion and are utilized by groups in a variety of contexts.

The literature on civil wars and terrorism has suggested that these two forms of political violence overlap quite significantly, implying that we may very likely see several of these strategies at work in any given civil war. However, when it comes to examining the specifics of civil war resolution, spoiling offers a significant amount of explanatory power in answering the question of why wars end - or rather, why they don't.

As previously mentioned, spoiling refers to an attack on an enemy with the intent of "spoiling" or ruining a potential peace deal (Kydd & Walter 2006). The goal in a spoiling event is to provoke a wave of distrust between the moderates that are pursuing a settlement. The rationale of spoiling operates under the assumption that parties will be hesitant to step into an agreement when they are suspicious of the opposing party's ability to uphold the agreement, and that this suspicion and lack of trust will eventually reignite conflict. Groups that employ terror typically utilize this strategy to assert their own power to their all sides of the conflict by

signaling that they are ready and willing to pursue further violence given the opportunity. This culmination of this process is the persuasion of moderates on both sides of the conflict to step back from any potential negotiations, reigniting conflict (Kydd & Walter 2006).

In the context of civil war, scholars have conceptualized spoiling at an action of violence from one side of a conflict that has potential to affect the outcome of the peace process (Findley & Young 2015; Mason & Mitchell 2016). In these situations, warring parties are often referred to as "potential spoilers," indicating that any side of a civil conflict could utilize this technique, regardless of civil war type. This further implies that, the more parties or rebel groups are present in a conflict, the more potential spoilers there are in that particular context, particularly if they are not all included in any subsequent negotiation processes. In a study encompassing 241 civil war peace agreements in the post-Cold War era, it was established that spoiling events intended to thwart a peace deal are actually less common than expected and are not as successful as one may assume, with not many spoiling events posing a significant risk to the completion of the peace deal, despite the attention and publicity given to the events (Reiter 2015). This study further concluded that the actor seeking to spoil the peace was likely a key variable in the success of spoiling, finding that certain types of actors, notably paramilitaries and security forces, can pose a serious threat to peace progression. Government security forces can pose a particularly difficult threat when there are splits within elites, allowing forces within the government that have access to arms to spoil potential settlements based on disagreements with the moderates in power.

A similar study looked more broadly at the effect terrorism has on civil war peace processes and found that, while terrorism may not see an immediate effect in spoiling the peace, it can derail the peace process over time and make long term cessation more evasive (Findely

and Young 2015). Despite the suggestion that spoiling may not be as successful as one would expect, the literature has consistently affirmed that "the use of terrorism can spoil peace processes by prolonging the duration of a war hastening the time until recurrence, (Findely and Young 2015). While the data on spoiling in civil wars, let alone in ethnic civil wars, is relatively limited at the time being, the literature does provide significant evidence to suggest that spoiling is a significant indicator of a conflict that will be significantly more difficult to resolve.

On ethnicity and communal identity

The topic of ethnicity has been studied extensively across countless fields, from politics to psychology to economics, but scholars have yet to nail down exactly how this form of identity interacts with cases of political violence. First and foremost, identity has been conceived as a form of social category that is based on some form of "fundamental and consequential sameness," with ethnicity falling as a subset of this broader definition (Mason and Mitchell 2016). Ethnicity has been defined as a perception of likeness among members of a particular group, where the eligibility for membership is based on attributes of common origin, that leads the group to view others prejudicially, or as outsiders (Mason and Mitchell 2016, Blanton and Kegley 2017). The main property of these attributes, or "ethnic markers," is their inability to be changed in the short term and their visibility to other members in society. Generally speaking, they include genetic features such as skin color, hair type, and other physical features, as well as cultural or historical features including name, language, and place of birth. Furthermore, scholars have also worked to study the strength of these ethnic markers, leading to two major expectations. Firstly, stronger the ethnic markers are between rival groups, the easier it is for members of one group to be singled out and discriminated against; secondly, the strength of ethnic markers is negatively correlated with assimilation between groups and positively

correlated with conflict (Mason and Mitchell 2016). From these general characteristics comes the concept of ethnic nationalism, which refers to a group's primary allegiance and devotion being connected with their cultural, ethnic, or linguistic identity rather than the state they reside in (Blanton and Kegley 2017).

While often considered synonymous with ethnic identity, religious identity varies in that it is typically less visible, harder to identify (or easier to conceal), and easier to change in the short term. The concept of religious identity is based in the system of practices and belief in spiritual attainment by means of adhering to specific codes of behavior or established community practice (Toft 2011, Mason and Mitchell 2016). While they often overlap, the distinction between ethnicity and religion becomes more salient when the identities clash, such as in the case of Kashmiri Hindus and Muslims or in Irish Protestant and Catholics. Similar to ethnic identity, religious identity often exists transnationally, transcending the constraints of a state's borders (Blanton and Kegley 2017).

The question of where communal identity comes from has been hotly contested among scholars of sociology and anthropology in particular, with the primary arguments falling into the dichotomy of primordial origins and constructionist origins. Respectively, these theories suggest that ethnicity is either innate and fixed or that it is socially constructed by the society that one exists in; however, the literature has evolved away from this polarization, suggesting that the answer likely lies somewhere in between (Hale 2004). Prominent arguments now suggest that ethnicity, and communal identity as a whole, acts as a "social radar" for individuals, offering them a framework through which they can navigate the world as they perceive it (Hale 2004). The implication here is that, while identity may hold innate importance at the individual level, is likely situational and ever-changing depending on the cultural and societal context. To this point,

the argument has been posited that ethnicity gains salience in a society when the society itself emphasizes it; thus, if a conflict were to arise between ethnic groups, those respective identities may become more and more important as they become the center of everyday life within the conflict.

This complex framework of communal identity leads to the question of how to capture such a subjective variable in a manner that is relatively consistent and appropriate for academic study. Scholars typically use a wide variety of measures in order to capture polarization and fractionalization of identity within a current population. Early scholars relied primarily on measures of "ethno-linguistic fractionalization," or ELF, which examines ethnic, linguistic, and religious diversity or fractionalization within a population, focusing additionally on the levels of inequality in resources or power distribution among different groups (Campos and Kuzeyev 2007, Mason and Mitchell 2016). This measure continues to be one of the main indicators of significant ethnic heterogeneity, resulting in consistent findings that very homogenous societies with little to no diversity and very diverse societies where no one group constitutes a major or can easily dominate others consistently show a lower risk of civil conflict (Mason and Mitchell 2016). Despite the consensus in the field surrounding this general finding, the ELF measure has long been criticized for being a rather static look at fractionalization that does not accurately account for the variations in the political salience of different identities. Several additional datasets have been created to help measure this concept, including the Minorities at Risk project, which examines cases wherein the identities in question are already subject to mistreatment, and the index of politically relevant ethnic groups, which measures how far the distribute of groups is from a bipolar distribution and is able to better capture the degree of polarization (Mason and Mitchell 2016). Overall, the scholarship is in agreement that fractionalization is best understood

through a multitude of variables such as cultural difference, income and resource inequality, geographical separation, as well as several other factors. These evolving understandings of identity and ethnic fractionalization can create an interesting composite image, revealing certain causes of internal conflict and pinpointing potential roadblocks to resolution.

On communal conflict and civil war

When looking at the intersection of identity polarization and civil conflict, the entire picture tends to get a bit blurrier. While the prevalence of civil war since the end of WWII has been thoroughly established, the vast majority of civil wars in the post-Cold War era have been classified as "communal" civil wars, wars of identity; in fact, some accounts suggest that as many as 64 percent of all civil wars fought in the past several decades have been fought along ethnic lines (Mason and Mitchell 2016). This trend has been explained primarily through two major theories: the aforementioned theory of relative deprivation and the clash of civilizations (Mason and Mitchell 2016, Blanton and Kegley 2017). While the condition of relative deprivation can and does arise from situations removed from communal identity, it would logically follow that if a state allocates resources or power differently across groups, one ethnic group could perceive themselves as "relatively deprived" compared to a rival group. Further scholarship has supported this argument, suggesting that ethnic conflict is rooted in social psychology of group dynamics and entitlements that evoke strong emotional reactions as rival groups dispute their relative superiority within a state or geographical region (Horowitz 1985, Mason and Mitchel 2016). On the other hand, the clash of civilizations argument, as developed by Samuel Huntington, suggests much more plainly that the existence of multiple cultures, ethnicities, or religions occupying a single space would be inherently contentious regardless of resource allocation (Mason & Mitchell 2016, Blanton and Kegley 2017). This theory has

garnered much less support in academia, as most scholars have found that diversity in and of itself is no more prone to conflict or civil war than social homogeneity (Carment & James 2000). On the contrary, studies have found that states at risk of ethnic conflict must is not affected by ethnic diversity per se, but rather by the levels of "ethnic dominance" within a state, where a clear imbalance of power can be perceived between groups (Carment & James 2000, 176).

Returning to the previously discussed theories of greed and grievance, some scholars suggest that ethnic civil wars are instigated by three causal mechanisms that revolve closely around rational choice theory. This argument suggests that modern rebel groups are more likely to organize around identity because polarized ethnic groups are (1) more likely to experience grievances, (2) better able to mobilize quickly given that they already have organized institutions in place, and (3) more likely to be restricted in the bargaining capabilities (Mason and Mitchell 2016). Combining the previous models of grievance theories and rational choice, this framework helps us to examine the puzzle of ethnic and communal conflict more holistically.

Beyond those general arguments of why ethnic conflict is more prominent generally, the literature has also identified several theories regarding why ethnic conflict occurs within the context of civil war: primordial, instrumental, constructionist and security dilemma (Oberschall 2010). As previously discussed, the primordial and constructionist identity arguments, suggest that ethnic identity is either fixed and will inevitably yield conflict or socially constructed (i.e., not fixed), but is an important building block of community that can be utilized by both the members of the group and politicians alike to create ingroups and outgroups when advantageous. The instrumental theory argues that, unlike the former argument, ethnic identity is formed and invoked by state powers in order to rally support or accomplish political goals. Finally, the security dilemma, a popular realist theory of international relations, argues that when a system

exists in a state of anarchy, or one without central leadership, the actors in the system will be more likely to act offensively in an attempt to protect themselves from the other preemptively. In this context, this theory suggests that when the state is collapsing or ineffectual, ethnic groups will find themselves in competition over resources and power, making conflict significantly more likely.

Looking more concretely at what communal civil war looks like off the pages of academic theories, the literature tends to be slightly divided on just how impactful identity is in navigating the war process. Some studies have shown that, when controlling for per capita income, more ethnically or religiously diverse countries have been no more likely to experience significant civil violence, indicating fractionalization is not a good predictor of the inception of civil war, but rather that there are other conditions that trigger war including poverty, political instability, rough terrain, and large population (Fearon and Laitin 2003). In a similar strain, more recent scholarship has argued that it is not ethnicity itself, but the interaction of ethnicity and domestic politics within a state that influence the duration and processes of civil war (Wucherpfennig et al 2012). This nuanced understanding suggests that ethnic conflicts are not prolonged due to rigid ethnic loyalties are rigid or increased devotion to the collective campaign from within the ethnic groups, but rather that intrastate conflicts last longer when they are infused with ethnonationalist sentiments and grievances (Wucherpfennig et al 2012). Thus, the politicization of ethnicity and identity as whole is likely the crucial point of interaction in unpacking how civil war unfolds.

In addition to the complexities of the ethnic civil war interaction, scholars have posited that interaction likely behaves differently in these conflicts as well, from the decision of a third party to intervene at all to the outcome of said intervention. In explaining why intervention

occurs in ethnic wars, scholars have identified both domestic and international factors that influence the actions of third parties. Domestically, factors such as vulnerability of the warring parties, ethnic ties, diaspora politics, and regime type have been identified, while the international factors include the international system's need to balance or bandwagon a specific power, regime type norms, socialization, defensive positions on the part of intervening states (Paquin and Saideman 2008). Additional findings have concluded that high levels of ethnic dominance and low levels of institutional constraints within the state, coupled with high levels of ethnic affinity from the third-party increase likelihood of intervention (Carment and James 2000, Cetinyen 2002). Scholars tend to agree that diaspora politics and ethnic ties from the third party to a warring party are the key variables impacting the likelihood of intervention, largely on the assumption that stronger ethnic ties yield stronger rebel groups, lowering the cost of interventions (Cetinyen 2002). In looking at the outcomes of intervention, studies have suggested that intervention early on in a conflict can work to mobilize and shape the stances taken by ethnic groups and can lead to dissenting groups to become more radicalized (Paquin and Saideman 2008). While it has been established that intervention increases war duration in all civil war types, this would suggest that this mechanism may have a greater effect in cases of ethnic or communal civil war.

The literature has consistently found deep complexities in the realm of communal conflict, with disagreements arising over just about every potential hypothesis from the origin of ethnic conflict to the best practices in resolving it. While this reveals a clear lack of consensus among scholars, it also points to a larger issue. Ethnic civil conflict has yet to be studied with enough depth and nuance to fully understand how it unfolds, how it interacts with other variables, and how to resolve it.

Critique of the Literature

While the literature has a vast understanding of civil war and terrorism as separate fields of study, there has been little research on the manner in which the two interact. We have a robust theoretical background surrounding the intentions of spoiling, the origins of communal conflict, and the factors influencing the processes of communally based civil wars, but very little data on the ways that these variables impact each other as well as the outcomes of the civil conflict.

Many disagreements among academics in this field indicate a clear gap in the research regarding why different civil wars vary in their processes. Scholars of political violence work with multiple theories that explain the beginnings of civil war, however, we have very little to work with when investigating how they end, let alone the conditions that impact the effectiveness or likelihood of negotiations and peace settlements.

As civil wars continue to be the primary form of global conflict seen today, there is a serious need to understand why civil wars proceed in the manner that they do. It is crucial to understand not only why wars begin, but also why the last, what drags them on, and what methods are effective in reducing war duration. By further investigating the overlap between civil wars and terrorism, we can begin to answer many important questions regarding the dynamics of intrastate conflict and develop novel implications for relevant policy to best address the prevalence of civil wars.

Theory

Over the course of this study, I aim to initiate the closing of two major gaps in the literature surrounding the processes of ethnic civil wars. First and foremost, I aim to contribute to the convergence of the fields of civil war and terrorism. Additionally, as the field develops in its understanding of best practices of resolving intrastate war, it is crucial that we cultivate a

thorough understanding of the processes and dynamics at work in ethnic civil wars, which have rapidly become the majority of intrastate wars across the board. Closing these gaps in our understanding of the overlap between intrastate war and terrorism as well as the dynamics of ethnic civil wars with allow for a more holistic view of civil war as a whole, particularly as we think about how to resolve these remarkably pervasive conflicts.

Prior theories of civil war have focused largely either on the inception of the civil conflict in and of itself or the point at which it ends, often neglecting the processes that can influence the resolution process. This does not necessarily mean that new theories should be developed to explain the processes of resolution; on the contrary, I argue that the same theories used to explain the origins of civil war as a phenomenon can easily apply to the process by which war culminates - or fails to culminate - in a peaceful resolution.

My argument is based first and foremost in contemporary theories of ethnic saliency that suggest identity becomes more salient both to groups and to individuals when the society focuses on that particular identity category. This suggests that identity based categories become more salient in cases of identity based civil wars than they would be in non-identity based wars. This saliency would serve to highlight and emphasize the differences between groups that otherwise may not experience much conflict, resulting in a heightened "us versus them" dynamic within the warring parties of the conflict. Thus, when faced with spoiling in the midst of an identity based conflict, we can expect this already heightened awareness of identity to become even more sensitive and salient. This increased saliency plays into the intersection of two additional theories that interact to construct my argument: relative deprivation and the security dilemma.

As previously explained, relative deprivation refers to when a group perceives a discrepancy between what they have and what they should realistically be able to achieve in their

condition. This theory is largely entangled in the psychology of collective action, suggesting that the sense of relative deprivation in people creates a feeling of frustration which will grow over time until ignited by an incident that serves to translate that frustration into outright anger that can quickly become violent collective action. Ethnic or identity based groups are arguably especially susceptible to this reaction as they already have the resources, through community organizations, churches, neighborhoods, etc., to mobilize insurgency. Meanwhile, the security dilemma refers to the situation that communal groups find themselves in when the government is ineffectual, forcing them to compete with other groups for resources, power, and safety. This theory suggests that groups in this situation will find themselves in a positive feedback loop of conflict, as both sides of the conflict will be acting preemptively and on the offense in efforts to protect themselves from the "other." This description of a conflict loop provides a remarkably successful predictive model for many of the ethnic civil wars seen in the past fifteen years.

Finally, the terrorist strategy of spoiling plays a crucial role in my theoretical argument based on its ability to reactivate the issues that originally triggered the conflict and simultaneously exacerbating or reigniting feelings of relative deprivation and the perception of the security dilemma. The literature has typically focused on the impact that spoiling has on moderates that are active in the peace process, however, I am suggesting that the effect of any spoiling event is much broader than just the negotiating table. While the primary goal of a spoiling party may be to breed distrust among moderates and deter a resolution, the audience of spoiling is much wider than just a handful of policymakers. The population as a whole is also witnessing and may even be victim to the spoiling event. This alone suggests that the resulting distrust and suspicion created by spoiling would be felt much wider than the moderates but would also affect the population at large. Should this theory hold, a spoiling event should even

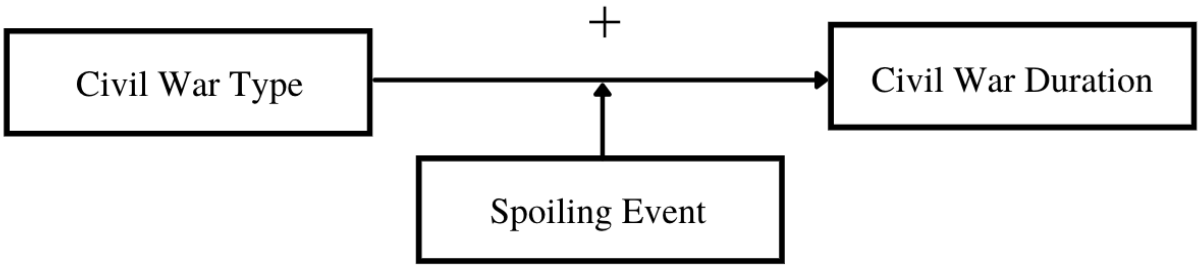
result in civilians being more hesitant to support and uphold any potential peace deal. While the targets of spoiling might be narrow, the impact ripples into the entire conflict.

I argue that, beyond the explanatory power these two theories have in describing why civil wars begin, their effects stretch across the course of the war, largely affecting the outcome of any possible resolution, particularly when we account for the presence of spoiling. The security dilemma is characterized by a lack of trust for other actors in the system and a strong incentive to remain armed and on the offensive, factors that would likely be amplified in the wake of a spoiling incident. Regardless of who the spoiling party is, the occurrence of spoiling will serve to make all negotiating parties suspicious of their rivals, reinforcing the lack of trust characterized by the security dilemma and re-emphasizing the relative power and "otherness" of opposing groups. I argue that this generalized assumption of how spoiling will impact a conflict becomes much more prevalent in cases of identity based civil war because the heightened saliency of identity will amplify the effects that spoiling has in reactivating the security dilemma and the sense of relative deprivation among the general population.

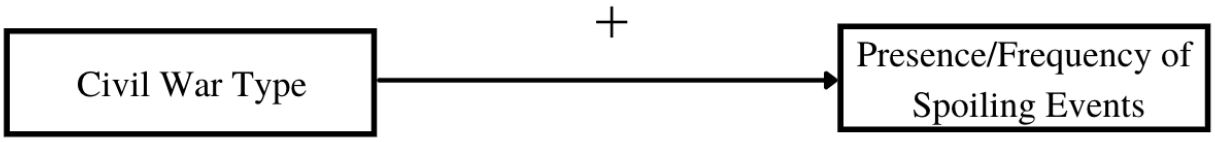
By adapting the theory of relative deprivation and the security dilemma, my argument holds that ethnic civil wars will be particularly resistant to resolution when spoiling occurs through a causal sequence that I have referred to as the Polarized Identity hypothesis. This hypothesis holds that if a civil war can be characterized as identity based, the warring parties will be more affected by any spoiling event that occurs, resulting in a more durable war that takes longer to see resolution.

Figure 2.1 Arrow Diagrams of Hypotheses

Hypothesis 1: If a civil war can be characterized as identity based, the warring parties will be more affected by any spoiling event that occurs, resulting in a more durable war that takes longer to see resolution (*Polarized Identity hypothesis*).



Hypothesis 2: When a civil war can be characterized as identity based, we can expect that it will experience spoiling events at a higher frequency than civil wars that are characterized as non-identity based.



Based in part on my argument and in part on the existing literature, I believe that spoiling in non-identity based civil war will not have the same effect in significantly increasing war duration. While spoiling may impact the peace process in all civil wars, the extent of its impact should be much lesser in non-identity based wars, given that many of the mechanisms that I believe trigger the success of spoiling (identity saliency, heightening security dilemma) is not as present in those cases as they are in identity based wars. Thus, we can expect that non-identity based civil wars will (a) experience successful spoiling less frequently than identity based civil wars and (b) will be able to more rapidly return to the peace process if the spoiling is successful than an identity based civil war would.

The experiences of relative deprivation and the security dilemma in which communal groups are forced to fend for themselves against opposing groups, have been found to intersect more frequently in ethnic civil wars (Oberschall 2000; Posen 1993; Regan 1996). The comorbidity of tension and opposition between polarized identity groups increases the likelihood that groups will be more defensive and less willing to compromise, even without the influence of a spoiling party. A spoiler will serve to confirm the suspicions of each combatting group, decreasing the likelihood of resolution and increasing the duration of the war. The null hypothesis states that ethnic civil wars do not experience a higher incidence of spoiling which limits the success of any attempt of resolution, thus, increasing the duration of the affected conflict.

Chapter 3: Methodology

Introduction

In order to thoroughly investigate the questions posed by the Polarized Identity Hypothesis and by the interaction between civil war and spoiling as a whole, I plan to utilize a large *n* study The field of political violence and civil war scholarship have established a general precedent that the large *n* study is the primary method of establishing a statistically significant connection between two variables, further allowing for more theorizing from that baseline. The large *n* study has been used vastly as a reliable method of evaluating trends and causal sequencing across all known wars through objective coding of variables that allows for the observation of an explanatory variable while also controlling for other variables that may be unique case to case (Narang 2014; Regan 1996; Sambanis & Elbadawi 2000; Werner 2000). This methodology also allows for the controlling of other variables to isolate the variables of interest, further justifying the application of the general results of the study to specific cases, regardless of most of the other variables at work.

This study will be framed by a civil war-year unit of analysis, looking at the temporal domain of all years between 1970 and 2014, and a spatial domain of all countries experiencing a civil war during that time. My population will include all civil wars occurring within this time period, allowing the study to verify the distinction found in the literature that identity based wars are more durable and are generally more difficult to resolve than non-identity based civil wars (Cunningham 2017; Johnson 2015; Sambanis & Elbadawi 2000). By limiting my sample temporally, I hope to root out most of the internationalized/proxy wars of the Cold War from my analysis, as their dynamics are significantly different and would not represent a valid test of the Polarized Identity hypothesis.

Study Design

Independent Variable

The independent variable in this study is civil war type, coded dichotomously with 1 indicating an identity based civil war, and 0 indicating a non-identity based civil war. Following much of the literature, civil war will be conceptualized as a conflict occurring within a single state that involves the state government, can be characterized by effective resistance from both sides, and amasses at least one thousand battle deaths within a calendar year (Sambanis 2004). I will be capturing the data for this sample from the Correlates of War Project, namely from the COW Intra-State War datasets (Sarkees and Dixon 2020).

In order to distinguish between identity and non-identity based conflicts, I will be supplementing the COW data with the Political Instability Task Force's State Failure Problem Set data. This data is composed of several datasets that identify conflicts as ethnic, revolutionary, regime changes, or genocide. For the purposes of this study, I am conceptualizing identity based civil war as a conflict that meets the general qualifications of a civil war, but where the conflict (1) revolves around the opposing identities of communal groups (ethnic, religious, linguistic, etc. and (2) the parties operate by making claims for the communal group's collective interest (Regan 1996). Any civil war that does not meet that criteria will be coded as non-identity based. By relying on multiple datasets and definitions, I hope to make this variable as nuanced and reliable as possible while also cultivating greater validity in its application to future studies.

Conditional Variable

The presence of spoiling within the civil wars is a conditional variable in my model, coded 1 for presence and 0 for absence of a spoiling event, regardless of which party was the "spoiler." In order to fully capture the impact of spoiling, I will also be collecting data on how

many spoiling events took place over the course of each conflict, as well as within each country-year. Once again relying on the literature, I will be conceptualizing spoiling as "various forms of behavior, such as terrorism," which aim to "negatively affect the course and the outcome of the peace process" (Findely & Young 2015). Data on spoiling events will be retrieved directly from the data of Global Terrorism Database (GTD 2018). As the most expansive terrorism database, the GTD has been used rigorously in the literature, establishing legitimacy and ensuring that my captured data will be consistent with other studies on the subject.

In order to ensure the events analyzed are capturing the form of terrorism that I aim to study, I searched the database for each country experiencing civil conflict, for every year of the conflict. Events that I coded as spoiling were those that were targeted at the government, whether general or diplomatic, military, non-state militias, and violent political parties. These parameters were meant to isolate terrorism events that would have an impact on the trust between warring parties consistent with the literature's understanding of spoiling. While this method of data collection will likely result in a somewhat conservative perspective regarding the amount of spoiling occurring from case to case, it should provide a sufficient examination of the variables to yield a strong conclusion regarding the role spoiling plays in the relationship between civil war type and duration.

Dependent Variable

As previously mentioned, the dependent variable of interest here is the duration of civil war. The most straightforward variable within this model, this variable examines how long a civil war endures from start to finish, as well as how long the conflict endures after a spoiling event. Relying again on the precedent set by Findely and Young, the duration of war will be operationalized through two measures. First, will be the end of civil war, coded for each year

with a 1 when civil war ends, and a 0 when it does not. Second, is the measure of war recurrence, which will also be measured dichotomously with a 1 when war recurred and 0 when it did not. I coded a war as recurring if it appeared to be a continuation of a prior conflict, involving the same actors, issues and war type. Both measures of this variable will be captured through the data from the Correlates of War Interstate War dataset.

Controls

Based on the control variables of similar studies, I will be controlling for population, GDP per capita, ethnic and cultural diversity, foreign intervention, regime type, number of parties to the war, history of civil conflict, and neighboring violence.

Data on population by year will be drawn from the World Population Growth dataset developed by Max Roser, Hannah Ritchie and Esteban Ortiz-Ospina, spanning from 1800 to 2019. This dataset offers the most expansive measures of population across time, drawing from Gapminder data, HYDE, and UN Population Division estimates, yielding a reliable and broadly accepted measure. Similarly, I will be drawing data measuring GDP per capita from the World Bank spanning from 1960 to 2019. Sourced from the World Bank national accounts data and the OECD National Accounts data, this dataset has amassed broad credibility and reliability across academics of political science as well as countless other fields. Given the disruptive nature of conflict, there are some small gaps in this data for states at war, given that it was not possible to capture economic data for those years. While this does weaken the control, I believe that the rigor of the controls I have included should minimize the effect.

Unlike the uniform acceptance of the aforementioned sources, scholars of political violence vary widely in their measure of diversity. Ethnic fractionalization has proved difficult even to define, let alone to universally measure. Given the context and purposes of my study, I

aimed to capture the most holistic view of diversity possible, and I will be utilizing James D. Fearon's appendix of ethnic fractionalization and cultural diversity scores (2003). Supplementing data from the *Atlas Narodov Mira* with a novel index of ethnic fractionalization, Fearon developed two separate scores for each state, one for ethnic fractionalization and one for cultural fractionalization. Scores range from 0 to 1, with 0 indicating complete homogeneity. This dataset was constructed in 2002 and captured this measure at that point in time, so I will not be able to vary the measure from year to year. While a year-by-year measure would be ideal, the literature suggests that ethnic fractionalization tends to be slow changing; given that this particular ELF measure comes from the approximate median of my temporal boundary, I believe that it should be sufficient as a control in the context of my study. While this remains an imperfect measure, this report aims to ground the conceptualization and operationalization of diversity in the groupings that are apparent within states, offering a more robust measure as a result.

Data on regime type will come from the Polity Project's Polity5 data on political regime characteristics (Marshall 2020). Spanning from 1800 to 2018, this dataset assigns scores based on the level of democracy and autocracy, as well as a composite score from 10 to -10, representing absolute democracy and absolute autocracy respectively. This source has been largely accepted in the study of international relations and comparative politics as a reliable and valid measure of regime type. Similar to the measure of GDP, there are small gaps in the collected data regarding certain state's regime type. I will be filling these gaps by averaging the regime score of surrounding years in order to compensate for this data loss.

For the sake of consistency, the measures of foreign intervention, and history of war will all be drawn from the Correlates of War Intra-State War and State Participants datasets. Foreign intervention will be measured dichotomously, with 0 indicating no intervention or

internationalization. A state's history of war will be a simply dichotomous variable, with 0 and 1 representing presence and absence respectively. For the purposes of this study, I was interested only in a relatively recent history of civil conflict; therefore, history of civil war was only coded as 1 if a prior civil conflict had occurred in that state from the beginning of the 20th century onward.

Data for the number of warring parties and neighboring violence will be pulled from the Uppsala Conflict Data Project. The number of warring parties will be a simple count variable based on the involved parties identified in the dataset for each war by year of the conflict. While the measure of warring parties is an imperfect one, especially for more internationalized conflicts that make it more difficult to determine exactly how many actors are involved, this dataset will offer the closest approximation that will remain consistent with the data for the population of civil wars in this study. Finally, the variable of neighboring violence will be dichotomous, with 0 and 1 representing presence and absence respectively. This variable is designed to capture any type of intrastate violence occurring in states directly on the border of the state at war, based on the assumption that any neighboring violence could have major impacts on the domestic politics within the state.

The data sources utilized for all the aforementioned variables have been widely used throughout previous studies in the civil war literature, and thus have established credibility in the field. Particularly, by using the data established by a previous study focused on civil war and spoiling, I can be sure that I am looking at the same cases that have already been used to successfully establish causal connections within the same variables I am examining. Given that there is no single data source that captures spoiling, I have worked to ensure that my method of capturing and coding spoiling is as straightforward and reliable as possible. By relying on data

already established within the literature, I believe that this study will yield valid and reliable results that can be replicated in the future.

Datasets

Given the complexity and ambiguity of the relationships at play here, I wanted to ensure that my data would be robust enough to capture any and all possible correlations. The literature examines the impact of spoiling almost exclusively as it relates to specific moments of negotiations or developing peace treaties, limiting the scope of study to the immediate effect of a single event (Findley & Young 2015). While this previous scope of study is undoubtedly valuable in the context of the literature on terrorism, my question is interested less in the immediate impact of spoiling and more concerned with the way that spoiling impacts the broader dynamics and mechanisms of civil wars over their full duration. In my work to address my question and hypotheses, I need to examine the dynamics of wars not only immediately as spoiling occurs, but also in their entirety. In order to best accomplish this, I plan to develop two datasets that will allow me to examine the variables at two critical units of analysis.

My first dataset, titled *duration*, will examine all civil wars with their onset between 1970 and 2014 with a conflict unit of analysis. In this dataset, duration will be measured as a count reflecting the total number of civil war years; the coding for war type will be dichotomous while spoiling will have both a dichotomous measure of presence as well as a count measure reflecting the approximate total number of spoiling events across the conflict as a whole. Given that this dataset will not examine the conflicts year by year, some of my control variables will not be applicable, as they vary considerably from year to year and an average of the total years would not yield a meaningful representation of the variable. The controls included in this dataset will be

ethnolinguistic fractionalization, measured on a scale of 0 to 1, and intervention, history of civil war, and neighboring violence, which are dichotomous measures of presence or absence.

My second dataset, titled *interaction*, will look more closely at the variations in conflict dynamics in real time. This dataset will examine the same civil wars identified in the previous data at the country-year unit of analysis. Unlike the previous dataset, however, duration of war will need to be measured at a dichotomous variable rather than account. Here I'll employ the durability measure, which will look at whether a war was durable within that particular year with 1 indicating a durable conflict and 0 indicating that the war was no longer durable. The coding of war type and spoiling will remain the same, with the slight distinction that the number of spoiling events will now only refer to those occurring within the specific year. Furthermore, this unit of analysis will allow for the inclusion of all my previously set control variables.

Empirical Analysis

To achieve the maximum robustness in the context of this study, I will be employing several statistical models to illustrate the relationships of interest. First, I will be looking at the correlational relationships between all the variables within my *duration* dataset in order to gain familiarity with the data and examine any immediate trends or correlations of interest. This will also begin to give me an idea of the kind of relationship at play between war type, spoiling and duration. Following this initial look at the data, I will be employing a series of count model regression in order to establish a link between spoiling and total war duration. These models will allow me to examine the impact that war type and spoiling have on the duration of civil wars, both as individual variables and as they interact, while also allowing me to look at the impact of both the presence and amount of spoiling. I will also be utilizing a chi-square test to examine whether there is a correlation between civil war type and the likelihood of spoiling. While this is

not necessary for my argument, this connection would allow for a more holistic discussion of the interaction between civil war type, spoiling, and war duration.

After establishing the general relationship at play, I will be utilizing a survival model with a country-year unit of analysis in order to fully examine the causal direction of the relationships between the variables of interest. This model will measure the effect of spoiling based on whether or not the conflict ends in the year following the spoiling event. Duration will be a lagged and dichotomous variable, with 0 indicating the end of conflict and 1 indicating either a continued conflict or the recurrence of conflict that had ceased.

Limitations of Study

While I have attempted to ensure that all the variables in this study are comprehensive and thoroughly operationalized, the ambiguity of many of these concepts is the greatest limitation of this study. The criteria for many of these variables, including identity based war and spoiling, is still largely disputed among experts in the field and it continues to be a challenge to find the best practices in capturing these variables. The field has evolved and continues to develop better ways to think about and capture our variables of interest. I have attempted to incorporate all the best practices in this study, maximizing the reliability of my measures and striving for as much external validity as possible.

Another major limitation is the ambiguity that comes with understanding the mechanisms of civil war in general. With consistent disagreements in the literature regarding many aspects of the way that civil wars begin, develop, and end, it is hard to say with any certainty that this study will result in an understanding of how factors cause conflict or prevent its resolution. Additionally, the vague nature of many of my variables results in some difficulty in just coding them consistently. Given the novelty of spoiling, both as a concept and as a measurable variable,

there is a significant likelihood that I may not be capturing the full extent of what the literature would conceptualize as spoiling. This ambiguity of operationalization also makes it difficult when it comes to controlling for certain factors, such as foreign backed civil war and internationalization. My hope is that this study will at the very least be able to indicate the direction and significance of certain relationships that can then be further developed and better understood with additional study in the future.

Overall, it may be difficult for this study to immediately offer concrete, predictive findings that can be applied to policy or to pre-existing questions in the field; however, I believe that it has the potential to cultivate support for a theory that may provide a more comprehensive view of how identity based wars evolve and function differently. Even if the results of this study do not offer support for the Polarized Identity hypothesis, they will offer us insight into the factors at work in extending war duration and begin to broaden our understanding of the overlap between specific types of terrorism and civil war.

Expectations

The focus of this study revolves very closely around the success of spoiling in mitigating the resolution of civil war. Overall, I expect to find that parties to identity based civil wars experience a more potent effect of spoiling than their non-identity based counterparts. To reject my hypothesis, I would need to see spoiling having no effect or having a uniform effect across all civil war types in terms of the duration of the war or the recurrence of war, indicating that there is another variable causing the effect.

These prospective findings would open up several new questions for further investigation, namely how negotiating parties should navigate in the wake of a spoiling event in order to reduce its impact, regardless of the war type. This study presents an opportunity to close

this glaring gap in the literature, allowing the field to more comprehensively understand the processes of how civil wars end, and how civil wars interact with the broader phenomenon of terrorism. I believe that this study will begin to uncover the missing piece of the long-standing puzzle in the field of political violence of how we go about ending such bloody, costly conflicts.

Chapter 4: Quantitative Analysis

Introduction

To briefly review my methodological approach and my hypothesis, I will utilize a large-*n* quantitative regression analysis to assess the potential relationship between extended duration in identity based civil wars and spoiling. Based on the scholarship within the study of civil war and terrorism, my hypothesis follows that the effect of spoiling events on the duration of civil wars will be greater in identity based civil wars than in non-identity based wars. I will begin by running a few basic tests to describe the data and identify significant correlations between variables. Then, I will justify my selection of a negative binomial regression model to test the data at the conflict unit of analysis, interpret the subsequent results, and discuss some of the implications these results will have on my hypothesis. Finally, I will utilize a hazard model to investigate the country-year unit of analysis, interpret the results, and evaluate my overall findings in relation to my hypothesis.

Descriptive Statistics and Correlations

Table 4.1 Conflict Descriptive Statistics

	Mean	Std Dv.	Min	Max
wartype	0.571	0.497	0	1
dury	4.575	6.938	0.01	42.88
spoilingnum	151.694	423.441	0	3241
ELF	0.574	0.249	0.078	0.933
intv	0.429	0.409	0	1
history	0.789	0.389	0	1
neighbors	0.816	0.389	0	1

Within my temporal limitation of 1970 to 2014 imposed by the available data in the GTD and the Correlates of War project, the study consisted of 147 observations with a unit of analysis of civil war. Table 4.1 depicts the full descriptive statistics for this initial dataset. Identity based

wars made up a slight majority, with 84 identity based and 63 non-identity based wars (see Table 4.2). Duration, measured by year, showed an incredibly wide range, with several conflicts such as the Black September War in 1970 or the Hama Uprising in 1982 lasting less than a year and conflicts including the Angolan Control War and the Mozambique War lasting over forty years. The average duration sat at around 4.5 years, akin to the Anti-Khomeini Coalition War, the First Sri Lankan Tamil War, and the Second Burundi War.

Table 4.2 War Type and Spoiling Summary

	spoiling		
wartype	0	1	**total**
0	12	51	63
1	11	73	84
total	23	124	147

It is also worthwhile to note that several of the conflicts observed appear brief, but recur consistently over time, as is the case for Lebanon, Sri Lanka, and the Democratic Republic of Congo. These conflicts are each coded separately for these initial models, meaning that they are appearing here as shorter conflicts, when that may not necessarily be the case. These recurring conflicts will be of particular interest for analysis in the context of the hazard model as I can observe recurrence as a dependent variable in addition to duration.

Contrary to my initial assumption, spoiling appears to be increasingly common across all civil wars regardless of war type, with 124 of the observed conflicts experiencing at least one instance of spoiling. A simple test of correlations found no significant connection between war type and spoiling or the number of spoiling events (Table 4.3). Much like the measure of duration, the number of spoiling incidents per conflict varied widely with a maximum of 3,241 spoiling incidents and an average of 151 incidents per conflict. This measure, however, may not

be the most reliable for regression style analyses, given that it reflects the number of spoiling events as static; thus, the longer a conflict lasts, there becomes more time available for spoiling to occur. While I will be using this measure of spoiling briefly at the conflict unit of analysis, I believe that analysis of the number of spoiling events will be much more meaningful and valid at the country-year unit of analysis.

Table 4.3 Conflict Correlation Matrix

	wartype	dury	spoiling	spoilingnum	ELF	intv	history	neighbors
wartype	1							
dury	0.0143	1						
spoiling	0.0811	0.1795*	1					
spoilingnum	0.0286	0.2645*	0.1548	1				
ELF	0.0504	0.1638*	-0.0705	-0.0998	1			
intv	0.3333*	0.2213*	-0.0054	0.0414	0.1033	1		
history	0.1252	-0.0735	0.0528	0.1386	0.0231	-0.1589	1	
neighbors	0.1927*	0.1026	0.0859	0.0737	0.2228*	0.1623*	-0.0729	1

Table 4.3 depicts the correlations between all the variables that are applicable to the conflict unit of analysis, including war type as the independent variable, spoiling as an intervening variable, duration in years as the dependent variable, and ethnolinguistic fractionalization (ELF), intervention, history of war, and neighboring violence as controls. Following the expectations of the literature, duration seems to be positively correlated with the presence of spoiling, the number of spoiling events, etho-linguistic fractionalization, and intervention (Collier, Hoeffler, and Soderbom 2004; Cunningham 2017). While not within the realm of focus for this study, the results also show a significant positive correlation between war

type and intervention, as well as with neighboring violence. This could indicate a transnational element of identity based wars that may warrant further study.

To more substantively analyze this data, I used a Chi² test for the relationship between war type and spoiling occurrence using the dichotomous measure of both variables. There appears to be no significant correlation between identity based conflicts and the occurrence of spoiling. Combined with the data on spoiling showing widespread occurrence across civil wars, these findings suggest that spoiling events may be a part of the general civil war process rather than significant indicators of the war's status or severity (Table 4.4).

Table 4.4 Chi Square Analysis

	spoiling		
wartype			**total**
0	12	51	63
1	11	73	84
total	23	124	147

Pearson chi2(1) = 0.09664
Pr = 0.326

Binomial Regression Analysis

Given the operationalization of variables in this dataset, an event count model should be utilized to analyze the data in full. Within the data of interest, there are no relevant negative values to capture given that zero is the lowest number of years in a conflict or of the number of spoiling events taking place. Additionally, the nature of my data can be expected to divert from linear assumptions, as the hurdle between 0 and 1 spoiling event is much larger than between 10 to 11 events. With this in mind, I can rule out an Ordinary Least Squares regression, as it would include negative values and would inhibit an accurate interpretation of my results (Krain 1997). Similarly, I can rule out the use of a Poisson regression, as it assumes that the events represented by the dependent variable are occurring independently of each other (Krain 1997). Within the

context of civil war, each year is certainly not happening in a vacuum and undoubtedly cannot be considered an independent event; the presence of a civil war within one year is largely influenced by the presence of a civil war in the previous year and will, in the same vein, impact the likelihood of civil war in the following year. In brief, while the duration of conflict is measured as a count variable, we know that each year of a civil war is not occurring independently of others in the war, or even of years prior to and following the conflict as a whole; therefore, a Poisson regression would also be inappropriate for this analysis. All this considered, a negative binomial model is the most fitting event count regression for this particular analysis.

The variables of interest here are war type, spoiling, and the duration of the civil war; specifically, I am interested in the effects that war type and spoiling have on duration. I began with a standard negative binomial regression to investigate the straightforward relationship between war type and the dichotomous measure of spoiling in Model A (see Table 4.5). Unlike other regression models, the coefficient outputs of a negative binomial cannot be interpreted as a one-to-one unit increase across variables. Rather significant coefficients must first be multiplied by the sample mean of the dependent variable, and then can be interpreted normally. Model A found that, while war type did not have a significant effect on duration, the coefficient of spoiling was significant, with a probability less than 0.001. Applying the aforementioned formula to interpret the coefficient, this model found that, when spoiling occurs within a civil war, the duration of the war was extended by 5.062 years.

With this in mind, I ran an additional regression (Model B) with the count measure of spoiling to establish whether or not the relationship held. Once again, no significant relationship was found between war type and the duration of war, however, the number of spoiling events

remained significant with a p-value of 0.003. Converting the coefficient suggests that war duration is increased by 0.003 years for each single incident of spoiling. This finding implies that, while single instances of spoiling may not have outstanding impacts on war duration, repeated acts of spoiling could be of particular interest to investigate further to better understand the impact that this form of terrorism has on civil conflicts.

To illustrate this relationship more tangibly, let's look back to what the descriptive data told us about the frequency of spoiling events across civil wars. A civil war that experiences 1 spoiling event may not be significantly impacted, with the duration extended by only 0.003 years. However, my descriptive statistic suggested that the average number of spoiling events within a conflict is approximately 151. This suggests that the average civil war would have its duration extended by almost half a year (.003 * 151 = 0.453 years), and a conflict that experiences 574 spoiling events, which is only one standard deviation above the mean would have its duration extend by nearly two years (.003 * 574 = 1.722 years).

Finally, my last negative binomial model targeted the interaction between war type and the presence of spoiling in order to exhaust all analytical methods of investigating this relationship. Once again, I used the dichotomous measure of spoiling and constructed an interaction variable, *wartype#spoiling*, to conduct this regression. Much like the previous two models, Model C found that the coefficient of spoiling was significant to duration (p=0.004) and that war type had no significant effect. Interestingly, the interaction variable also showed no statistical significance, with a p-value of 0723.

These results are particularly interesting, as they suggest that the civil war type has no significant impact on the overall duration of the war. Rather, the presence of spoiling seems to be the most useful variable in projecting the potential duration of a conflict. Contrary to my

Polarized Identity hypothesis, the current analysis would suggest that spoiling has the same effect on conflict, regardless of conflict entanglements across identities.

Table 4.5 Binomial Regression Models

Variable	**Model A** (dichotomous)	**Model B** (count)	**Model C** (interaction)
wartype	-0.0144 [0.192]	0.0765 [0.190]	-0.1936 [0.54]
spoiling	1.1064** [0.288]		1.2147** [0.4178]
spoilingnum		0.0007** [0.0003]	
wartype#spoiling			-0.2052 [0.5778]
constant	0.5332 [0.282]	1.307** [0.148]	0.6147 [0.3666]
observations (N)	147	147	147
Ln(alpha)	1.0734 [0.1477]	0.0699 [0.1383]	0.07 [0.1376]
LR Chi2	12.79	12.06	12.91
Prob > Chi2	0.0017	0.0024	0.0048
Pseudo R2	0.0166	0.0157	0.0168

* $p \leq 0.05$, ** $p \leq 0.01$ (Standard Error shown in brackets

As mentioned earlier in this section, the nature of many of the variables at work may not be best represented under this particular unit of analysis. By shifting to a country-year unit of analysis, I will be able to capture more of the nuance and complexity of the relationships at play, incorporating duration as a year-by-year measure and accounting for wars that recur over time. This will allow for a closer investigation of the impact of spoiling as it occurs and the impact that spoiling has as it fluctuates over time.

Survival Model

While the regression analyses of the previous section yielded significant insights on the validity of the Polarized Identity hypothesis, there are still significant questions remaining

regarding the precise nature of the effect that spoiling has across civil wars. As previously mentioned, this is in part due to the nature of my original unit of analysis. There is significant value in examining the dynamics at the level of the conflict, however, by isolating each conflict the analysis is rendered unable to capture the complicated and cyclical nature of civil wars within a state. The recurrence of a war and its year-by-year duration allow for a closer examination into civil war dynamics and their impacts in real time.

With these stipulations in mind, this larger analysis relied on a country-year unit of analysis, resulting in 555 observed units between 1970 and 2014. As with the last model, I included the control variables of ELF, intervention, history of civil conflict, and neighboring violence, with the addition of GDP per capita, population, regime type, and the number of parties to the war. The measures of spoiling also remain consistent, with a dichotomous measure indicating the presence or absence of spoiling within that country-year, and a count variable indicating the estimated number of events that occurred within that country-year.

Unlike the previous count models, this larger analysis will allow for a closer examination of the relationships between my variables of interest as they covary in real time. Rather than examine conflict duration overall, this analysis will utilize a dichotomous measure of duration, where 1 represents a year of durable conflict and 0 represents that the conflict was no longer durable, or the conflict ended within that year. This will allow me to examine the effects of spoiling in real time rather than relying on speculation. I will be utilizing a similar measure with the additional dependent variable of war recurrence, where a 1 indicates that the conflict beginning in that country year is a recurrence of a previous conflict rather than a "new" war and a 0 indicates an entirely novel conflict. This variable is primarily relevant to the first year of a conflict, whereas the durability variable will be relevant across every unit.

Table 4.6: Country-Year Descriptive Statistics

	Mean	Std Dv.	Min	Max
wartype	0.5568	0.4974	0	1
spoilingnum	40.9027	102.2468	0	1226
population	$6.89*10^7$	$1.86*10^9$	807000	$1.15*10^9$
gdp	1084.622	1265.273	69.1394	9673.946
ELF	0.5856	0.2307	0.078	0.933
intv	0.4324	0.4959	0	1
history	0.8	0.4003	0	1
neighbors	0.8	0.4.0004	0	1
regime	-0.6425	5.865	-10	9
parties	5.3448	4.8957	2	40

As with the previous analysis, a simple test of correlations across the variables shows no significant correlation between war type and spoiling or between war type and the number of spoiling events, further strengthening the evidence against the Polarized Identity hypothesis. As would be expected, war type was significantly positively correlated with ELF, intervention and the number of parties to the war, suggesting that many of the general assumptions along the literature of ethnicity and civil war hold. Interestingly, there does not seem to be a correlation between the dichotomous measure of spoiling and durability, whereas durability is positively correlated with the number of spoiling events that occurs. This further strengthens the assumption suggested by the negative binomial regression model, that it is the magnitude of spoiling rather than simply the presence of spoiling that has a significant impact on civil war. Finally, it does not appear that war type, the presence of spoiling, nor the number of spoiling events are significantly correlated with war recurrence, leaving significant questions regarding the role of recurring conflicts within this paradigm.

Table 4.7 Country-Year Correlation Matrix

	wartype	*spoiling*	*spoilingnum*	*durable*	*recurred*	*population*	*gdp*	*ELF*	*intv*	*history*	*neighbors*	*regime*	*parties*
wartype	1												
spoiling	0.0694	1											
spoilingnum	0.0352	0.2125*	1										
durable	0.0307	0.067	0.1325*	1									
recurred	0.0648	0.0306	-0.0431	0.0598	1								
population	0.1949*	0.0683	0.0421	0.0366	-0.0297	1							
gdp	*0.0147*	0.1688*	0.3679*	0.0415	-0.0093	-0.081	1						
ELF	0.0918*	-0.1216*	-0.1307*	0.0311	-0.079	0.1896*	-0.1479*	1					
intv	0.3835*	-0.046	0.042	0.0125	0.0425	-0.1930*	0.0458	0.1643*	1				
history	0.1070*	0.1697*	0.1671*	0.0519	0.1577*	0.147*	0.1057*	-0.0831	-0.2273*	1			
neighbors	0.0707	0.05	0.0888*	0.0301	-0.0469	0.018	-0.001	0.2536*	0.1455*	0.009	1		
regime	0.0106	0.2267*	0.2747*	0.0452	-0.0373	0.362*	0.2746*	-0.0502	-0.1166*	0.1949*	0.0468	1	
parties	0.2456	0.1371*	0.1639*	0.0531	-0.0196	0.4969*	0.0157	0.2849*	0.0922*	0.1806*	0.1806*	0.1543*	1

In order to delve deeper into this data, I will be utilizing a Cox proportional hazard model focused on the impact that civil war characteristics have on conflict durability and recurrence. The hazard model looks to examine the "failure" of a variable, or the point at which a variable changes states. Within the context of this study, I am looking to examine the way that war type and spoiling in particular impact duration and recurrence over time; however, given the distinctions between the two dependent variables, I will be defining "failure" slightly differently to best reflect what is occurring within the data.

In looking at duration, failure will be coded as 0, when a war is no longer durable. This will allow me to pinpoint the year at which the impact of spoiling ceases to extend the duration of the conflict. However, because the model calculates the z-scores based on the connection of the variables to the failure which is coded as 0, with non-failure coded as 1, we can expect correlations to be inversely represented by the calculated z-score, with a positive z-score indicates a negative correlation and negative z-score indication positive correlation. For example, if war type were to elicit a z-score of -3.00, this would indicate a significant positive relationship between war type and duration; war type would have a significant impact on the likelihood that the war will continue to be durable from one year to the next, decreasing the probability of reaching a 0 for duration in the following year. Unlike duration, the failure indicator for recurrence is coded as a 1, allowing for the interpretation of the statistical calculation to be conducted as usual, with z-scores representing the accurate directions of any potential correlations.

Beginning with the dependent variable of durability, I first ran a model that looked only at the variables of interest: war type, spoiling, and the number of spoiling events (see Table 4.8). As alluded by previous analyses, war type does not appear to have a statistically significant

correlation with durability year by year, however, both spoiling and the number of spoiling events showed a very significant positive correlation. Once again, this indicates that when spoiling occurs in a conflict, the likelihood of the conflict being durable over the next year increases. I repeated this model with the addition of the aforementioned control variables with no significant changes occurring in the results. This tells us that the relationship between durability and spoiling is significant and influential even when all other factors are accounted for, further strengthening the collection of evidence against the Polarized Identity hypothesis.

Turning to the recurrence variable, I followed the same course of action in order to assess the relationships at work here (Table 4.9). I began first by running the model with just the variables of war type and my two measures of spoiling. As expected, war type does not appear to be significant to the recurrence of civil war, however, this model deviated from the previous analyses in that the presence of spoiling also shows no statistical significance. The number of spoiling events appears to be slightly statistically significant, with a negative correlation. Contrary to the relationship found between spoiling and duration, it seems that an increase in spoiling events is decreasing the likelihood of recurring war.

Interestingly, when the control variables are included in the recurrence model, the findings flip (see Table 4.9). While war type remains insignificant, the presence of spoiling becomes the significant variable, and the number of events is no longer statistically significant. The direction of this relationship remains negative, suggesting that spoiling decreases the likelihood of recurring conflict at least to some extent. However, the nature of the contrary results certainly suggests that there may be other mechanisms at work when it comes to the recurrence of civil war, indicating a need for significant additional study to fully understand this relationship.

Table 4.8 Cox Proportional Hazard Durability Models

Variable	model 1	model 2	model 3	model 4
wartype	0.8612 [0.1592]	0.9024 [0.1657]	1.1563 [0.3022]	1.0449 [0.2761]
spoiling	0.3345** [0.0728	–	0.3569** [0.0987]	–
spoilingnum	–	0.9849** [0.0039]	–	0.9891* [0.0048]
population	–	–	1* [9.10e-10]	1* [9.10e-10]
gdp	–	–	0.9998* [0.0001]	0.9998 [0.0001]
ELF	–	–	0.8706 [0.4128]	0.7819 [0.3769]
intv	–	–	0.9244 [0.2443]	0.9649 [0.2537]
history	–	–	0.7669 [0.2207]	0.8593 [0.2477]
neighbors	–	–	0.4284** [0.1126]	0.497** [0.132]
regime	–	–	0.9298** [0.0235]	0.9362* [0.0242]
parties	–	–	0.8708** [0.0339]	0.8701** [0.0352]
LR Chi^2	23.74	45.27	74.64	77.02
Prob > Chi^2	≤0.0001	≤0.0001	≤0.0001	≤0.0001
Log likelihood	-646.8483	-636.0809	-451.6511	-450.4608

* $p \leq 0.05$, ** $p \leq 0.01$ (Standard Error shown in brackets)

Table 4.9 Cox Proportional Hazard Recurrence Models

Variable	model 1	model 2	model 3	model 4
wartype	1.3961 [0.4209]	1.4699 [0.4406]	1.3763 [0.6147]	1.2197 [0.5518]
spoiling	0.5249 [0.2007]	–	0.3308* [0.1459]	–
spoilingnum	–	0.9941* [0.0028]	–	0.9968 [0.0023]
population	–	–	1 [1.88e-09]	1 [1.88e-09]
gdp	–	–	0.9996* [0.0002]	0.9997 [0.0002]
ELF	–	–	0.3948 [0.2885]	0.4349 [0.3223]
intv	–	–	1.9085 [0.8155]	1.8943 [0.8219]
history	–	–	3.16e+15 [6.59e+22]	1.54e+15 [2.07e+22]
neighbors	–	–	0.2763** [0.1133]	0.3219** [0.1339]
regime	–	–	0.9269 [0.0373]	0.9206* [0.0365]
parties	–	–	0.8699* [0.0519]	0.08688* [0.0525]
LR Chi^2	3.43	10.95	53.8	50.71
Prob > Chi^2	0.1797	0.0042	≤0.0001	≤0.0001
Log likelihood	-268.1313	-264.3711	-168.6881	-170.2303

* $p \leq 0.05$, ** $p \leq 0.01$ (Standard Error shown in brackets)

Case Discussions

Following the theoretical frameworks pre-existing in the civil war literature, I put forth two separate hypotheses regarding the relationship between war type, spoiling and civil war duration. In the Polarized Identity hypothesis, the primary theory of the study, I predicted that spoiling would act within civil wars as a conditional variable that would extend the duration of identity based civil wars significantly longer than non-identity based wars. In my secondary hypothesis, I predicted that identity based civil wars would experience spoiling at a significantly higher frequency than non-identity based wars. While this hypothesis was less important to the theoretical argument of the Polarized Identity hypothesis, it sought to address the prominent gap in the overlapping civil war and terrorism literatures which have neglected to fully examine the interaction of civil conflict and spoiling.

Upon the completion of a full quantitative analysis of correlations, regressions and hazard models, the results provide strong evidence against both of these hypotheses. First and foremost, that data suggests that spoiling occurs indiscriminately across civil war types with neither type experiencing significantly more spoiling events than the other. This suggests that spoiling may be a part of the civil war process that has yet to be identified and thoroughly studied. Additionally, the analysis consistently showed that spoiling alone was significantly correlated with extended war duration, while war type and the interaction of the two variables had no significant impact. Given the robustness of the analysis and the consistency of results, my findings suggest that the interaction between civil war type and spoiling is not significant to the war's duration, conclusively rejecting the Polarized Identity hypothesis.

In light of these unexpected results, I wanted to employ a brief discussion of particularly interesting cases in order to fully illustrate the conclusion of my findings. My theoretical

framework relied heavily on literature surrounding the security dilemma and ethnic saliency, arguing that acts of spoiling would have a greater impact on the war dynamics within identity based wars on account of increasing salience of identity heightening the security dilemma between warring parties. Contrary to this assumption, it would seem that the effect of spoiling is rather uniform across wars regardless of type, indicating that either the security dilemma is equally activated in all war types or the security dilemma may not have a profound impact on the dynamics of civil wars over time. To better illustrate this relationship and begin to look at the way the security dilemma and spoiling interact in civil wars, I will be employing a brief comparative discussion of two prominent conflicts, the recurring Lebanese Civil War and the FARC/ELN War in Colombia. This discussion will begin with a brief overview of the context and dynamics of each conflict followed by a look at what the data tells us about what these very different civil wars seem to have in common.

Broadly understood as an identity based conflict that spanned decades with periods of cessation followed by recurrence, the Lebanese Civil War serves as one of the most extreme examples of a conflict within a longstanding sectarian society (Ghosn & Khoury 2011). While the conflict formally began in 1975, the seeds of war were planted decades earlier within the structures of the French Mandate and the subsequent government following Lebanese independence. The partition of the Levant under Mandate would leave Lebanon a cluster of ethnic and religious identities without the structure in place to effectively and equitably govern. The primary attempt to establish representative governance came in the National Pact of 1943, wherein leaders relied on the 1932 census which showed the population evenly split between Muslims and Christians, resulting in an allocation of all state positions across confessional lines with the top three positions assigned respectively to a Maronite Christian, a Sunni Muslim, and a

Sh'ia Muslim (Ghosn & Khoury 2011). Despite a seemingly equitable division of power, this arrangement coupled with the growing generational wealth associated with Maronites in Lebanon and Sunni Muslims across the Middle East as a whole resulted in deep rooted sectarian beliefs that drastically weakened the state overall (Ghosn & Khoury 2011; Salloukh 2019).

Growing domestic tensions related to power sharing, economic inequality, and sectarian exploitation combined with regional tensions relating to the neighboring Israeli-Palestinian conflict came to a staggering head with the outbreak of war in April of 1975. The fifteen years of conflict were characterized by shifting internal tensions associated with several warring groups (South Lebanese Army, the Unification and Liberation Front, Hezbollah, the Palestinian Liberation Front, etc.) that made it near impossible to resolve given the constant competition over the war front (O'Ballance 1998). Countless attempts of mediated resolution involving the United Nations, the Arab League, Syria and the United States fell short of ending the conflict until the Taif Accords in 1989 (Ghosn & Khoury 2011). This resolution resulted in the Lebanon's Second Republic which redistributed power equally between Christian and Muslim communities and worked to roll back confessionalism with varying degrees of success noted by scholars.

In stark contrast to the Lebanese conflict, Colombia's civil war is defined by a lack of any ethnic, regional or religious cleavages within the conflict, but rather by a heaving history of political violence between political parties (Restrepo et al 2004). Unlike the traditional conception of civil wars, this war is characterized by conflict between the institutional government which is supported by the vast majority of the population and an extremist minority that particularly victimizes civilians in isolated and poor areas of the countryside (Restrepo et al 2004).

Conflict within the country dates back to the 1940s, relating largely to the colonial history of the state and disputes regarding land distribution. The formal beginning of the civil war came about in the 1980s when partisan guerrillas shifted away from the proxy conflicts of the Cold War and transformed themselves into established guerrilla groups that opposed the conservative government (Steele & Schubiger 2018). Two primary forces rose quickly, the Revolutionary Armed Forces of Colombia (FARC) and the National Liberation Army (ELN), with the severity of conflict ebbing and flowing over the decades. Conflict largely intensified in the late 1980s and early 1990s, accelerating into the early 2000s before beginning to decline in severity up into the present day. While the war remains ongoing, it has continued to proceed at low intensity despite a peace deal between the Colombian government and the FARC 2016 (Steele & Schubiger 2018).

These cases reflect the wide variety of characteristics that we can expect to see in cases of durable and recurring conflicts, with Lebanon clearly representing a case of identity based conflict, while Colombia offers insight into a non-identity based civil war. Under the assumptions of the Polarized Identity hypothesis, we would expect that Lebanon should have experienced a heightened effect of spoiling, thus lengthening the duration of the conflict, to a greater extent than the Colombian conflict; however, the results of the quantitative analysis suggest that this would not be the case. By taking a closer look at these two cases which so clearly distinguish themselves by war type, I expect to gain a better understanding of how the mechanism of spoiling works across civil wars uniformly, rather than disproportionately impacting identity based war

Table 4.10 Case Statistics: Colombia and Lebanon

Case	wartype	dur (y)	spoiling	spoilingnum	ELF	intv	history	neighbors
Colombia	0	26.91	1	1452	0.656	0	1	1
Lebanon	1	10.7	1	463	0.78	1	1	1

Given the available data, the capacity of my dataset to capture the full length of these conflicts was significantly limited. With the sources available, I compiled data on the Colombian conflict over the course of nearly 27 years, spanning from 1988 to 2014 and capturing 1,452 spoiling events within that time frame. The case of the Lebanese civil war proved more challenging in its analysis, as the Correlates of War Civil War dataset identified the conflict not as a single war across time, but as four brief civil wars. This is likely due to the COW definition of civil war requiring at least 1,000 battle deaths within a calendar year, which would result in coding an absence of war in years of lower intensity conflict, despite no actual resolution (Sarkees 2010). In order to maintain the consistency of results with the prior analyses, I will be working only with the years of data drawn from the COW project regarding Lebanon. With these limitations in mind, the data reflects nearly 11 years of on and off conflict in Lebanon spanning from 1975 to 1990 with a total of 463 spoiling events.

As seen in Table 4.10, both cases had a history of civil war, neighboring violence, and experienced comparable levels of ethnolinguistic fractionalization. The primary points of divergence are in war type, as previously discussed, and in intervention, with Lebanon experiencing significant foreign intervention while Colombia has not. With respect to this study, the primary point of comparison that I am interested in is the rate at which spoiling is occurring and the impact that spoiling had on the duration of the conflict. Table 4.11 explores this further, looking specifically at the mean number of spoiling events per year in each respective conflict.

The average events are about 53.778 and 66.143 for Colombia and Lebanon respectively. Despite the characteristic differences in these wars, there does not seem to be a notable difference in the amount of spoiling that occurs.

Table 4.11 Mean Spoiling per Year: Colombia and Lebanon

Case	mean	std. dev.	min	max
Colombia	53.77778	52.6493	0	199
Lebanon	66.14286	63.51228	4	150

In order to conclusively establish that the rates of spoiling are uniform across these conflicts, I ran a difference of means *t*-test in order to establish statistical significance using the standard two sample test at 32 degrees of freedom. In order for the difference in the mean number of spoiling events to be considered significant, the calculated *t* value would need to reach or exceed the critical value, 2.037, which is determined by the degrees of freedom and the significance level of 0.05. The test yielded a *t* value of -0.5315, indicating no significant difference in the number of spoiling events occurring in these conflicts per year, with the full calculations of the test shown in Table 4.12.

Table 4.12 Difference of Means *t*-Test

Case	Mean	Std. Err.	Std. Dev.	[95% conf.	interval
Colombia	53.7778	10.13236	52.6493	32.95041	74.60515
Lebanon	66.14286	24.00538	63.51228	7.403796	124.8819
Combined	56.32353	9.303912	54.25066	37.39458	75.25248
Difference	-12.36508	23.26414	–	-59.75258	35.02242
		critical *t* = *2.037*		**t = -0.5315**	

These two cases demonstrate first and foremost that the rate at which spoiling is occurring seems to be consistent across vastly different civil wars. While it is difficult to statistically establish the impact that spoiling is having on the duration of these wars with the

data I have, it is worth noting that war type does not seem to be a driving force in the duration of these particular wars. The durations of both wars extend beyond the first standard deviation of civil war duration established in Table 1.1, with no reason to suggest that the interaction of war type is having any significant impact on the durability of these conflicts. In light of the prior quantitative results, these cases further support the rejection of the Polarized Identity hypothesis and suggest that spoiling has a larger role to play in the civil war process than the literature presents.

Results

Over the course of this chapter, my goal was to delve into the available data regarding civil wars and spoiling in order to establish the existence of any significant relationships between the dynamics of civil war, the occurrence of spoiling and the duration of war. As spelled out in the Polarized Identity hypothesis, I expected to find a significant correlation between the interaction of identity based civil wars and spoiling, with spoiling impact those wars more than non-identity based wars. I additionally speculated that identity based wars would experience spoiling at a high frequency that non-identity based wars.

To begin, I looked at the data from 1970 to 2014 with a conflict unit of analysis in order to examine the correlations between these variables and the overall duration of the conflict. An initial look at the data showed that, rather than being a rare occurrence, spoiling is a rather widespread component of civil wars. Additionally, there appeared to be no significant correlation between the war type and the frequency of spoiling. A look at the correlation to duration found that war type was also not significantly correlated, but spoiling did have a significant positive relationship with overall conflict duration.

To investigate these initial findings further, I utilized a negative binomial regression analysis to look at the interaction between war type and spoiling. Consistent with prior results, war type was found to have no significant relationship with war duration, while spoiling was positively correlated with duration. The number of spoiling events appeared to be particularly important in determining the magnitude of effect that spoiling would have on duration, with the impact increasing with every additional spoiling event. The regression also found no significance to the interaction variable created to look at the interaction between war type and spoiling, suggesting that it is spoiling alone that is driving the relationship with duration.

Given these results, I expanded the data in order to examine these variables of interest at the country-year unit of analysis, thus allowing me to examine the relationship between spoiling and war progression in real time. I employed the use of a Cox proportional hazard model in order to examine the likelihood that a war would continue to be durable each year, depending on whether or not spoiling occurred. Consistent with the findings of the negative binomial regression, the presence of spoiling events and the number of spoiling events were consistently positively correlated with durability while war type appeared to have no significant effects.

Finally, in order to illustrate these results more concretely, I examined the context and data on two significant cases within the study: the Lebanese Civil War and the FARC/ELN War in Colombia. These two civil wars arose in situations that are diametrically opposed, with Lebanon clearly presenting as an identity based conflict entrenched in longstanding sectarianism and religious divisions whereas Colombia's conflict arose out of political and economic strife, with no interplay of identity in the conflict. In examining the data available on these cases, it appears that there is no significant difference in the amount of spoiling occurring in either of these wars, indicating that there likely is no significant relationship with war type and the

frequency of spoiling. Additionally, we can see that the duration of these war likely is not linked to identity, given that both conflicts exceed the first standard deviation of overall civil war duration and the Colombian civil war lasts exceptionally longer despite being a non-identity based conflict.

Given the robustness and consistency of these results, I can conclusively reject both of the hypotheses presented in this study. First and foremost, the frequency of spoiling does not seem to have any significant relationship with war type; rather spoiling seems to be occurring uniformly across civil wars, regardless of other variables. Additionally, the interaction between war type and spoiling has been consistently shown to have no statistically significant effect on the duration of war or on the likelihood of a war recurring. Despite the conclusive findings going against the original hypothesis, the results of this study raise several crucial questions regarding our understanding of terrorism as a component of civil war and the role that it plays in the duration of contemporary civil conflicts.

Chapter 5: Conclusion

Discussion of Findings

I began this study with the intention of beginning to close the gap within political violence literature which has neglected to examine the overlap between civil wars and terrorism. A look at the literature suggested a significant level of this comorbidity but did very little to inform on the dynamics of the relationship at play (Findley & Young 2012). Previous studies showed that the frequency of terrorism tends to increase immediately preceding and following civil war, but little work had been done to understand the effect of terrorism on the civil war process itself. With this in mind, I wanted to begin closing this gap by studying the way that the impact of terrorism across different war types, looking specifically at identity based wars.

With the robust literature on ethnicity, civil war onset, and resolution, I decided to apply several pre-existing theories to the speculated relationship between identity based civil wars and terrorism. Drawing from theories of ethnic saliency, relative deprivation, and the security dilemma, I argued that opposing identities (ethnic, religious, linguistic, etc.) would become more salient within the context of civil wars that are based on identity claims. Furthermore, I suggested that terrorist attacks would be more impactful in preventing peace in identity based wars by triggering either onset or relapse of the ethnic security dilemma, wherein distrust would significantly grow among groups and disrupt the peace process. I decided to narrow my focus, looking only at terrorist attacks that fall into the category of spoiling in order to specifically capture the impact that terrorist events have on civil war duration, recurrence and the peace process overall.

From this theoretical foundation, I set forth two hypotheses. The Polarized Identity hypothesis, the primary hypothesis at the core of this study, asserted that the warring parties in

identity based civil wars will be more affected by any spoiling event that occurs, resulting in a more durable war that takes longer to see resolution. My secondary hypothesis suggested that, even without looking at the impact of spoiling, we should see spoiling occurring at a higher frequency in identity based civil wars than in non-identity based civil wars. In order to ensure that my results would address these hypotheses with as much robustness as possible, I employed the use of several quantitative models in order to examine the impact of each variable carefully.

I began by looking at all the civil wars between 1970 and 2014 at the conflict level of analysis and performed several correlational tests as well as a negative binomial regression. Across those models, I found that civil war type does not seem to be significantly correlated with the presence of spoiling, the amount of spoiling, or the duration of the conflict. Additionally, looking at the interaction between war type and the presence of spoiling showed that the interaction had no significant correlation to war duration. Rather, these initial tests showed overwhelmingly that spoiling was the variable impacting duration most prominently. Both the presence of spoiling and the number of spoiling events were positively correlated with war duration.

To further understanding of these relationships, I expanded my data to look at the same conflicts through a country-year unit of analysis and ran a series of Cox proportional hazard models, looking at the way my variables influence the point at which a war either ends or recurs. My results again showed overwhelmingly that spoiling, both the presence of and the amount, is very significantly correlated with increased war duration, while war type does not appear to have a significant effect. Interestingly, however, spoiling appeared to be negatively correlated with war recurrence, indicating that there seems to be a different dynamic at play when a war recurs than when it is still ongoing.

Finally, I illustrated my results with a brief look at the civil wars in Lebanon and Colombia. These cases present as two practically diametrically opposed conflicts, with Lebanon as a war clearly entrenched in identity and sectarianism while Colombia's war is entirely political. Despite their opposition, these cases both present with the same level of spoiling and seem to experience the effect of spoiling similarly.

The robust and consistent nature of these findings allows for several conclusions to be drawn that shed a significant amount of light on the original gap that I identified in the literature. First and foremost, spoiling appears to be happening uniformly across all civil war types, with no significant distinction being detected between the frequency at which spoiling is occurring in identity based wars compared to others. Additionally, the effect of spoiling is consistent across civil war types, indicating that the impact of war type on conflict duration is not significant. Rather, spoiling alone is the significant variable at play in the extension of civil war duration.

With these findings, I can conclusively reject both of my hypotheses; however, this study does bring to light several important questions as well as implications for future work on the subject. Over the course of this chapter, I will outline the difficulties I faced within this study, the implications that my findings have on future research and relevant policy, and finally, my final thoughts on the relationship between civil war, identity, and terrorism.

Complications in Methodology

In keeping with the gap in the literature on civil war and terrorism, I came across several difficulties in acquiring the appropriate data for several variables. For the most part, I was able to rely on sources of data that have been carefully vetted and are generally accepted by the field, including the Correlates of War Project, the Polity5, and the World Bank. However, given the

novelty of a few of my variables, it became difficult to rely on pre-existing datasets to capture exactly what I was targeting.

This particularly became a problem with my measures of spoiling. The study of terrorism as a whole is relatively new compared to the study of civil war and ethnicity, so the level of data available on terrorism as a whole is already somewhat limited. Additionally, the focus on this study was on spoiling, a type of terrorism which only entered the vernacular of the field in the past fifteen years (Kydd & Walter 2006). This complicated the process of finding data, given that datasets focused on terrorism have not yet developed subcategories of data based on the typologies of terrorism that have been developed in the literature. Therefore, in order to ensure I was capturing the events that fit spoiling, I had to carefully collect the data based on the actors involved and the target of the event by looking year by year at the data available for each country-year.

Given the novelty of both the concept of spoiling as well as the nature of the data collection, it is important to note the limitations of this study's ability to fully capture spoiling. While I am confident in the dichotomous measure of spoiling, which indicated only presence and absence, I want to emphasize that the count measure, the number of spoiling events, is likely a rough estimate. While I attempted to ensure that this measure was as close as possible given the data available, it would be critical to repeat this study with a more comprehensive data source should it become available.

While certainly not to the same extent, I also faced a methodological hurdle when it came to the measure of recurrence. As I briefly discussed in my study of the Lebanese civil war, the Correlates of War Project, from which I sourced my conflict data, has a very strict definition of civil war which complicated this variable. The COW requires at least 1,000 battle deaths within

each calendar year in order to be considered a civil war; therefore, should a war dip below that threshold in a single year, the COW would code the war as no longer ongoing despite no actual resolution. Therefore, a war could appear as recurring, when rather it is ongoing but falling below the defined threshold. This methodological discrepancy coupled with the interesting result from the hazard model on recurrence suggest that it would be incredibly beneficial to revisit the variable in the future in order to more accurately code it and better understand how it relates to other variables.

Implications on Future Research

I began this study with the express purpose of beginning to make sense of the way spoiling interacts with the civil war process and, while my findings have certainly brought significant insights to the field, many incredibly important questions remain. Considering the challenges I faced in the theoretical and methodological aspects of this study as well as the findings, I believe that future research should work to further the current understanding of spoiling, both as a unique form of terrorism and as it interacts with civil war, on the impact of intervention, and on the factors that result in civil war recurrence.

In my work with the literature, it became abundantly clear that the field of political violence as a whole would greatly benefit from a more uniform understanding of spoiling, both conceptually and in operationally. The typologies of terrorism are still new relative to the study of terrorism, so I believe that future research will work to fill in the gaps. Work to distinguish the types of terror in data or to establish dataset specific to each type of terrorism should be the highest priority at this point. While the tedious process of data collection employed for this paper best satisfied the needs of my study, it revealed this major gap in the existing data that could be hindering our understanding regarding the effects of terrorism. Future researchers and the

literature of terrorism and political violence as a whole would undoubtedly benefit from having a uniform understanding of spoiling that would allow for consistent coding of spoiling as a variable and collection of data.

Beyond the basic conception of spoiling as isolated terror events, there is a significant need to more closely examine the role that spoiling is playing in civil wars. One of the very first things that stood out in the data collected was the prominence of spoiling across all civil war types; this abundance suggests that spoiling may be a part of the civil war process rather than a unique event that only comes about when wars meet certain conditions. A better understanding of the role played by spoiling would allow us to better conceptualize spoiling and recognize it as it occurs in civil conflicts. Additionally, if spoiling is a part of the civil war process, a more robust literature on its interaction with conflict could better inform future peace-keeping efforts and negotiations working to end conflict.

Finally, this study left a major question in the results that came about regarding recurrence of civil war. While war type remained largely insignificant in relation to recurrence, spoiling seemed to be negatively correlated with the recurrence of war. This finding is particularly interesting, as it goes against both what the literature suggests and what would logically make sense given the impact spoiling has on duration. I argue that the finding on recurrence suggests that there is likely another factor aside from war type or spoiling that better predicts or influences the likelihood that a war recurs. These results coupled with the general lack of contemporary research done on the recurrence of civil wars leads me to argue that this subject should be a priority for the field going forward. Particularly in a world where the majority of global conflicts are civil war, it is of the utmost importance to know how to end these conflicts and ensure that they are not at risk for recurrence; thus, a further study on recurrence is

needed in order to identify the risk factors involved and develop more effective policy for the resolution of civil wars.

Policy Implications

Given the scope and results of this study, it is important to acknowledge that further research is needed in order to make conclusive policy recommendations. If and only if subsequent replications of this study yield consistent findings in tandem with additional research to fully understand and operationalize spoiling and recurrence should scholars begin to consider real changes to policy. Particularly given the dicey results attributed to the recurrence of civil war, significant further research should be undertaken to better understand the mechanisms at work within this framework before I can advocate alterations to relevant policy. With this in mind, my results do carry some policy implications that could warrant further investigation to validate and confirm.

Given the finding that spoiling is significantly correlated to civil war duration, the major implication suggests that policy relating to war resolution should revolve around building trust, holding warring parties accountable, and minimizing terrorism. While we do need significantly more research to better understand spoiling, the literature suggests that it operates primarily as a tool of disruption by creating distrust among negotiating parties (Kydd & Walter 2006). The findings of this study also suggest that spoiling is positively correlated with civil war duration, suggesting that to decrease the frequency or effectiveness of spoiling events would in turn decrease the duration of war. While significant additional work should be done to verify my findings, expand our understanding of the relationship between spoiling and war, and to investigate other factors associated with extended war duration, this study does imply that policy

revolving around trust building among warring parties could be effective in reducing war duration.

Reflections and Final Thoughts

In all, my results provided me with comprehensive and sufficient evidence to reject both of the hypotheses that I set forth at the beginning of this study. While we know that identity based communal conflict tends to play a significant role in the inception of civil war, the data suggests that it may not have a significant impact on the civil war process beyond the onset of conflict. Rather, spoiling seems to be playing a much bigger role in civil wars than the literature credits it with, leaving significant room for additional research to further our understanding and flesh out the mechanism through which spoiling impacts the duration of civil wars. Despite failing to support my Polarized Identity hypothesis, my results surprised me and challenged both the assumptions that I extrapolated as well as many assumptions set forth by the literature, filling in some gaps in the field of political violence while also opening up some new ones.

Over the course of this study, I have worked to follow the standards, foundations, and precedents set by others in the field that have engaged with similar questions. I believe that my study has not only helped to answer some pre-existing questions but has also brought new questions to the forefront and encouraged future research to take a more holistic approach in the study of civil war and terrorism. In conclusion, I maintain that spoiling plays an integral role in the process of civil wars that has been largely ignored by prior research and by the contemporary policy regarding conflict resolution. In short, spoiling seems to be a major part of civil war, and if the field is looking for a comprehensive understanding of the most prominent form of contemporary global conflict, then it should work to understand civil war as a sum of its parts.

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Appendix I: Codebook

ccode	The number assigned to that specific conflict.
conflict	The name assigned to the conflict by the COW dataset.
country	The state that saw the majority of fighting throughout the duration of the war.
dury	The number of years the war lasted.
wartype	1 = Identity based war, 0 = Non-identity based war.
spoiling	1 = At least one spoiling event occurred, 0 = no spoiling events occurred.
spoilingnum	The number of spoiling events that occurred
durable	1 = The conflict continued after this year, 0 = The conflict ceased within this year.
recurred	1 = A prior conflict recurred within this year, 0 = a conflict did not recur within this year.
population	The number of people living within the conflict's country.
gdp	The "sum of marketed goods and services produced within the national boundary, averaged across everyone who lives within this territory."
ELF	The decimal score of ethnic fractionalization, with 0 = complete homogeneity, 1 = completely heterogeneity.
intv	1 = Intervention from a third party occurred, 0 = intervention from a third party did not occur.
regime	The composite regime score, ranging from +10 (total democracy) to -10 (total autocracy).
parties	The approximate number of actors party to the conflict.
history	1 = This country has a history of civil war in the 1900s, 0 = this country has no history of civil war in the 1900s.
neighbors	1 = This country shares a border with another state engaging in violence, 0 = this country shares no borders with other states engaging in violence.

Appendix II: Tables

Table A.1 Conflict Descriptive Statistics

	Mean	Std Dv.	Min	Max
wartype	0.571	0.497	0	1
dury	4.575	6.938	0.01	42.88
spoilingnum	151.694	423.441	0	3241
ELF	0.574	0.249	0.078	0.933
intv	0.429	0.409	0	1
history	0.789	0.389	0	1
neighbors	0.816	0.389	0	1

Table A.2 War Type and Spoiling Summary

	spoiling		
wartype	0	1	**total**
0	12	51	63
1	11	73	84
total	23	124	147

Table A.3 Conflict Correlation Matrix

	wartype	dury	spoiling	spoilingnum	ELF	intv	history	neighbors
wartype	1							
dury	0.0143	1						
spoiling	0.0811	0.1795*	1					
spoilingnum	0.0286	0.2645*	0.1548	1				
ELF	0.0504	0.1638*	-0.0705	-0.0998	1			
intv	0.3333*	0.2213*	-0.0054	0.0414	0.1033	1		
history	0.1252	-0.0735	0.0528	0.1386	0.0231	-0.1589	1	
neighbors	0.1927*	0.1026	0.0859	0.0737	0.2228*	0.1623*	-0.0729	1

Table A.4 Chi Square Analysis

	spoiling		
wartype			**total**
0	12	51	63
1	11	73	84
total	23	124	147

Pearson chi2(1) = 0.09664
Pr = 0.326

Table A.5 Binomial Regression Models

Variable	**Model A** (dichotomous)	**Model B** (count)	**Model C** (interaction)
wartype	-0.0144 [0.192]	0.0765 [0.190]	-0.1936 [0.54]
spoiling	1.1064** [0.288]		1.2147** [0.4178]
spoilingnum		0.0007** [0.0003]	
wartype#spoiling			-0.2052 [0.5778]
constant	0.5332 [0.282]	1.307** [0.148]	0.6147 [0.3666]
observations (N)	147	147	147
Ln(alpha)	1.0734 [0.1477]	0.0699 [0.1383]	0.07 [0.1376]
LR Chi2	12.79	12.06	12.91
Prob > Chi2	0.0017	0.0024	0.0048
Pseudo R2	0.0166	0.0157	0.0168

* $p \leq 0.05$, ** $p \leq 0.01$ (Standard Error shown in brackets

Table A.6 Country-Year Descriptive Statistics

	Mean	Std Dv.	Min	Max
wartype	0.5568	0.4974	0	1
spoilingnum	40.9027	102.2468	0	1226
population	$6.89*10^7$	$1.86*10^9$	807000	$1.15*10^9$
gdp	1084.622	1265.273	69.1394	9673.946
ELF	0.5856	0.2307	0.078	0.933
intv	0.4324	0.4959	0	1
history	0.8	0.4003	0	1
neighbors	0.8	0.4.0004	0	1
regime	-0.6425	5.865	-10	9
parties	5.3448	4.8957	2	40

Table 4.7 Country-Year Correlation Matrix

	wartype	spoiling	spoilingnum	durable	recurred	population	gdp	ELF	intv	history	neighbors	regime	parties
wartype	1												
spoiling	0.0694	1											
spoilingnum	0.0352	0.2125*	1										
durable	0.0307	0.067	0.1325*	1									
recurred	0.0648	0.0306	-0.0431	0.0598	1								
population	0.1949*	0.0683	0.0421	0.0366	-0.0297	1							
gdp	*0.0147*	0.1688*	0.3679*	0.0415	-0.0093	-0.081	1						
ELF	0.0918*	-0.1216*	-0.1307*	0.0311	-0.079	0.1896*	-0.1479*	1					
intv	0.3835*	-0.046	0.042	0.0125	0.0425	-0.1930*	0.0458	0.1643*	1				
history	0.1070*	0.1697*	0.1671*	0.0519	0.1577*	0.147*	0.1057*	-0.0831	-0.2273*	1			
neighbors	0.0707	0.05	0.0888*	0.0301	-0.0469	0.018	-0.001	0.2536*	0.1455*	0.009	1		
regime	0.0106	0.2267*	0.2747*	0.0452	-0.0373	0.362*	0.2746*	-0.0502	-0.1166*	0.1949*	0.0468	1	
parties	0.2456	0.1371*	0.1639*	0.0531	-0.0196	0.4969*	0.0157	0.2849*	0.0922*	0.1806*	0.1806*	0.1543*	1

Table A.8 Cox Proportional Hazard Durability Models

Variable	model 1	model 2	model 3	model 4
wartype	0.8612 [0.1592]	0.9024 [0.1657]	1.1563 [0.3022]	1.0449 [0.2761]
spoiling	0.3345** [0.0728	–	0.3569** [0.0987]	–
spoilingnum	–	0.9849** [0.0039]	–	0.9891* [0.0048]
population	–	–	1* [9.10e-10]	1* [9.10e-10]
gdp	–	–	0.9998* [0.0001]	0.9998 [0.0001]
ELF	–	–	0.8706 [0.4128]	0.7819 [0.3769]
intv	–	–	0.9244 [0.2443]	0.9649 [0.2537]
history	–	–	0.7669 [0.2207]	0.8593 [0.2477]
neighbors	–	–	0.4284** [0.1126]	0.497** [0.132]
regime	–	–	0.9298** [0.0235]	0.9362* [0.0242]
parties	–	–	0.8708** [0.0339]	0.8701** [0.0352]
LR Chi^2	23.74	45.27	74.64	77.02
Prob > Chi^2	≤0.0001	≤0.0001	≤0.0001	≤0.0001
Log likelihood	-646.8483	-636.0809	-451.6511	-450.4608

* $p \leq 0.05$, ** $p \leq 0.01$ (Standard Error shown in brackets)

Table A.9 Cox Proportional Hazard Recurrence Models

Table 4.9 Cox Proportional Hazard Recurrence Models

Variable	model 1	model 2	model 3	model 4
wartype	1.3961 [0.4209]	1.4699 [0.4406]	1.3763 [0.6147]	1.2197 [0.5518]
spoiling	0.5249 [0.2007]	–	0.3308* [0.1459]	–
spoilingnum	–	0.9941* [0.0028]	–	0.9968 [0.0023]
population	–	–	1 [1.88e-09]	1 [1.88e-09]
gdp	–	–	0.9996* [0.0002]	0.9997 [0.0002]
ELF	–	–	0.3948 [0.2885]	0.4349 [0.3223]
intv	–	–	1.9085 [0.8155]	1.8943 [0.8219]
history	–	–	3.16e+15 [6.59e+22]	1.54e+15 [2.07e+22]
neighbors	–	–	0.2763** [0.1133]	0.3219** [0.1339]
regime	–	–	0.9269 [0.0373]	0.9206* [0.0365]
parties	–	–	0.8699* [0.0519]	0.08688* [0.0525]
LR Chi²	3.43	10.95	53.8	50.71
Prob > Chi²	0.1797	0.0042	≤0.0001	≤0.0001
Log likelihood	-268.1313	-264.3711	-168.6881	-170.2303

* $p \leq 0.05$, ** $p \leq 0.01$ (Standard Error shown in brackets)

Table A.10 Case Statistics: Colombia and Lebanon

Case	wartype	dur (y)	spoiling	spoilingnum	ELF	intv	history	neighbors
Colombia	0	26.91	1	1452	0.656	0	1	1
Lebanon	1	10.7	1	463	0.78	1	1	1

Table A.11 Mean Spoiling per Year: Colombia and Lebanon

Case	mean	std. dev.	min	max
Colombia	53.77778	52.6493	0	199
Lebanon	66.14286	63.51228	4	150

Table A.12 Difference of Means *t*-Test

Case	Mean	Std. Err.	Std. Dev.	[95% conf.	interval
Colombia	53.7778	10.13236	52.6493	32.95041	74.60515
Lebanon	66.14286	24.00538	63.51228	7.403796	124.8819
Combined	56.32353	9.303912	54.25066	37.39458	75.25248
Difference	-12.36508	23.26414	–	-59.75258	35.02242
			critical *t* = *2.037*	***t* = -0.5315**	

Appendix III: Conflict STATA DO File

```
*This DO File accompanies the DURATION dataset focused on the conflict unit of analysis. *
*The following lines produce the descriptive statistics*
summarize
tab wartype spoiling
pwcorr wartype dury spoiling spoilingnum ELF intv history neighbors, star(0.05)
*This line initiates the Chi2 test for correlation between war type and spoiling.*
tab wartype spoiling, chi2
*The following lines produce my negative bionomial regression models. *
nbreg dury wartype spoiling
nbreg dury wartype spoilingnum
nbreg dury wartype spoiling wartype#spoiling.
```

Appendix IV: Country-Year STATA DO File

```
*This DO File accompanies the INTERACTION dataset focused on the country-year unit of analysis. *
*These lines initiate the descriptive statistics. *
summarize
pwcorr wartype spoiling spoilingnum durable recurred population gdp ELF intv history neighbors regime parties, star(0.05)
*The following lines create the hazard models for DURABILITY. *
stset year, failure(durable==0)
stcox wartype spoiling
stcox wartype spoilingnum
stcox wartype spoiling population gdp ELF intv history neighbors regime parties
stcox wartype spoilingnum population gdp ELF intv history neighbors regime parties
*The following lines create the hazard models for RECURRENCE. *
stset year, failure(recurred==1) scale(1)
stcox wartype spoiling
stcox wartype spoilingnum
stcox wartype spoiling population gdp ELF intv history neighbors regime parties
stcox wartype spoilingnum population gdp ELF intv history neighbors regime parties.
```