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LEADER PSYCHOLOGY AND CIVIL WAR BEHAVIOR

by

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in the Department of Political Science
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ABSTRACT

How do the psychological characteristics of world leaders affect civil wars? Multiple studies have investigated how the personalities and beliefs of world leaders affect foreign policy preferences and outcomes. However, this research has yet to be applied to the intrastate context, which is problematic, given the growing importance of civil wars in the conflict-studies literature. This dissertation project utilizes at-a-distance profiling methods to investigate how leaders and their psychological characteristics can affect the likelihood, severity, and duration of civil conflicts. The findings of this research provide further support for the general hypothesis that leaders can, and often do, matter when trying to explain policy outcomes. More importantly, the findings demonstrate that leaders can influence the likelihood of civil war onset, the severity of civil wars, and their duration. Additionally, this project investigates the effect that civil war severity has on the psychological characteristics of leaders. Contrary to some previous research, however, the findings here indicate that leaders' psychology may not be sensitive to civil conflict severity.

I wish to dedicate this dissertation project to my beloved late Grandmother Alice Smith. You never stopped encouraging me to be the best person I could be. I'm eternally grateful for the sacrifices you made for me, the endless support you gave, and your limitless belief in my potential. Without you, I would not be where I am today. I also wish to dedicate this to my beloved late Mother Janet, who left us too soon, but never let me forget that my future was bright and full of promise. I love and miss you both more than words can express. Finally, I also dedicate this work to my nieces K.K. and Emerson and my nephews Oliver and Weston. Always remember that you are loved and that the future holds limitless potential.

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CHAPTER 1: LEADERS AND CIVIL WAR BEHAVIOR

Introduction

How does the psychology of political elites affect civil war behavior? Since approximately 2003, it became clear that internal conflict had captured the attention of conflict studies scholars (Walter 2017). Furthermore, civil wars have resulted in a number of combat-related deaths that is almost double that of casualties associated with interstate war (Fearon and Laitin 2003, 75). As a result, there has been a great deal of research that has explored the sources of civil war onset, duration, severity, and termination. However, much of this research has focused on structural factors relevant to the state and how those factors make civil war more likely or more severe. As a result, the vast majority of the civil war literature ignores leaders entirely. This issue is particularly important because many of the key theories that attempt to explain civil war make explicit psychological arguments without ever directly measuring or testing those psychological processes. A key example of this is research based on the concept of relative deprivation (Gurr 1970). The theory of relative deprivation argues that people who are struggling economically or politically - relative to people they see on a regular basis - are more likely to have grievances that lead them to rebel against the state (Gurr 1970). This is said to be true regardless of the presence or absence of absolute deprivation – which should hinder the ability of people to rebel. Unfortunately, too often state-level variables, such as economic inequality (i.e. Acemoglu and Robinson 2005) or political inequality (Cederman, Weidman, and Gleditsch 2011) are used as proxies for *individual* motivations for revolt. This type oversight in the literature is what I seek to address in this project. To correct this shortcoming, I explore how

the psychology of elites (i.e. presidents, prime ministers, etc.) can affect civil war behavior (i.e. civil war initiation, duration, and severity) and how civil wars can affect the psychology of elites (i.e. do events within the conflict cause leaders to adapt their psychological predispositions to the situation?).

We understand that individual leaders can shape foreign policy outcomes (Hermann and Hagan 1998). Furthermore, many scholars have considered leadership psychology as necessary for exploring foreign policy behavior (Ethridge 1971; Foster and Keller 2014; Keller 2005; Schafer and Walker 2006). If civil wars are more common and have resulted in more casualties than interstate wars, then it stands to reason that effective studies of the correlates of civil conflict should include measures of leadership psychology. A casual glance at the differing responses to the Arab Spring protests show how leaders can affect the dynamics of civil conflict. Bashar al-Assad in Syria and Muammar Qaddafi in Libya responded to peaceful protests with disproportionate violence, while other leaders like King Abdullah II in Jordan and Mohammed IV Morocco granted concessions to the protesters' demands. All four states were economically and politically similar; however, all four governments responded very differently to peaceful opposition. In Syria and Libya, the government's response resulted in destructive and bloody civil wars¹.

This casual glance at a recent and relevant series of events demonstrates that, while structural factors help us understand civil conflict behavior, leaders play an important role in the outbreak and/or conduct of intrastate conflicts. Far too many studies emphasize the situational

¹ Syria's conflict continues as of the writing of this dissertation and Libya continues to be plagued by extreme regime instability (i.e. high rates of regime turnover and dubious internal sovereignty).

variables present within a state that make civil wars more likely, but there are no studies that consider the role that individual leaders can play in shaping civil war behavior. Therefore, I attempt to address this shortcoming by exploring the role that individuals can play in shaping a variety of civil war behaviors.

Literature Review

While there has been a lot of research produced by conflict studies scholars, the vast majority of that research has relied on exogenous situational variables. For example, the research investigating civil war onset has found that structural factors like the presence of natural resources (Collier and Hoeffler 2004; Lujala, Gleditsch, and Gilmore 2005; Miodownik and Bhavnani 2011) or economic or political grievances (Fearon and Laitin 2003; Gurr 1970; Braithwait, Dasandi, and Hudson 2016; Holterman 2012; Vreeland 2008) are factors that increase the likelihood of civil war onset. Similarly, researchers studying the duration of civil wars tend to focus heavily on the role of structural factors. Similar to studies of civil war onset, researchers tend to find that two broad factors affect the duration of civil wars: economic factors and political grievances. Research has consistently demonstrated that factors such as high levels of income inequality and ethnic fractionalization are related to longer civil wars (Collier, Hoeffler, and Soderbom 2004; DeRouen and Sobek 2004). Most recently, researchers have begun to include the effect of individual leaders on civil war duration by finding that the longer a head of state is in power, the longer the civil war tends to be (Uzonyi and Wells 2016).

A similar lean toward structural or situational variables can be seen in the literature on civil war severity. Scholars have found that higher income countries experience less severe civil

wars (Chaudoin, Pskowitz, and Stanton Forthcoming), while countries that are heavily dependent on natural resources are more likely to experience more severe civil wars (Gawande, Kapur, and Satyanath Forthcoming). Additionally, like many other studies of civil war behavior, there is reason to believe that political institutions can shape certain civil war behaviors. A good deal of research finds that there is a negative relationship between democratic political institutions and the severity of civil wars (Lacina 2006)².

What is made clear in this very brief review of the civil war behavior literature is that there is an emphasis on structural or situational factors. These variables are often meant to serve as proxies for concepts such as individual grievance or individual greed. Such an approach homogenizes individual factors such as preferences, decision-making abilities, motivations, and predispositions to violence. However, there has been other fruitful research that has explored the role that individual leaders can play in shaping policy outcomes. Much of this research has focused on how the psychology of elites can affect foreign policy outcomes in particular. Because my project considers variables from leadership trait analysis and operational code analysis, this preliminary literature review will explore some of the key findings from these research agendas.

Leadership trait analysis has provided some very useful insights about how the psychological characteristics of leaders can affect their foreign policy preferences. Hermann (1980) investigated the effects of seven characteristics on aggressive foreign policy tendencies. She finds that characteristics of particular importance are: distrust, nationalism, need for power,

² The specifics of these various findings will be explored in the literature reviews of each respective chapter.

and conceptual complexity (Hermann 1980). This research indicates that higher levels of distrust, nationalism, and need for power correlate with a more aggressive foreign policy orientation, while a higher level of conceptual complexity correlates with a less aggressive foreign policy orientation (Hermann 1980).

Later research has emphasized how the psychology of leaders can affect different types of conflict. For example, Foster and Keller (2010) explore the effects that a leader's level of in-group bias has on the willingness to use diversionary force. They find that, in the context of economic hardship, leaders with higher levels of in-group bias are *less* likely to use diversionary force (Foster and Keller 2010). In a later research project considering the use of diversionary force, Foster and Keller (2014) find that higher levels of distrust and lower levels of conceptual complexity increase the likelihood that a leader will choose to use diversionary force. Finally, more recent research has explored how the psychology of leaders can help scholars better understand the democratic peace. Keller (2005), using an aggregated measure that combines need for power with a belief in ability to control events, demonstrates that a leader who is more likely to challenge constraints will be more likely to initiate militarized disputes regardless of whether he or she is operating in a democratic system.

Operational code analysis has also provided many insights into the foreign policy behaviors of a variety of world leaders. The operational code system focuses on a leader's political beliefs (George 1969). It is argued that these political beliefs should inform the types of foreign policy behaviors that leaders exhibit. The earlier operational code research has provided rich insights into the foreign policy behaviors of individual leaders and advisers. For example, McLellan (1971) explores how Dean Acheson's worldview affected his policy recommendations

during the Truman administration. However, many early studies relied on subjective, qualitative methods for identifying the operational codes of leaders.

Eventually, more systematic procedures were developed to quantify the political beliefs of leaders (Walker, Schafer, and Young 1998). Once scholars developed a way to quantify these beliefs, it became easier to systematically identify patterns of behavior. For example, Walker, Schafer, and Young (1999) explored the conflict management behaviors of George H.W. Bush and Bill Clinton in the Post-Cold War Era. Despite some similarities, the authors find that Clinton relied more on speech patterns labeled *rewards* while Bush relied more on *promises*. Furthermore, Bush was less flexible in his choices between the two. This leads the authors to conclude that, not only was Bush more conflictual, but he was also less flexible in his operational code than Bill Clinton (Walker, Schafer, and Young 1999, 618-619). The authors then explore how each president was likely to respond to moves made by foreign policy opponents. Bush was more likely to respond in a similar fashion if the move made by the opponent was cooperative or conflictual, while Clinton showed a less cooperative tactical choice when the opponent's move was conflictual (Walker, Schafer, and Young 1999, 622).

The more systematic approach has also been applied to deepening our understanding of the democratic peace. Schafer and Walker (2006) investigate the operational codes of Bill Clinton and Tony Blair to determine if there is any difference in the two leaders' beliefs about democratic and non-democratic states. The authors find that both leaders believe that democracies are more peaceful than non-democracies (Schafer and Walker 2006, 578). Additionally, both leaders are more optimistic about achieving their political goals with democratic states than with non-democratic states (Schafer and Walker 2006, 578). However,

there are interesting differences between the two leaders in their instrumental beliefs. On average Clinton is more cooperative toward non-democracies than Tony Blair (Schafer and Walker 2006, 573). This finding is supported by considering the different foreign policy behaviors each leader uses when dealing with non-democracies. Schafer and Walker find that Tony Blair tends to be much more “dogmatic” when dealing with non-democratic states, while Bill Clinton tends to be more flexible when dealing with either regime type (2006, 578-579). This finding is particularly interesting because the authors expected Tony Blair, who was operating under greater institutional constraints, would select a more pragmatic and flexible approach to foreign policy (Schafer and Walker 2006, 578).

What do these findings about foreign policy behavior have to do with civil war? It is clear there is a lack of research applying at-a-distance methods to the study of civil war behavior. Therefore, research applying these methods must build theories based upon the findings in the foreign policy literature. These findings lend themselves well to the study of civil war because many of them speak explicitly to the issue of preferences for aggressive tactics. It stands to reason that these psychological characteristics can be applied to a leader’s conduct during difficult domestic negotiations over contentious political issues. This project, therefore, addresses shortcomings in both the civil war and political psychology literature. While the traditional civil war literature assumes away the effects of individual idiosyncrasies, the at-a-distance political psychology literature fails to apply these methods to the study of intrastate violence and civil war.

Layout of the Project

This research project seeks to address the fact that the psychology of heads of state has not been applied to the study of broader civil war behavior. Therefore, this project proceeds to address each of these questions in separate chapters. In chapter two, I build a theory of how heads of state can influence the bargaining process. I argue that certain psychological characteristics of heads of state can increase or decrease the likelihood of bargaining failure by making bargaining problems, identified by James Fearon (1995), more likely. In chapter two, I investigate how heads of state and their individual characteristics can affect the conduct of civil war once it has begun. I argue that key psychological characteristics can influence a leader's decision to apply more violent strategies or tactics in the conduct of civil war and, therefore, increase the number of battle-related deaths in a given year.

In chapter three, I consider how heads of state can affect the termination of civil wars. Because my theories argue that political leaders have a key effect on civil war behavior, I focus on whether a civil war terminated with a negotiated settlement. Integrating a theory based on information provided by an ongoing conflict and how leaders perceive that information, I argue that certain leaders with certain characteristics are more likely to accept a negotiated end to a civil war rather than continue the costly fight. In chapter four, I reverse the independent and dependent variables in order to address a question that is often asked by political psychologists, but seldom receives attention in cross-national studies. I investigate what effect, if any, the events that take place within a civil war can cause meaningful and lasting changes in the psychology of world leaders. In chapter five, I discuss the conclusions that can be drawn from

this project about how leaders can influence policies that may lead to civil wars and can affect the conduct of the civil war once it has begun.

CHAPTER 2: CIVIL WAR ONSET

Introduction

How can the psychological characteristics of political elites help explain civil war onset? The majority of research investigating the correlates of civil conflict onset focus on the role of structural or situational variables. Furthermore, there is an implicit – and sometimes explicit – reliance on the rational actor approach to understanding the incentives and/or opportunities for civil war. However, the rational actor approach assumes away the effect that individuals can have on the likelihood of civil war onset. There is a robust research agenda in political psychology and behavioral economics that indicates that individuals may face many barriers to the rational calculation of costs and benefits (discussed in more detail below).

Given that the idiosyncratic characteristics of individual heads of state can – and often do – affect policy preferences and outcomes, it is imperative that these characteristics and their effects on civil war behavior be investigated. While no political psychologist would ever argue that structural and situational variables do not have an effect on policy preferences and decisions, many argue that the unique psychological characteristics of political elites act as a lens through which these situations and structures are viewed (Levy 2013). Factors such as state capacity can provide – or limit – a state’s ability to respond to armed or unarmed opposition groups, but state capacity tells us only about the *ability* of the state to repress and nothing about the willingness of leaders to utilize this capacity against its citizenry. Different regime dynamics do indeed provide different incentives or constraints on a leader’s willingness to respond to demands with force, but the presence or absence of these constraints tells us nothing about how leaders *perceive* such

constraints. Are they simply a minor obstacle? Or, are they actually binding constraints that may stop a leader from using force when an opposition group makes a demand? Costs and benefits can indeed be calculated by heads of state when considering compromise with an opposition group. However, given the same structural or situational constraints, leaders can – and often do – *perceive* costs and benefits very very differently (Kahneman and Tversky 1979; Tversky and Kahneman 1986).

In order to grapple with and challenge the assumptions made about how individual leaders calculate the costs and benefits of compromise or civil violence, we must take a closer look at leaders themselves. With advances in content-analysis software and a wider availability of speech transcripts, it is becoming much easier to investigate the psychological characteristics of world leaders at-a-distance. In early research, many political psychologists studying elite psychology's effect on policy preferences relied on small sample sizes or comparative case studies. Now, with the technological advancements just discussed, it is becoming possible for leadership analysts to apply these at-a-distance measures to more widely accepted large-*n* cross-sectional time-series models and increase the visibility of these findings in the broader conflict studies literature.

The factors affecting the onset of civil war have been of particular interest since the early 2000s because of their violence. However, no scholar to date has considered how the psychology of political executives that have been associated with conflict can affect the likelihood of civil war onset when controlling for key situational and structural variables. I try to fill this gap in the civil war literature by constructing a theory of civil war onset that focuses on how the psychological characteristics of political leaders can affect the bargaining behavior of that leader

in the context of contentious domestic politics and how that behavior can make civil war more or less likely. I argue that different psychological characteristics can cause a head of state to fall into different potential problems laid out by Fearon (1995) within the bargaining process. My findings indicate that, when controlling for key structural and situational variables, the psychological characteristics of heads of state can indeed influence the likelihood of civil war onset as well as the onset of lower-level armed domestic conflict. These findings reinforce the intuitive appeal of applying leader psychology in studies of civil war, while also presenting avenues for future research.

Structural Explanations for Civil War Onset

In the introductory chapter, I presented the at-a-distance political psychology literature and what the findings of these research projects mean for understanding leaders and their conflict behaviors. In this section, I report the findings related to structural variables and their effect on the likelihood of civil war onset. The majority of research investigating the onset of civil wars frame the effect of structural variables from the rational actor perspective (Mason 2009, 74). Many of these studies argue that certain structural variables can, in different ways, help to mitigate the collective action problem (Olson 1965) for potential rebels or provide opportunities for the state to respond with force to demands made by opposition actors.

One of the most consistent findings in the civil war literature is the effect of overall economic development on the likelihood of civil war onset. Fearon and Laitin (2003) find that GDP per capita – serving as a proxy for national development – is a robust predictor of civil war onset across several models. The more underdeveloped a state is, the more likely it is that the

state will experience a civil war because the population is frustrated with their lower standard of living and general economic deprivation. Additionally, others have found that lower per capita national income and a lower proportion of the population receiving secondary education is linked to a higher likelihood of civil war onset (Collier and Hoeffler 1998, 568). Instead of arguing that lower national income and education rates create a heightened sense of deprivation, Collier and Hoeffler (1998) argue that these economic factors actually capture the opportunity costs associated with participating in a rebellion. Moreover, Sambanis (2004) finds that only the population of a state³ and GDP per capita are significantly related to civil war onset across multiple data and model specifications.

Other scholars have argued that certain economic indicators can serve as a proxy for the so-called “greed” hypothesis of civil war onset (Collier and Hoeffler 2004). Collier and Hoeffler (2004) hypothesize that access to natural resources and their rents can help potential rebel leaders provide incentives to potential rebel recruits. However, the effect of natural resources on the likelihood of civil war onset has been contested (Fearon 2005). Some of the scholars challenging this finding have argued that rent-seeking behavior often associated with the presence of natural resources leads to weaker government institutions and a weaker capacity for counter-insurgency operations (Fearon 2005; Fearon and Laitin 2003; Humphreys 2005), while others have argued that there may be economic grievances associated with price-shocks and unequal distribution of benefits derived from natural resource rents (Ross 2004). Others have found that the type of resource within a country can also affect the likelihood of civil war onset. For example, several

³ This finding is driven by the fact that a country that is more populous is more likely to reach the necessary battle-death threshold because there are a greater number of people available to fight (Fearon and Laitin 2003; Hegre and Sambanis 2006).

scholars have found that oil and gas can have a strong effect on the likelihood of civil war onset (Fearon and Laitin 2003; Hegre and Sambanis 2006; Lujala 2010; Ross 2006).

Moving beyond the effect of economic variables on the likelihood of civil war onset, other scholars have focused on explicitly “state-centric” models of civil war. These scholars argue that regime dynamics can have a notable impact on whether or not a state experiences a civil war. Fearon and Laitin (2003) argue that states with politically, economically, or organizationally weak central governments are more likely to experience civil wars because they are less able to engage in effective counter-insurgency processes (75-76). However, state-capacity is not the only way to consider the regime-civil conflict hypothesis. Goodwin (2001) argues that there is a strong case to be made for the civil democratic peace. Goodwin even asserts that no consolidated democracy was ever overthrown by a popular revolutionary movement (2001, 276). However, other scholars have investigated a more nuanced approach to the effect of regime dynamics on civil war by exploring the effect of “anocratic” governments on civil war onset. Research into the effect of regime type on civil conflict propensities has largely relied on the Polity measure of democracy (Marshall, Gurr, and Jaggers 2016). The polity measure is an index of a variety of structural and political factors that combine to create a score ranging from -10 (most autocratic) to +10 (most democratic). While for democratic states, civil war may be unnecessary, and for fully autocratic states civil war is extremely difficult (see Hegre et al. 2001; Henderson and Singer 2000; Krain and Meyers 1997), some have argued that we should be focused on those regimes that fall in between these poles. The focus on those regimes that fall in between democracy or autocracy (usually measured as greater than -7 or less than +7 – referred to as anocracies) was driven by the idea that these states may be moving toward becoming

democracies, but there were several factors about the state that made civil war possible. One key example is that these transitioning states may provide for greater political participation but are averse to allowing public demonstrations against the government (Vreeland 2008). This belief has led many scholars to re-test empirical models that investigate the effect of anocracy on civil war onset (e.g. Fearon and Laitin 2003; Hegre et al. 2001). However, James Vreeland (2008) points out that flaws in the Polity measure, which includes political violence in its index, can explain the findings linking anocracy to an increased likelihood of civil war onset. Once the political violence aspect of the measure was removed, the correlation between anocracy and civil war disappears (Vreeland 2008).

Another application of the effect of regime dynamics on the onset of civil conflict can be borrowed from *interstate* conflict research. Studies of interstate conflict have investigated how authoritarian regime dynamics can affect the likelihood of interstate conflict initiation. Rather than aggregating measures of regime type into a continuous scale, some scholars have created unique measures of different types of authoritarian regimes (Geddes, Wright, and Frantz 2014). This approach captures the variation in regime types within the authoritarian spectrum and creates binary measures of personalist, party, military, monarchical, and hybrid dictatorships (Geddes, Wright, and Frantz 2014). Jessica Weeks (2012) builds a theory of how different authoritarian regimes produce different incentives or constraints on their respective leaders as they relate to the initiation of militarized interstate disputes (MID). Weeks (2012) argues that different types of authoritarian regimes present leaders with varying potential audience costs when they consider the use of force. In strong party dictatorships, where a leader is beholden to a civilian governing body, the political cost of choosing force is much higher than in a situation

where there is an unconstrained personalist dictator or a military dictatorship (Weeks 2012). She finds that strong civilian constraints on a dictator in a party dictatorship can make an autocratic state just as peaceful as a democratic one, while regimes lacking those constraints may serve to explain violence in mixed-regime dyads (Weeks 2012).

While this approach to studying the effect of regime type on conflict is a relatively new one, there is ample room in the civil war literature for its application as an explanatory or control variable. It is very likely that when faced with opposition demands, a personalist dictator is more likely to see the potential costs of using force to dispel the opposition as very low. Conversely, the same would not be true of a dictator facing the constraints of a party that is responsible for his or her tenure in office. Therefore, this particular regime dynamic is worthy of exploration in this project.

What is evident in the most predominate research into civil war onset is that scholars believe that situational or structural variables are the key to understanding why some states experience civil wars. These situations or structures arguably influence the incentives to rebel, the potential costs of rebellion, the ability of the state to effectively respond to rebellion, and/or the ability of the population to rebel. However, many of these variables serve as proxies for inherently psychological arguments about the causes of civil war. For example, economic underdevelopment is meant to serve as a proxy variable for *grievances* or *counter-insurgent capabilities* and the presence of natural resources is supposed to serve as a proxy for “*greed*” motivations. However, almost all of these theories and their empirical implications are based on the assumptions that either the state or the potential rebels are *rational actors*. For decades behavioral economists and political psychologists have argued that an individual’s ability to

accurately calculate costs and benefits is either hindered or enhanced by that individual's psychological characteristics (Kahneman and Tversky 1979; Simon 1972; Thaler 2015; Tversky and Kahneman 1986).

Given the role of individual cognitive and psychological limitations to rational calculation, it is perplexing that conflict studies scholars pay such scant attention to these limitations in their attempts to understand conflict behavior. Such an omission is especially perplexing given the findings relating the psychological characteristics of political elites to interstate conflict preferences and behavior (see discussions of Foster and Keller 2010, 2014; Hermann 1980; Keller 2005; Keller and Foster 2012, 2016 in the previous section). Furthermore, given the inherent psychological assumptions of many of the approaches to the study of civil war, there is a need to test whether or not the psychological characteristics of principal actors can affect civil war onset when controlling for these important structural factors. No individual can be expected to behave in the same ways as another individual in the same political or economic structure or given the same political constraints. Individuals bargaining over opposition demands *perceive* different costs to compromise, they *perceive* different threats and opportunities, they *believe* different things about the other actor making demands, and they are *motivated* by different things. Understanding how these idiosyncrasies affect the likelihood of civil war onset is essential for a more complete understanding of intrastate conflict.

Theory and Hypotheses

At the most basic level, civil wars involve two key actors: the state and an opposition group⁴. One or both actors have some sort of political claim that the other actor may respond to. The actors may choose to do nothing (maintain the status quo), negotiate some sort of settlement to avoid violence, or they may choose to abandon negotiation and engage in armed civil conflict. As with interstate conflict, the road to civil war is the result of a bargaining process that typically begins with instances of non-violent contentious politics (for a discussion of war as a bargaining process see Powell 2002). Furthermore, political leaders are instrumental in tracing the breakdown of negotiations. Therefore, a theory of how heads of state can affect the likelihood of civil war onset should be framed in relation to the bargaining theory of war. More importantly, a strong theory of civil war onset should explore what factors may cause bargaining to break down and make a civil war more likely.

James Fearon (1995) sought to explain why actors would choose to abandon the bargaining process and choose the costlier option of fighting. He argues that bargaining should always be the preferred option because the costs of fighting can offset the gains that may be achieved by the fighting; therefore, the breakdown in bargaining cannot be rational (Fearon 1995). As a result, he explores possible explanations for why normally rational actors would abandon the bargaining process and engage in armed conflict.

⁴ This does not mean that there may not be multiple opposition groups, but for simplicity of explanation this theoretical frame focuses on a two-player bargaining model as its base.

Fearon (1995) argues that normally rational leaders can choose the seemingly irrational option to fight instead of bargain for two overarching reasons: asymmetric information and commitment problems. In the first condition, one or both actors do not have complete information about the capabilities of the other actor they are bargaining with. Therefore, an actor may be overconfident about his or her ability to mitigate possible costs or underestimate potential *ex ante* costs. This problem is exacerbated because both actors have an incentive to overstate their respective capabilities during the bargaining process. In the second condition, actors may be unable to credibly commit themselves to following through on an agreement (Fearon 1995). These two overarching bargaining problems can be magnified if heads of state have higher scores for certain key psychological characteristics.

The first psychological characteristic that can cause a head of state to abandon the bargaining process is his or her need for power. Leaders who are motivated by a need for power desire to impose their will upon other actors and are more likely to pursue positions that give them power or influence (Hermann 2003, 190). Furthermore, this motivation can result in a leader being more competitive, aggressive, and manipulative in the bargaining process (Keller 2005, 11). Finally, leaders motivated by power tend to be more willing to use military force against domestic and international adversaries (McClelland 1975, 314-359; Winter 1973). Therefore, when a head of state motivated by a need for power and influence faces demands – such as regional autonomy – made by a domestic actor, he or she is more likely to experience the asymmetrical information bargaining problem. This is because these types of leaders – motivated to be aggressive and manipulative during bargaining – will underestimate the strength of the group making the demands. Additionally, they will be motivated by a desire to not feel or appear

weak by capitulating to the demands of opposition actors. Finally, leaders with a high need for power – driven by their desire to assert their dominance – will be far less likely to make the necessary concessions that could prevent an opposition actor from abandoning the bargaining process and engage an armed conflict.

H1: A head of state motivated by a need for power will increase the likelihood that the state will experience a civil war.

Another psychological characteristic that can increase the likelihood of bargaining problems is a leader's level of distrust. Distrust is a general wariness about the reliability or intentions of other actors (Hermann 2003, 202). Particularly, distrustful leaders tend to believe that the other actor is not negotiating in good faith and that any concession the state may offer will not be met with honest and equitable concessions by the other actor. The effect of distrust on the bargaining process can be viewed through the lens of the commitment problem. If a head of state is distrustful, he or she is likely to approach the bargaining process with a baseline wariness that is higher than a more trusting leader. Once bargaining begins, the distrustful leader should be more likely to believe that the actor making the demands will not honor their side of the agreement or that the other actor may increase their demands even if they are given a concession, thus leading to a stalemate or an escalation that makes a civil war more likely.

H2: A more distrustful head of state increases the likelihood that the state will experience a civil war.

Another characteristic that can affect the likelihood of civil war onset is a leader's belief about his or her ability to shape events and outcomes. A leader who has a higher belief in his or

⁵ This characteristic appears in Leadership Trait Analysis (as Belief in Ability to Control Events) and Operational Code Analysis (as Philosophical Belief 4, Control over Historical Development). These two variables are

her ability to control events believes that he or she is able to navigate political situations and shape the future of his or her country (Hermann 2003). This characteristic generates two competing hypotheses. It may be that leaders who have a higher belief in their ability to control events are more likely to believe that they can achieve their political goals through negotiation because they see themselves as being able to directly influence the outcome of contentious political negotiations. From this perspective, they should be less likely to experience asymmetric information problems and therefore be more likely to continue negotiations over political demands made by an opposing actor. This is the case because the leader should be less likely to feel the need to misrepresent his or her capabilities. Additionally, they may be less susceptible to the fear of the other actor reneging on their commitment. This theoretical possibility is driven by the fundamental belief that, even if the other actor reneges, the leader will be able to overcome that obstacle and resolve the problem by returning to the negotiating table. The certainty about one's ability to navigate political obstacles should decrease the likelihood that a leader will abandon the bargaining process. Moreover, leaders who score low for a belief in an ability to control events may feel uncertain about their ability to navigate the potentially tenuous negotiating process. Furthermore, these individuals are more likely to become easily frustrated with the negotiating process and become aggressive because they consistently feel that they have no control over their political environment or the negotiating process.

However, it is possible that a high belief in ability to control events can make civil wars more likely. Leaders who have a strong belief in their ability to control events may be more

operationalized differently, but they are conceptually very similar. Therefore, the discussion of this portion of the theory will discuss both interchangeably.

impulsive and willing to challenge perceived constraints (Hermann 2003). The impulsivity could lead them to abandon the bargaining process with a domestic actor. Further, the willingness to challenge constraints may cause the leader to rely more upon using the military as a tool for domestic repression and spark an armed rebellion, actual domestic political constraints notwithstanding.

H3a: A leader with a greater sense of control decreases the likelihood of civil war onset.

H3b: A leader with a greater sense of control increases the likelihood of civil war onset.

Additionally, a leader's self-confidence can affect the likelihood of civil war onset. Self-confidence refers to a leader's sense about his or her ability to overcome political obstacles and cope with objects and actors in the political environment (Hermann 2003, 194). In this case, the various stimuli from the political environment are filtered through a leader's beliefs about himself or herself (Hermann 2003, 194). A greater sense of self-confidence has been linked a greater willingness of individual actors to engage in various forms of collective action (Zomerem, Spars, and Postmes 2008). Additionally, leaders with high-levels of self-confidence tend to be less open to contextual information generated by the political environment (Hermann 2003, 194). This is because they are confident in their own assessment of the information. This can cause a breakdown in the bargaining process in a variety of ways.

Self-confident leaders may experience problems of asymmetric information for two key reasons. The first is that they are less open to contextual information. The self-confident leader is more likely to believe that they are stronger than they are relative to the other actor despite potential incoming information to the contrary. Additionally, the self-confident leader will likely

underestimate the other actor's level of resolve and commitment to achieving their political goals. Therefore, they may be less flexible in their willingness to make compromises that may avert conflict. However, higher self-confidence may also theoretically lead to a decrease in the likelihood of civil war onset. For example, if a leader is more self-confident, he or she may believe that he or she can successfully meet the demands of the opposition through negotiation or be less fearful of making concessions because they believe they can cope with any potential political fallout. Considering both of these possibilities, two rival hypotheses can be generated.

H4a: A self-confident leader will be less likely to experience the onset of a civil war.

H4b: A self-confident leader will be more likely to experience the onset of a civil war.

The next relevant psychological characteristic is a leader's conceptual complexity. Conceptual complexity refers to the degree to which a leader sees people, places, and events in shades of grey rather than black and white (Hermann 2003, 195). Leaders who are less complex in their thinking are more likely to perceive themselves as having fewer options when faced with demands from other political actors (Foster and Keller 2014; Hermann 2003). Equally important, less complex leaders are going to be more likely to see the other as good or bad rather than an actor responding to their own respective constraints. Conversely, more complex thinking leaders will be more likely to see themselves as having more options at their disposal in pursuit of their goals. Finally, more complex leaders tend to be better able to interpret the meaning of incoming contextual information than a less complex leader.

In the bargaining situation, the less complex leader is more likely to experience problems of asymmetric information than a leader whose thinking is more complex. When an opponent

signals resolve to achieve his or her goals in the bargaining process, the less conceptually complex leader is more likely to ignore these signals because they are more closed to information. Additionally, less conceptually complex leader is more likely to see the bargaining process as win or lose (i.e. zero-sum) rather than a process through which the bargaining parties can come to a compromise. Moreover, the less complex leader is going to be more likely to see the opening offer as *take-it-or-leave-it*. Therefore, this type of leader will be less likely to propose a counter-offer and more likely to abandon bargaining all together after the rejection of the first offer. These factors all lead to an increased likelihood of bargaining breakdown and therefore increased likelihood of civil war.

H5: A less complex leader is more likely to experience a civil war onset.

Another leader-specific variable that can cause the bargaining process to breakdown is the level of in-group bias. In-group bias refers to a leader's emphasis on the supremacy or advancement of his or her in-group. More precisely, leaders who score high on in-group bias believe that their group is the most important actor in the political universe (Hermann 2003, 201). This characteristic creates a strong attachment to the group or nation. In-group bias can increase the likelihood of bargaining failure because of the effect it can have on the concept of *issue indivisibility* (Fearon 1995, 382). Issues that are especially salient to an actor can be considered by the actor to be indivisible, and a high score for in-group bias likely makes demands related to a state's unity or the actor's group remaining in control of the government especially salient. Therefore, when a leader perceives his or her in-group as the state (akin more to nationalism than to other in-group identities), demands made by another group for regional autonomy or secession appear as an existential threat to his or her group. This results in the

leader refusing the demands of the opposition group and abandoning the bargaining process. Such abandonment makes conflict more likely. Additionally, when a leader perceives his or her in-group as the ethnic, religious, or political group he or she identifies with and he or she relies on that group for power bargaining is more likely to breakdown. This is particularly true when an opposition group makes demands for more meaningful representation in a governing coalition or broader political rights. A breakdown in this case too makes civil war more likely.

H6: A leader with high in-group bias is more likely to experience a civil war onset.

An additional characteristic that can affect the likelihood of civil war onset is a leader's belief about the fundamental nature of the political universe (P-1). Individuals can believe that the political universe is inherently one of conflict or one of cooperation (George 1969; Schafer, Walker, and Young 2003, 226-227). When a leader believes that the nature of the political universe is inherently conflictual, the bargaining process can breakdown in a few key ways. First, these leaders are likely to perceive the utility of negotiating at all as being quite low. This is because the leader believes that conflict is natural and that attempts to avoid it will be futile. Moreover, they will also believe that other actors in the political universe may see the world in the same way leading them to believe that the opposition sees conflict as being inevitable as well. In the context of bargaining problems, a conflictual worldview can make problems of asymmetric information and commitment problems more acute. First, if a leader believes the political universe is inherently conflictual, he or she will likely not believe that the opposition will take negotiation seriously, even if there are credible signals that an opposition group is making its demands peacefully. This may be driven by the way the conflict-oriented leader filters information about threats and intentions of an opposition group through his or her beliefs about

the political universe. Moreover, these individuals are likely to discount or ignore the information about the potential costs of abandoning bargaining, thereby increasing the possibility of conflict. Second, the conflict-oriented leader may be more susceptible to perceived commitment problems. This is because the conflict-oriented leader is likely to believe that, even if he or she did negotiate with the opposition and reach a settlement, that the settlement will not be a lasting one. The conflict-oriented leader is likely to believe that once he or she makes a concession, that the opposition group may choose to escalate their demands and resort to conflict to achieve them. This belief is driven by the belief that the political universe and the actors within it are inherently conflict-oriented and that conflict is a natural part of the political universe. Therefore, the conflict-oriented leader is likely to abandon bargaining in order to skip the time-consuming bargaining process altogether and get straight to the fighting.

H7: A belief that the political universe is conflictual increases the likelihood of civil war onset.

A final psychological characteristic that can reasonably affect the bargaining process is a leader's belief about whether conflict or cooperation is the most effective way to achieve political goals (I-1). While P-1 reflects a leader's belief about other actors and the political universe, I-1 reflects a leader's belief about himself or herself. More importantly, I-1 reflects whether or not a leader believes that he or she should pursue political goals using strategies of conflict or cooperation. An actor who believes that he or she achieves political goals more effectively with conflict is far more likely to see the bargaining process as a waste of time. For the conflict-oriented leader, cooperative strategies are inefficient and sitting down with a potentially hostile actors runs counter to how the leader thinks about himself or herself. This

refusal to meaningfully bargain will make the breakdown of bargaining more likely and therefore increase the likelihood of civil war.

H8: A belief that conflict is the best way to achieve goals increases the likelihood of civil war onset.

The bargaining process applied in this theory assumes more than one actor is involved in the process. However, modelling such a process using at-a-distance psychological methods is not an easy task. Therefore, I wish to expand the discussion of a key assumption I make in this model of civil war onset. While either actor (the opposition or the state) can exacerbate bargaining problems, I am most interested in capturing how the head of state's behavior contributes to the onset of civil war. Both sides can choose to abandon bargaining, but that choice is not exclusively informed by one side's decision to give up bargaining. Eventually, it is the behavior of one of the actors that can lead the other party to abandon bargaining.

In the case of intrastate bargaining over political demands, it is the government that holds the majority of the leverage in negotiations. The government makes and enforces laws; this makes the bargaining behavior of the head of state important. Choosing to consider the monadic effects is desirable because the state can choose to leave the bargaining table, or they can drive the opposition away from it. This process is driven by the way the leader behaves and that behavior is informed by the characteristics outlined above. Therefore, despite the fact that the process is an inherently dyadic one, I am interested in observing a set of monadic variables at the level of the state. The leader in this case is an instrument of the state, though not its exclusive decision-maker; they are the *final* decision-maker in matters of policy (i.e. they approve negotiated settlements, sign laws, etc.). Since this is the case, it is also important to think about

the bargaining failure process as being centrally related to the state's failure to make concessions, and that failure inevitably rests with the leader.

Research Design

Sampling Criteria and Unit of Analysis

The potential population of cases will be every state in the international system in a given year. This is appropriate because every state in the system is at risk of experiencing a civil war in a given year. Though many states never experience a civil war, there is a non-zero probability of experiencing one in every year. The population will be sampled from 1939 – 2010. This time-period is appropriate because of the clear uptick in civil wars in the international system in the post-World War II (WWII) era driven by the independence of former colonies and, later, the collapse of the Soviet Union (Fearon and Laitin 2003).

My unit of analysis is the state-year. Because I am interested in the ways in which the psychological characteristics of national leaders can affect the likelihood that a country will experience a civil war, I assume that the national leader is an important extension of the state. When a domestic opposition group makes a political demand against the government, it is very likely the national leader who will be the principal negotiator. Therefore, it is the leader's characteristics that are important for understanding whether the bargaining process will break down and result in a civil war. My sample of the population is driven by the availability of speech texts for a given leader in a given year⁶. These transcripts are taken from a variety of

⁶ This availability is driven by the depth and breadth of digitally available speech archives.

possible sources including: government archives, news transcripts, political party websites, and personal websites of the leaders in question. To accurately code a leader's score for the characteristics requires between 4,000 and 5,000 spoken words.

Variables, Sources, and Procedures

Dependent and key independent variables

The dependent variable is taken from the Upsala Conflict Data Program's (UCDP) Armed Conflict Data Set (ACD). They define internal armed conflict as, "contested incompatibility that concerns the government or territory, or both where the use of armed force results in at least 25 battle-deaths in a calendar year," (Themner and Wallensteen 2014, 541). I use their measure of armed conflict onset⁷ (25 or more battle-deaths in a calendar year) conflict and high-intensity conflict (1,000 or more battle-deaths in a calendar year) to test alternative models and demonstrate robustness. The dependent variable in each instance is binary, where zero indicates no new civil conflict or war in a given year and one indicates that a new civil conflict or war started in a given year. Additionally, I test two different ways to handle ongoing civil conflicts. The first approach I codes ongoing civil wars as zeroes. While this approach may cause states experiencing civil wars to appear more peace than they are, a state can experience internal conflicts with more than one group. Moreover, these conflicts may not start at the same time. The second approach treats ongoing civil conflicts as missing data. This approach does

⁷ This operationalization of the dependent variable considers the onset of all conflicts that reach the 25 annual battle-related death threshold, including those conflicts that surpass the 1,000 battle-related fatality threshold. I refer to these conflicts simply as "armed conflicts" and I refer to the subset that reaches 1,000 battle-related fatalities in the first year of the conflict as "high-intensity conflicts"

shrink the sample but avoids the problem of making states experiencing conflicts seem more peaceful than they actually are.

The key independent variables of interest come from leadership trait analysis (Hermann 1980) and operational code analysis (Walker, Schafer, and Young 2003). All scores will be generated using Profiler Plus content-analysis software (socialscienceautomation.net), which analyzes the spoken words of heads of state. The first set of psychological characteristics will come from the Leadership Trait Analysis program (Hermann 1980). The first psychological characteristic of interest is the level of distrust for a head of state. Profiler Plus focuses on the use of nouns and noun phrases when referring to persons other than the leader and groups other than the group the leader belongs to (Hermann 2003, 202). The score is the percentage of times in a speech or an interview response that a leader exhibits distrust toward others (Hermann 2003, 203). The second psychological characteristic of interest is an elite's level of self-confidence. Profiler Plus focuses on the leader's use of pronouns such as, *my*, *myself*, *I*, *me*, and *mine* (Hermann 2003, 194). Again, the context is essential. Does the pronoun appear in a phrase where the leader is initiating an action, or arguing that he or she should be viewed as an authority figure (Hermann 2003, 194)? The score for self-confidence is calculated as the percentage of times in an interview response that pronouns are used in this context (Hermann 2003, 195).

The third psychological characteristic of interest is a leader's need for power. The coding for need for power focuses on the use of verbs. Some conditions under which a leader may be signaling an attempt to establish or maintain power and influence include when the speaker: proposes or engages in a strong forceful action, gives advice or assistance that is not solicited, attempts to control the behavior of another person, tries to persuade or argue with someone else,

seeks to gain fame or notoriety with an action, or shows concern for his or her reputation or position (Hermann 2003, 190).

The fourth psychological concept of interest in this study is a leader's belief in his or her ability to control events. As discussed above, this concept is operationalized two different ways, one in conjunction with Leadership Trait Analysis and one with Operational Code Analysis. The LTA version of belief in ability to control events refers to a leader's perception that he or she has some degree of control over the situation she or he is in (Hermann 2003, 189-190). More precisely, these leaders believe that individuals and governments can shape outcomes (Hermann 2003, 190). Coding focuses on verbs and action words, particularly verbs describing actions taken by the leader in question or the group with which the leader identifies (Hermann 2003, 190). The score is calculated as the percentage of times the verbs indicate that a speaker has taken responsibility for planning or initiating an action (Hermann 2003, 190).

An alternative measure about a leader's sense of control comes from operational code analysis (P-4). This score reflects a leader's belief about his or her own sense of control over historical events. The score is generated by taking the number of self-attributions as a percentage of the total attributions (Walker, Schafer, and Young 2003, 228). This index measures the locus of control over historical events: those who attribute more actions to self, see self as more in control, while those who attribute more actions to others see others as more in control. This score is bound between zero (a very low belief of one's control over historical events) and one (a very high belief in one's control over historical events) (Walker, Schafer, and Young 2003, 228).

The fifth psychological characteristic of interest is an actor's conceptual complexity. Conceptual complexity is the degree of differentiation that the leader shows in describing other people, policies, or things (Hermann 2003, 195). Words such as *approximately*, *possibly*, or *trend* indicate a higher degree of conceptual complexity; words such as *certainly*, *absolutely*, or *without a doubt* indicate a lower degree of conceptual complexity (Hermann 2003, 196). The score for this trait is the percentage of high versus low complexity words used in the verbal sample (Hermann 2003, 196).

The sixth psychological characteristic of interest is a leader's level of in-group bias. In-group bias is a leader's world view in which his or her group holds center stage (Hermann 2003, 201). This belief promotes strong emotional attachments to the group with which the leader identifies. When coding for this trait, the focus is on words used to describe the leader's own group (Hermann 2003, 201). If the leader uses modifiers to describe his or her group as positive (i.e. *peace-loving*, *great*, *progressive*, *successful*, *prosperous*), or they use words that suggest strength (i.e. *powerful*, *capable*, etc.), then that leader likely has higher in-group bias (Hermann 2003, 201). The score is the percentage of times in a speech that a leader refers to in-groups that use the modifiers outlined above (Hermann 2003, 201).

The next set of psychological characteristics are taken from the Operational Code Analysis research program. These characteristics focus on the political beliefs that individuals hold. Operational code analysis uses the Verbs in Context System (VICS) to generate scores for the beliefs of interest. The VICS method focuses on six attributes of the verb and its surrounding context (Walker, Schafer, and Young 2003, 224). The six attributes are: subject, verb category, domain of politics, tense of the verb, intended target, and context (Walker, Schafer, and Young

2003, 224). The subject of the verb can be self or other (Walker, Schafer, and Young 2003, 224). The verb can have a positive or negative valences. In the event the verb is transitive, then it can be further categorized as cooperative or conflictual behavior that takes the form of a word or a deed (Walker, Schafer, and Young 2003, 224).

The first philosophical belief within operational code analysis focuses on whether or a not an actor believes the political universe is essentially one of conflict or harmony (George 1969; Walker, Schafer, and Young 2003). It ranges between -1 and +1, with a positive score indicating that a leader believes that the fundamental nature of the political universe is one of harmony, while a negative score indicates that it is one of conflict (Walker, Schafer, Young 2003, 227). The score for this variable is the balance between the frequencies of positive and negative verbs attributed to others in a leader's public statements (Walker, Schafer, and Young 2003, 226).

The next psychological variable of interest is the first instrumental belief from operational code analysis. This measures the extent to which a leader believes that a conflictual or a cooperative approach is most appropriate for achieving his or her political goals (George 1969; Walker, Schafer, and Young 2003). The score can range from -1 to +1 with a negative score indicating that the leader believes conflict is the most effective means of achieving a foreign policy goal, while a positive score indicates that a leader believes that cooperation is the most effective approach for pursuing foreign policy goals (Walker, Schafer, and Young 2003,

⁸ These can be positive or negative transitive verbs.

227). This score is generated by taking the balance of the frequencies of positive and negative verbs attributed to self (Walker, Schafer, and Young 2003, 226).

Control variables

A series of relevant control variables will also be included to minimize the possibility of spuriousness. The first variables capture the importance of regime dynamics. It has been long-accepted that perfectly autocratic and perfectly democratic states do not tend to experience civil wars (Vreeland 2008, 401). This led to a belief that so-called “Anocracy” would be related to the onset of civil wars (see Hegre 2001)⁹. However, this approach to linking regime type to civil wars has faced scrutiny regarding measurement (Vreeland 2008)¹⁰. Despite a lack of consistent findings linking the anocracy concept to the onset of civil conflicts and war, given its importance in the literature, I include the measure of anocracy as a control variable.

In addition to the anocratic variable, I also control for autocratic regime dynamics. States ruled by autocrats can be governed by the military junta, a single-party, a monarch, or by a personalist dictator (i.e. Syria, Libya, or Cuba) (Geddes, Wright, and Frantz 2014). Geddes, Wright, and Frantz (2014) code each class of dictatorship by focusing on who controls the policy-making process, leader selection, and the state’s security apparatus. Therefore, if the military controls those decisions, a state is coded as a one for being a military dictatorship, and zero on other values. The same is true for the identification of a party dictatorship. To identify a

⁹ Anocracy refers to states in between democracy and autocracy on the Polity IV scale. The argument states that regimes that fit into this category have meaningful signs of democracy like elections, but there are few outlets for the population to peacefully express grievances to the government. Therefore, these states are more susceptible to civil wars.

¹⁰ This is driven in part by issues with the Polity IV coding of states, particularly its inclusion of political violence as one of the components of the final index (see Vreeland 2008 for a thorough review of this data issue).

personalist dictatorship, they try to determine if the control over the various mechanisms rest in the hands of a very small group of people around the leader (Geddes, Wright, and Frantz 2014, 318). Recently research has shown that the internal dynamics of an autocratic regime can affect the likelihood that an autocrat will initiate a militarized interstate dispute (Weeks 2012).

Therefore, I will run models that control for the type of autocratic regime in a given year¹¹. The variables are binary for each type of autocratic regime. The state is coded as a one if they fit the definition of one of the autocratic regime types, zero if otherwise. I expect that, consistent with Weeks (2012), military dictators and personalist dictators will be more likely to experience a civil war onset, while I expect party dictatorships to be less likely to experience an onset of internal conflict.

Two final control variables are the log of the total population of a country being observed and GDP per capita. The overall population of a country should be positively associated with the likelihood of civil war onset. This stems from the greater resource pressures applied to the state as the population gets larger (Fearon and Laitin 2003; Hegre and Sambanis 2006). GDP per capita captures a state's level of economic development. If a state is well-developed, the population should be happier with their lot than if the state is less-developed. Therefore, there should be a negative relationship between GDP per capita and the likelihood of civil war onset (Fearon and Laitin 2003; Wengast and Basedau 2014).

¹¹ Geddes, Wright, and Frantz (2014) introduce additional categories that are not likely to be relevant to this study. These categories are: oligarchies, indirect-military, and hybrids of military, party, and personalist dictatorship.

Statistical Methods

Because my dependent variable is binary, I apply a variant of logistic regression model to test my hypothesis. The first consideration when working with time series cross-sectional (or panel) data is a concern about the possibility of unobserved unit heterogeneity. In the case of my data, I create a fixed-effect estimator to control for unobserved effects that are potentially unique to each state that may increase or decrease the likelihood that the state will experience a civil war. Another potential concern – unique to my data set – pertains to my sample size. When initially attempting to run models in which ongoing civil wars are treated as missing data, standard panel logit models fail to calculate a maximum likelihood estimator when certain psychological variables are present. This failure to calculate a maximum likelihood estimator is more common when working with smaller sample-sizes (Allison 2008, 8). Therefore, rather than performing a basic panel logistic regression with a fixed-effect estimator, I apply a bias-reduced generalized linear model (BRGLM) (Firth 1993; Kosmidis and Firth 2009). This method applies iterated adjustments of data in order to maximize the penalized likelihood. As a result, this method makes the accurate calculation of a maximum likelihood estimator more likely, especially when working with a sample-size of less than 200¹².

Results – Psychology and Civil War Onset

Before discussing the findings of the fully-specified models, it is prudent to discuss the motivations for model-specification choices. As with many social science models, it is

¹² I apply the same method to the models that code ongoing civil wars as zeroes rather than missing data. Kosmidis and Firth (2009) argue that this method is equally effective even in the absence of small-sample bias.

appropriate to explore possible collinearity among the independent variables of interest. Some variables demonstrate moderate to high correlations (see pairwise correlation tests in Appendix B). Distrust is moderately correlated with P-1 and need for power is moderately correlated with in-group bias; while a state's logged population is highly correlated with a state's logged GDP per capita. To explore the possible effects of these correlations, I tested several different combinations of psychological variables in differing models (see Appendix A). Despite the presence of moderate correlations among the psychological variables, the findings are only minimally sensitive to model specification¹³. As a result of these minimal differences, in this chapter I present only the models that include all psychological variables. Additionally, I ran models that exchange GDP per capita and logged population (see Appendix A). The change in findings only affects the significance of those control variables. Therefore, to remain consistent with the existing civil conflict onset literature, I present models that include both population and GDP per capita in the fully specified model.

Another specification question pertains to the treatment of ongoing conflicts. As discussed above, the concept of the dependent variables of interest is *civil conflict onset*, which means that when a civil conflict starts in a country year, it is coded 1 in the data (no conflict onset is coded 0). In the next year, the variable is coded 0 if there are no new civil conflict onsets. That is the case even if the original conflict is still going (see Bennett and Stam 2001).

¹³ The exception is the effect of distrust when included in armed conflict onset models along with P-1 and in-group bias. When ongoing conflicts are treated as zeroes, models with this combination of variables results in distrust losing its statistical significance.

Since that is the way onset is typically treated in the literature, in two of my models (columns 1 and 3 in Table 1 below), I follow that precedent.

However, there are at least two reasons to be concerned about that treatment of onset. First, an existing civil conflict may have its own independent effect on the possibility of another civil conflict starting: once the government is seen as engaged in one conflict, other alienated groups may see the moment as an opportunity to pursue their grievances. The second concern, and the more important one for the present research, is a theoretical one that pertains to my main explanatory variables. If a conflict continues into the second year with no new onset, then the traditional coding for that country year would be 0. But since the psychology of the leader probably has not changed significantly, it would now be corresponding to a 0 in the data set, and that problem compounds itself each year the conflict continues. It does not make much theoretical sense that a leader's psychology would predict conflict onset in one year, but, because of coding rules, it cannot predict the same conflict in year two. Because of these concerns, I ran an additional model for each dependent variable (columns 2 and 4 in Table 1) where ongoing conflicts are simply treated as missing cases and not included in the sample.

Table 1 - Onset Models

Fully-Specified Models

VARIABLES	Armed Conflict: Ongoing=0	Armed Conflict: Ongoing Missing	High Intensity: Ongoing=0	High Intensity: Ongoing Missing
Distrust _(t-1)	-0.843 (0.827)	-1.093 (0.700)	-2.020** (0.682)	-1.478* (0.616)
BACE _(t-1)	3.019** (1.023)	2.571** (0.887)	2.319** (0.846)	1.846* (0.754)
In-Group Bias _(t-1)	-0.652 (1.340)	1.934+ (1.173)	0.719 (1.107)	1.991+ (1.017)
nPower _(t-1)	-2.850* (1.191)	-2.808** (1.054)	-3.464*** (0.984)	-2.905** (0.930)
Conceptual Complexity _(t-1)	0.799 (1.086)	1.153 (0.997)	0.268 (0.897)	0.523 (0.857)
Self-Confidence _(t-1)	0.438 (0.448)	-1.132** (0.384)	0.277 (0.370)	-0.437 (0.332)
Task-Orientation _(t-1)	-0.251 (0.748)	-0.360 (0.667)	-0.126 (0.618)	-0.270 (0.573)
I-1 _(t-1)	-0.891** (0.319)	-0.584* (0.270)	-0.854** (0.263)	-0.745** (0.235)
P-4 _(t-1)	-2.346* (0.965)	-0.412 (0.861)	-1.248 (0.798)	0.185 (0.758)
P-1 _(t-1)	1.392** (0.483)	0.216 (0.446)	0.529 (0.399)	-0.520 (0.377)
Population _(log t-1)	0.0323 (0.0215)	0.0459* (0.0182)	0.0414* (0.0177)	0.0123 (0.0160)
GDP Per Capita _(log t-1)	-0.0526 (0.0337)	-0.0910** (0.0292)	-0.0517+ (0.0277)	-0.0272 (0.0248)
Personalist Regime	-0.551 (0.384)	3.883*** (1.089)	-0.380 (0.317)	3.648*** (0.900)
Party Regime	-1.127* (0.453)	0.0248 (0.691)	-0.979** (0.374)	0.127 (0.599)
Military Regime	-2.013** (0.686)		-1.506** (0.563)	
Anocracy	0.114 (0.205)	-0.409 (0.275)	0.0198 (0.169)	-0.362 (0.222)
Constant	-2.326* (0.970)	-1.859* (0.810)	-1.727* (0.801)	-1.292+ (0.692)
Observations	282	195	282	218

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Model one in Table one presents the findings for the onset of armed conflicts with 25 or more battle-deaths and codes ongoing conflicts that do not experience a new onset of a separate conflict as zeroes. First, a leader's belief in his or her ability to control events significantly increases the likelihood of a new armed conflict onset. This finding provides initial support for hypothesis 3b, which asserts that a leader's belief in his or her ability to control events makes armed conflict onset more likely. Interestingly, need for power is statistically significant; but, rather than making armed conflict *more* likely, a leader with a higher need for power is *less* likely to experience the onset of an armed conflict. Model one also provides support for hypothesis eight; a leader who believes that cooperation is the most effective strategy for achieving political goals (I-1) is less likely to experience the onset of an armed conflict. Additionally, a leader with a strong belief in his or her ability to shape historical outcomes (P-4) is less likely to experience a new armed conflict onset¹⁴. Finally, a leader's belief about the fundamental nature of the political universe (P-1) is statistically related to the onset of armed conflict. However, the coefficient is positive (contrary to the hypothesis). This finding signals that, when a leader believes that the fundamental nature of the political universe is one of cooperation, that leader is more likely to experience an armed conflict onset. In model one, only the control variables that pertain to specific regime dynamics achieve statistical significance. States with military and party dictatorships are less likely to experience armed conflict onsets than other regime types.

¹⁴ It is noteworthy that this finding is sensitive to model specification and is only present in model one. Therefore, we should be cautious about the inferences we draw about this variable.

Model two presents the findings for all civil conflicts (with a minimum of 25 battle deaths) when ongoing conflicts are treated as missing data. This modeling choice has some effect on the findings. First, in-group bias approaches statistical significance at the ten-percent significance threshold. This model indicates that a leader with a higher-level of in-group bias is more likely to experience the onset of an armed conflict. Though this finding is consistent with my hypothesis, the relationship is rather weak, and scholars should be cautious about drawing inferences from this finding. Second, self-confidence achieves statistical significance and significantly decreases the likelihood of armed conflict onset. This finding indicates that a self-confident leader is less likely to experience a new onset of internal armed conflict. While two variables become significant when ongoing conflicts are treated as missing data, two variables that were significant in model one fail to achieve statistical significance. P-1 and P-4 lose the significance exhibited in model one. Despite some differences between the two models, I-1, belief in ability to control events, and need for power continue to be significant and maintain the directional effects from model one. However, there are some noteworthy changes among the control variables. Population becomes statistically significant and makes an armed conflict more likely, while a higher GDP per capita makes armed conflict less likely¹⁵. Finally, the presence of a personalist dictatorship makes an armed conflict more likely than the presence of other types of regimes¹⁶.

¹⁵ Recall that GDP per capita and population are highly correlated with one another. Moreover, the significance GDP per capita is very sensitive to the presence of population in the models (see specifications in Appendix A). Therefore, we should be wary about drawing any inferences about GDP per capita from these models.

¹⁶ Military dictatorships are excluded from models that treat ongoing conflicts as missing variables. The military dictatorship variable in these models becomes a perfect predictor of a non-onset in that year.

Models three and four in Table one mirror models one and two but focus on the subset of the most intense internal conflicts. These models consider only new conflicts that reach the 1,000 battle-death threshold in the first year of the conflict¹⁷. The findings in models three and four share similarities with models one and two. Need for power and I-1 make high-intensity civil wars less likely, while belief in ability to control events is positively related to the onset of a high-intensity civil war. However, when exploring the subset of high-intensity conflicts, distrust achieves statistical significance in models where ongoing civil wars are coded as zeroes (when there is no new conflict onset) and models where they are treated as missing data points. Moreover, distrust has a negative effect on the likelihood of civil war onset in both models. This finding is not only contrary to my hypothesis, but contrary to a majority of the findings in the literature. Therefore, I will discuss the possible explanations for this perplexing finding in the following section. However, as with armed conflict onset, in-group bias achieves significance at the ten-percent level only when ongoing conflicts are treated as missing data. Therefore, despite a higher score for in-group bias increasing the likelihood of civil war onset, further research is needed to identify the effect that in-group bias can have on civil war onset.

Finally, to make the interpretation of these findings easier to understand, I present the predicted probability graphs for variables that are consistently related to intrastate conflict. Additionally, I present the predicted probabilities for GDP per capita. This approach allows me to compare the strength of my psychological variables of interest to the strength of an oft-used economic control variable. Figure one shows the probability of an armed conflict onset (>25

¹⁷ I will use the terms “civil war” and “high-intensity conflicts” interchangeably to describe the subset conflicts that surpass the 1,000 battle-death threshold.

battle-deaths) at different levels of a leader's belief in his or her ability to control events. Figure one shows that belief in ability to control events greatly increases the probability of an armed conflict. As belief in ability to control events approaches zero, the probability of an armed conflict is approximately 0.25. However, at its highest-level, belief in ability to control events is associated with a probability of armed conflict onset of approximately 0.90. Belief in ability to control events is significant in every model specification presented above. Moreover, the substantive effect of this variable on the probability of armed conflict is substantial, with an increase in probability of 0.65 from the lowest-level of belief in ability to control events and the highest-level of the variable.

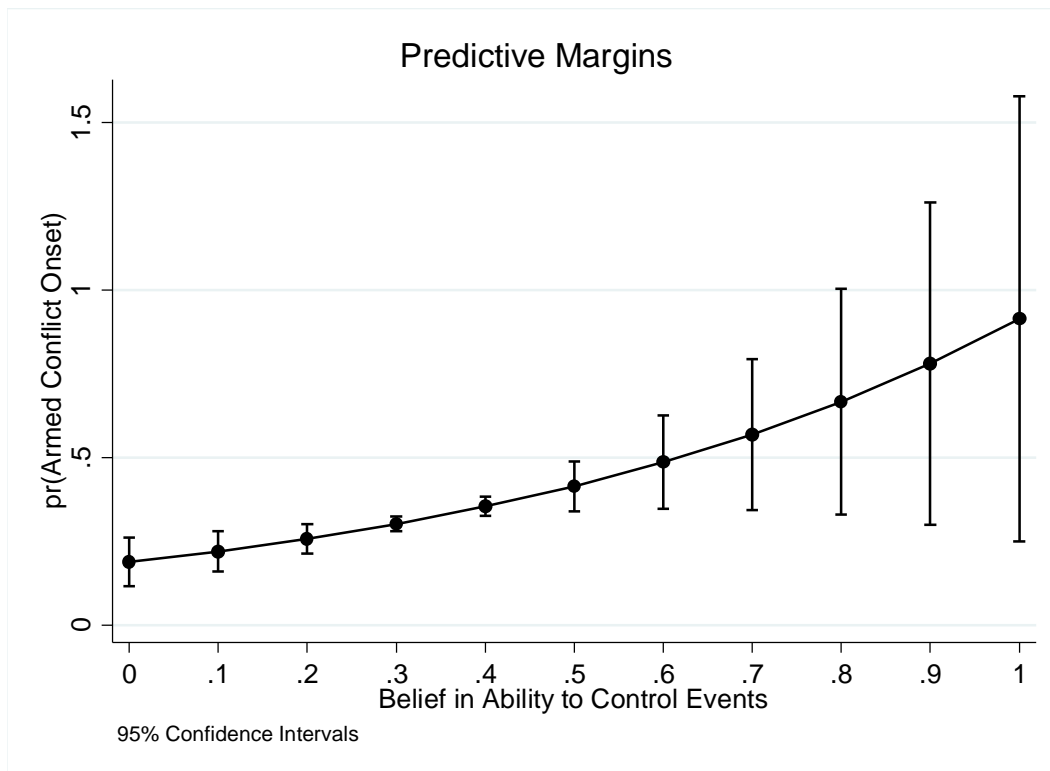


Figure 1: Predictive Margins - BACE

Figure 2 presents the predicted probabilities for need for power. The effect of need for power on the probability of armed conflict onset is not as pronounced as belief in ability to control events. The statistical results indicate that a leader's need for power decreases the likelihood of both armed conflict and high-intensity civil war onset, regardless of model specification. These findings are reflected in the graphical presentation of predicted probabilities. At the lowest-level of need for power, the probability of armed conflict is approximately 0.5; while at the highest-level, the probability of an armed conflict is approximately 0.1. This decrease in probability - of approximately 0.4 - is slightly weaker than the increase in probability associated with belief in ability to control events (approximately 0.6). However, as with belief in ability to control events, the marginal effect at each level of need for power is significantly associated changes in the probability of armed conflict onset.

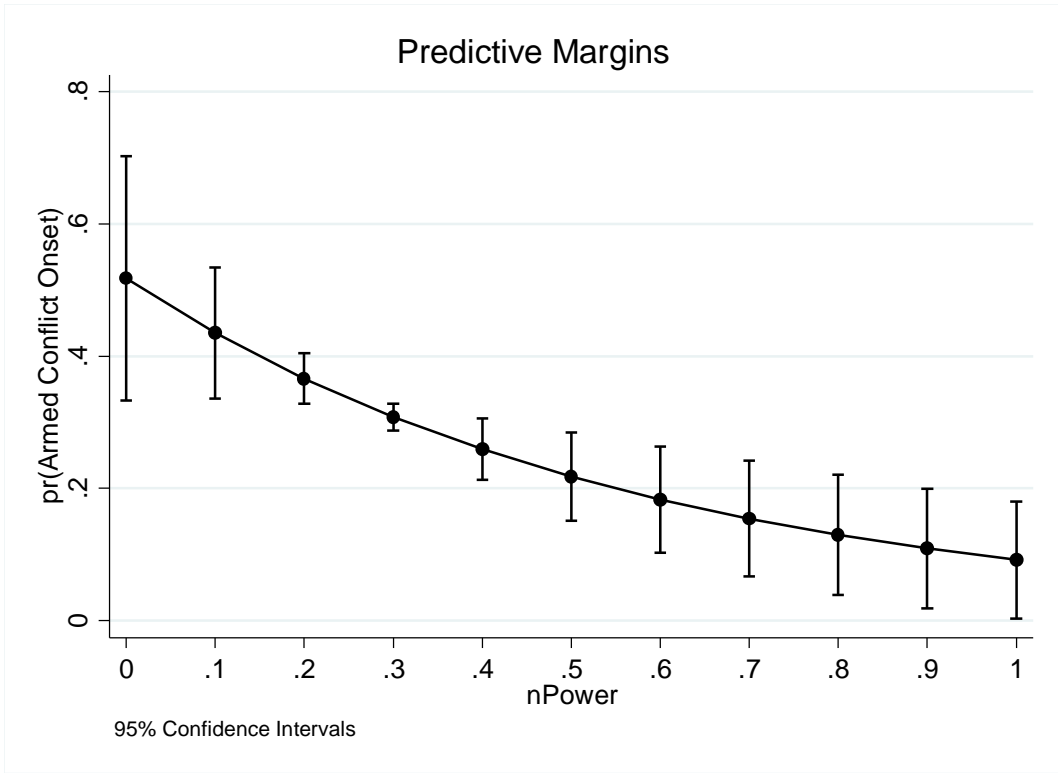


Figure 2: Predictive Margins - nPower

Figure 3 presents the predicted probabilities for I-1. I-1 is consistently associated with a decreased likelihood of armed and high-intensity conflict onset regardless of model specification. Again, the predicted probability graphs reflects the findings of the statistical model. At the lowest-levels of I-1 (most conflict-oriented), the probability of experiencing an armed conflict onset is approximately 0.59; while the highest (most cooperative) I-1 score is associated with a probability of 0.3 that a state will experience an armed conflict. This signals a modest decrease in probability of approximately 0.3 that a state will experience an armed conflict.

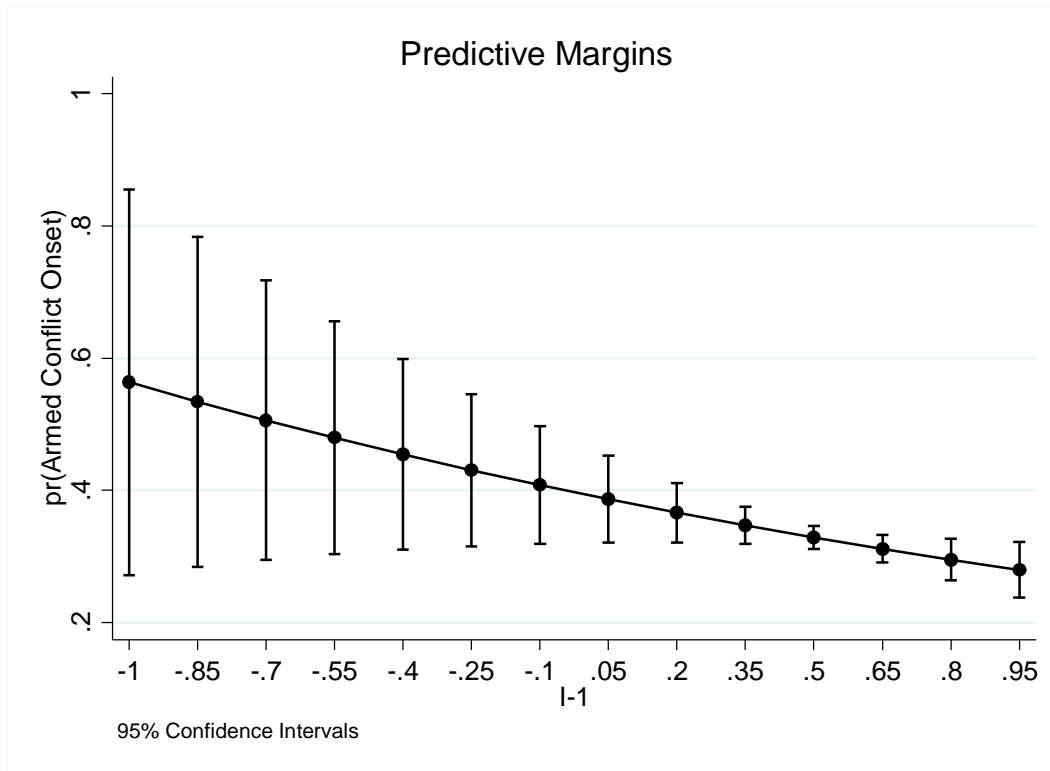


Figure 3: Predictive Margins - I-1

Finally, I explore the predicted probabilities for distrust. While the previously discussed variables were significant for all models tested in Table 1, distrust is only significant in models of the high-intensity conflict subset. Therefore, the marginal predicted probabilities presented in Figure 4 considers the probability of high-intensity conflict onset in a given year at various levels of leader distrust. Figure 4 shows that distrust does indeed have a negative effect on the likelihood of civil war onset. Distrust is associated with a decrease in probability of civil war onset of approximately 0.2 (i.e. the more trusting leader has a probability of approximately 0.35 of experiencing a civil war and a less trusting leader has a probability of 0.15). Though the findings show a significant and negative relationship, the effect on the probability of civil war onset is modest compared to some other psychological variables.

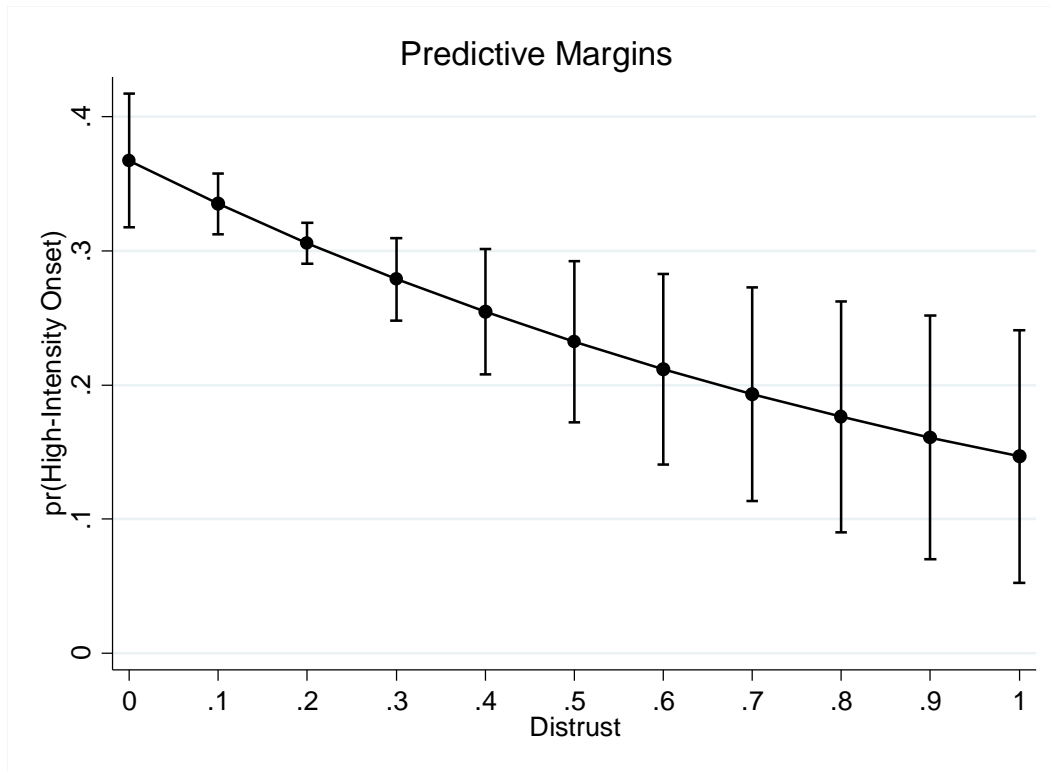


Figure 4: Predictive Margins - Distrust

Finally, for comparison, I present the predicted probabilities of GDP per capita. At the lowest-levels, GDP per capita is associated with a probability of approximately 0.5 that a state will experience an armed conflict in a given year, while the highest-level of GDP per capita is associated with a probability of approximately 0.28 that a state will experience an armed conflict. Interestingly, despite the consistent use of GDP per capita in the civil conflict literature, the decrease in probability from the highest to the lowest-levels of GDP per capita (approximately 0.2) is rather modest. In fact, when compared to a leader's belief in his or her ability to control events (approximately 0.6), the effect of economic development on the probability of armed conflict onset seems weak. Moreover, most of the significant psychological variables perform as

well, or better, than GDP per capita when comparing the predicted probabilities of armed conflict¹⁸.

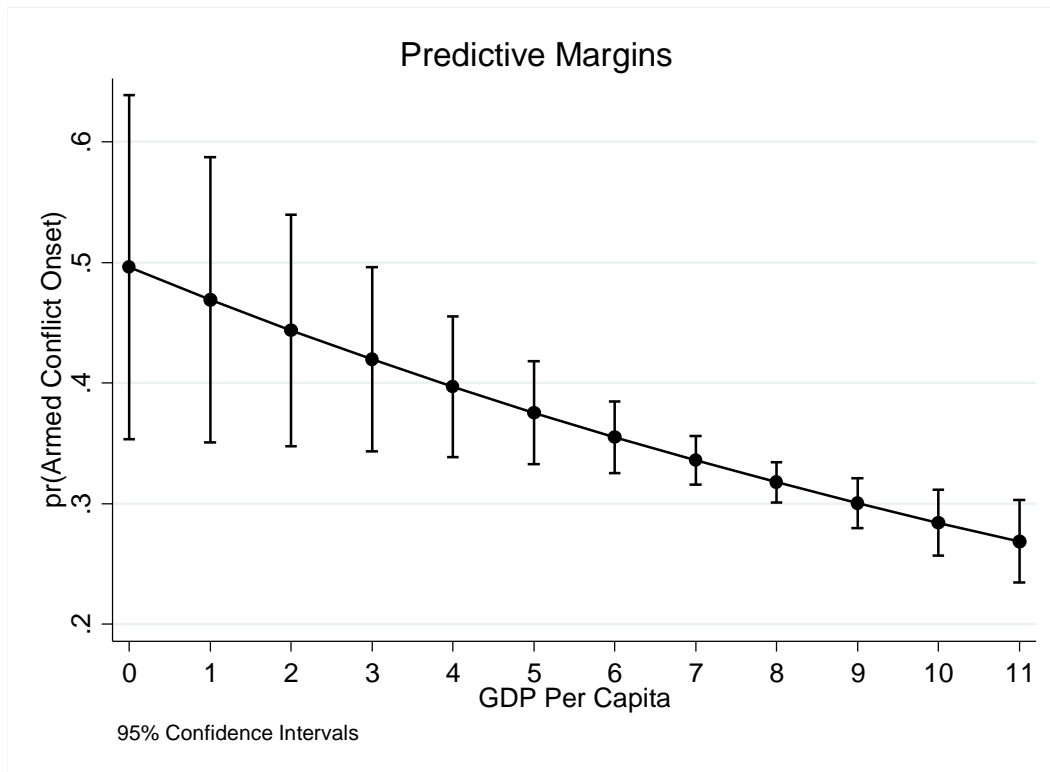


Figure 5: Predictive Margins - GDP Per Cap

Conclusion and Discussion

This chapter began by asking how the personality characteristics and beliefs of world leaders can affect the likelihood of civil conflict onset. The project began by constructing a theory that borrowed heavily from the bargaining theory of war and constructed hypotheses

¹⁸ Despite the fact that the significance of GDP per capita is very sensitive to model specification in my sample, GDP per capita is a variable that appears frequently in the civil war onset literature. Therefore, despite the sensitivity in my sample and the concerns about potential multicollinearity, I compare this consistently important variable to my novel independent variable.

about the ways in which these psychological characteristics can make bargaining failure – and thus conflict - more likely. Across multiple model specifications, a handful of personality characteristics stand out as important for understanding the likelihood of conflict onset (both high-intensity and armed conflicts). Moreover, these findings are largely consistent – with few exceptions - regardless of the treatment of ongoing conflicts. Nevertheless, some of the relationships run contrary to expectation.

Before turning my attention to the findings that were contrary to expectation, I will discuss the implications of the findings that were consistent with my hypotheses. One variable that maintains a relationship consistent with my hypothesized expectations is I-1. When a leader believes that the most effective strategy for achieving political goals is cooperation – rather than conflict – he or she is less likely to experience the onset of both civil conflicts and civil wars. This indicates that there is support for the idea that leaders with a belief about the efficacy of cooperation are less likely to abandon – or create an environment where the opposition will abandon – negotiations over domestic political differences. This finding is consistent regardless of how ongoing conflicts are treated, model specification, or intensity-level of conflicts.

In addition to a leader’s belief about the efficacy of conflict or cooperation in the pursuit of political goals (I-1), a leader’s belief in his or her ability to control events makes the onset of civil conflict significantly more likely. I began by establishing competing hypotheses for this variable since a belief in ability to control events could have either a positive or negative effect on the likelihood of conflict onset. However, the findings of every model indicate that the more a leader believes he or she can control political events, the more likely he or she is to experience the onset of a domestic armed conflict. The consistent nature of this finding indicates support for

the argument that leaders with a strong belief in their ability to control events are more likely to abandon the bargaining process or create conditions for its demise. While these findings support two of my hypotheses, there are also interesting implications for the variables that are consistently significant, but contrary to hypothesized expectation.

The first of these variables is distrust. Distrust is a consistently significant variable that decreases the likelihood of civil war onset. This finding is consistent regardless of the treatment of ongoing conflicts or model specification. However, the negative coefficient is contrary to not only my hypothesized expectations, but the literature that explores how generalized distrust can affect the likelihood of violent foreign policy behaviors. The interstate conflict literature consistently indicates that the more distrustful the individual, the more likely he or she is to advocate for or carry out varying degrees of violence to achieve foreign policy goals. However, this project is the first time that an at-a-distance measure of a leader's distrust has been applied to the study of intrastate conflict. First, the domestic political environment is different than the international political environment. Leaders operating in the former are likely to have a firmer grasp on the nature of politics within their respective countries¹⁹. Therefore, in the context of domestic politics, distrustful leaders may perceive the threat posed by an opposition group very differently than potential threats posed by other states. It is possible that these leaders may be more distrustful of their constituencies and more sensitive to the political costs of failure to bargain with opposition groups. This may lead them to be more likely to capitulate to the demands of the opposition rather than risk a potentially unpopular civil conflict.

¹⁹ It is even likely that a firm grasp on the domestic political environment or domestic political support is almost a necessary condition of becoming a head of state.

Another variable that is consistently significant and contrary to expectation is need for power. In the interstate conflict literature, a leader motivated by a desire to impose his or her will on others tends to be more violent in the conduct of foreign affairs. However, the current findings indicate that a leader with a higher need for power is *less* likely to experience the onset of both civil wars and armed conflicts. This finding is less difficult to explain than the finding for distrust, however. While leaders with a higher need for power can be more aggressive, there is also meaningful evidence that leaders who are motivated by a desire for power are often adept and capable politicians who know which strategies are appropriate for achieving political goals (Hermann 1999, 2003; Schafer and Crichlow 2011, 192). In the context of domestic political bargaining, these leaders are more likely to negotiate effectively with opposition groups, thereby decreasing the likelihood that bargaining will break down and make civil wars less likely.

In addition to the statistical models, I presented predicted probabilities for the consistently significant psychological variables and compared the effect on probabilities to GDP per capita. These predicted probability graphs demonstrate that the psychological variables perform as well as, or better than, an oft-used economic control variable when determining the probability that a state will experience a civil conflict or high-intensity civil war. These findings indicate that the inclusion of psychological characteristics of world leaders in the study of civil conflict is essential to advance this research agenda. Though some of the findings run contrary to expectations, leaders and their characteristics have an unmistakable effect on the likelihood that a state will experience internal conflict. Moreover, these findings are consistent regardless of how

ongoing civil conflicts are coded.²⁰ This chapter will conclude with a discussion of the directions for future research.

Directions for Future Research

The at-a-distance study of world leaders and their personalities and beliefs has made several great advancements in the last two decades. The advent of software like Profiler Plus that can generate scores for a variety of psychological characteristics more quickly than older hand-coding procedures has been instrumental in driving these advancements. However, we still have a long way to go to match the generalizability of the most common conflict studies models. Several questions about methodology, selection effects, endogeneity, and the interactions of leadership psychology with institutional constraints still need to be explored. Furthermore, we still face barriers regarding the availability of necessary speech texts. In more recent years, several countries have developed digital archives of speech transcripts for heads of state. However, the archives that do exist, tend to have speeches for a limited amount of time. This makes it difficult to create data sets of psychological characteristics that are temporally and cross-sectionally comparable to other studies of conflict.

This issue also raises the question of selection bias. Many of the countries with digitally available speech archives tend to fall in the category of developed countries. This means that less-developed countries are under-represented in not just my data set, but many data sets using at-a-distance profiling methods to explain interstate conflict²¹. Future research should explore

²⁰ It is worth noting that models that drop ongoing civil conflicts have stronger Wald Chi-Square statistics and are therefore better fit.

²¹ The issue of potential selection bias driven by missing data in traditional civil conflict models has been examined by scholars as well (see Lall 2016).

how – if at all – the over-representation of developed countries generates biased inferences. Additionally, the issue of the relationship between conflict and elite psychology is not well-understood. Currently, a handful of comparative case studies demonstrate that the beliefs of leaders can be affected by exogenous shocks (i.e. terrorist attacks, wars, etc.) (Renshon 2009), but no studies to date have used broad cross-sectional time-series data to test for genuine endogeneity between conflict and the psychology of world leaders. The simplest approach to dealing with this is to simply lag the psychological characteristics²². However, future research should do a better job of determining if the psychological characteristics are actually affected by the onset or severity of conflicts or shocking events.

This chapter is another attempt to apply at-a-distance political psychology to the broader field of conflict studies. To date, those who have used the psychology of leaders to explain conflict preferences and behavior have been focused on the interstate dimension. However, this study reinforces the fact that there are several more dependent variables in the field of conflict studies that can be better explained by including the psychology of world leaders. Understanding why civil wars – hands down the most bloody and costly form of war still relatively prevalent in the international system – begin requires a more complete understanding of the dynamics that lead to the outbreak of violence in the state. While certain situational and structural variables indeed play an important role in explaining the onset of civil conflict, the role of leaders

²² While this approach is common, recent research indicates that lagging independent variables does nothing to alleviate problems of endogeneity; rather, the endogeneity is simply pushed back to $t-1$. Furthermore, research indicates that lagging independent variables that are actually endogenous significantly increases Type I error (Bellemare, Masaki, and Pepinsky 2017). This leads some scholars to argue that, if the variables are actually endogenous, it is more harmful to try to resolve endogeneity using lagged versions of independent variables. However, this approach is still prudent if there is a theoretical reason to believe that there is time delay effect or scholars are testing for the presence of autoregressive processes (Bellemare, Masaki, and Pepinsky 2017).

represents another piece of the puzzle that helps us see the picture more clearly and better understand why and how civil violence breaks out.

CHAPTER 3: CIVIL WAR SEVERITY

Introduction

How does the psychology of leaders affect the severity of a civil war? As stated in earlier sections, the study of civil wars has become an important part of the conflict studies research agenda. The study of civil war severity, however, has been a much smaller part of this broader research agenda (Chaudoin, Peskowitz, and Stanton 2017, 57). Moreover, the few studies that have examined this question have focused on the effects of political and economic variables. As demonstrated in the previous chapter, there is good reason to believe that heads of state and their idiosyncratic characteristics can affect the likelihood of civil war onset. There is further reason to believe that heads of state and their psychological characteristics should have a more marked effect on the *conduct* of the civil war.

Civil wars vary widely in their severity with some resulting in very few casualties and others resulting in a large number of battle-related deaths. Indeed, the severity of civil wars can be informed by economic factors and the issue(s) over which the civil war is being fought. But, heads of state can exert a great deal of discretion in how the civil war is fought regardless of any potential political or economic constraints. Therefore, including these unique characteristics of world leaders in a study of civil war severity is imperative for providing a more complete understanding of the dynamics of a civil war. One need only look to Arab Spring to see wide variation in the conduct of domestic conflict given similar structural constraints.

This chapter explores how a variety of psychological characteristics of heads of state can affect the severity of civil wars. The findings indicate that the psychological characteristics of

world leaders can have noticeable effects on the severity of civil conflicts. This chapter proceeds with a brief review of the existing literature that has used political and economic variables to explain the severity of civil wars. I follow with a theory section that outlines how leaders and their individual characteristics can influence strategic preferences, thus making a civil war more or less severe. After discussing the method I use to test my hypotheses, I present my findings and discuss the implications for the study of civil conflict more broadly.

Civil War Severity – Empirical Findings Related to Politics and Economic Variables

Economic Development and Civil War Severity

There are few cross-national studies of civil war severity relative to the studies of civil war onset (Chaudoin, Peskowitz, and Stanton 2017, 61). Scholars who emphasize the role of economic factors using cross-national data build their theories on the logic applied to theories of civil war onset. Lacina (2006) argues that economic development may serve proxy for a state's capacity to develop strong counter-insurgency abilities and thus be related to a more severe civil war. Instead, she finds that state capacity is unrelated to the severity of civil wars (Lacina 2006, 287). Rather, she finds that democratic regimes are related to less severe civil wars, while foreign assistance (military or economic) to either rebels or the state results in more severe civil wars (Lacina 2006, 287).

Instead of focusing on narrow definitions of economic growth, Bazzi and Blattman (2014) explored the effect of export price shocks on civil war severity. They find that export price shocks are unrelated to the emergence new civil wars, but steadily rising export prices lead to shorter and less severe civil wars (2014). This finding indicates support for the argument that a

strengthening economy is often associated with the strengthening of counter-insurgency capabilities of a state²³. Moreover, the findings challenge the assumption that an increased desire to take control of an economically growing state should make civil wars more severe (Bazzi and Blattman 2014). Similarly, using instrumental variables for a variety of indicators of economic development, Chaudoin and colleagues (2017) find that economic growth is negatively related to both the duration and severity of civil wars.

Others have explored factors other than economic growth when trying to explain variance in civil war violence. De Juan and Banks (2016) consider how the selective allocations in public goods can influence political violence during civil war. They argue that, when the allocation of electricity is selectively distributed, there will be increased political violence in certain sub-districts during the Syrian civil war (De Juan and Banks 2016). Their theory states that an authoritarian government facing dissatisfaction from the broader population cannot rely on repression alone; rather, they need to allocate certain public goods to loyal sectors of the population to encourage compliance (De Juan and Banks 2015, 93-94). Using satellite data and geospatial methods, De Juan and Banks find that sub-districts in Syria that experienced positive relative and absolute changes in nighttime light distribution would be less likely to experience political violence during the first eighteen months of the Syrian conflict. This provides unique empirical support for the broader theory that the selective distribution of goods contributes to political stability (e.g. Gerschewski 2013; Levi 2006).

²³ However, the counter-insurgency techniques of a state may not be adequately measured by economic development alone. Others have pointed out that the introduction of private military and security companies can greatly increase the counter-insurgency capabilities of a weak state and lead to a more severe civil war (Petersohn 2017).

Ethnicity and Civil War Severity

While most research find that ethnic divisions have a limited effect on civil war onset (Fearon and Laitin 2003), scholars of civil war severity have argued that the ethnic makeup of a country experiencing civil war can play a meaningful role in explaining the level of civil violence (Costalli and Moro 2012). Scholars who argue that civil war severity can be informed by the division of ethnic power approach the research by focusing on sub-national units of analysis (Costalli and Moro 2012; Slack and Doyon 2001). Investigating the variance in violence between municipalities during the Bosnian civil war, Costalli and Moro (2012) argue that the balance of ethnic groups within a municipality can explain the level of violence observed in them. Costalli and Moro (2012) find that when there is a high-level of ethnic polarization in a municipality, there were higher degrees of observed violence. Additionally, they find that ethnic dominance in a municipality decreases the severity of violence in the municipality (Costalli and Moro 2012, 807-809).

Other scholars have investigated how the makeup of governing coalitions influence the severity of ongoing civil conflicts. Heger and Salehyan (2007) argue that the size of a governing coalition can help to explain some of the observed variance in conflict severity. They argue that countries with larger governing coalitions – especially democratic ones – should be much more constrained in the methods that they use to fight an armed domestic opponent. When using the ethnic affiliation of heads of state as a proxy for coalition size, the evidence suggests that smaller ruling coalitions present fewer constraints for leaders, thus leading to more severe civil conflicts (Heger and Salehyan 2007).

As with the study of civil war onset, there is a strong reliance on using structural proxy variables to explain variances in civil war severity. However, there is ample room for the inclusion of leadership psychology in the study of civil war severity. Once a civil war has begun, the head of state exercises a great deal of control over the strategies and tactics the state uses to conduct the war. The number of battle-deaths that occur during a civil war can be directly informed by these strategic choices made by these heads of state. Moreover, there should be a great deal of variation between leaders experiencing civil wars on various psychological characteristics that can explain the reliance on certain strategic choices. As discussed in chapter one, there is evidence that the psychological characteristics of leaders can affect their decisions to rely on violence as a policy tool, but there is a lack of such research attempting to explain civil conflict severity. The following section constructs a theory about how the psychology of leaders can make civil wars more or less severe.

Theory and Hypotheses

As briefly mentioned in the introduction, many of the studies of civil war severity rely on rational actor assumptions when constructing theories that seek to explain civil war severity. However, many researchers in economics and political science have been doubtful about the applicability of such assumptions (see Simon 1979). Individuals face cognitive limitations that hinder their ability to use rational processes when making decisions. These limitations are even more evident during periods of great uncertainty (Greenstein 1969). There are few situations that create greater uncertainty than the instability of civil war. Therefore, the assumption that individuals – regardless of individual idiosyncrasies – process information and make calculations in the same way seems fundamentally flawed. I argue that a variety of characteristics and beliefs

and can influence how leaders perceive incoming information and shape tactical preferences regarding the conduct of a civil conflict.

The first expected relationship between leader psychology and civil war severity considers a leader's need for power or influence. A leader's need for power describes the extent to which he or she is motivated by a desire to gain, maintain, or exert power or influence in the political context (Hermann 2003; Winter 1973). Evidence has indicated that leaders motivated by a need for power tend to rely more on force in domestic and international political contexts (Hermann 1980; McClelland 1975; Winter 1993). Therefore, when a leader with a high power motive faces armed civil opposition, he or she will be more likely to bring a greater proportion of the state's resources to bear in the civil war and make the civil war more severe. Moreover, these leaders will be more likely to view concession as a sign of weakness, rather than a tactful maneuver that could bring an end to the bloodshed. For these types of leaders, the perceived costs of capitulation or defeat are too high to merit anything less than a strong military response to an armed opposition.

H1: A leader's need for power should be positively related to civil war severity

As with onset, a leader's level of distrust should have a notable effect on civil war severity. Distrustful leaders view the intentions and reliability of others with wariness (Hermann 2003, 202). Further, distrustful individuals tend to view the use of greater levels of force as an efficacious policy tool (Driver 1977). Once a civil war has begun, a distrustful leader is more apt to view demands made by the opposition as more personally threatening. Moreover, they are likely to view the opposition as being more likely to expand their demands and escalate the

conflict even if concessions are granted. Additionally, these types of leaders have a magnified threat perception during both peace and war (Stuart and Starr 1981). Therefore, regardless of whether the opposition wants control of the government or to secede from the state, the distrustful leader is more likely to view the opposition as a greater threat and thus respond with greater force during armed conflict. The three key perceptions associated with a higher-level of distrust – heightened threat perception, wariness of the intentions of other actors, and the belief about the efficacy of force – combine to drive the leader to use more aggressive tactics and make the civil war more severe.

H2: A leader's level of distrust should be positively related to civil war severity.

A leader's sense of control over political events should also be related to civil war severity. A leader's belief in his or her ability to control events refers to a leader's sense of the amount of control he or she has over shaping events and outcomes (Hermann 2003). Leaders who have a higher belief in their ability to control events tend to be impulsive and willing to challenge perceived or actual constraints (Hermann 2003). Therefore, any perceived constraints of norms prohibiting violent politics may be more easily challenged. However, belief in ability to control events may also decrease the severity of civil war. When a leader has a weak belief in his or her ability to control events, he or she may become frustrated and desperate when choosing tactics. This may lead them to choose more aggressive and possibly foolish tactics in response to armed opposition. Whether or not the tactics are "successful," a frustration-driven

overreaction may result in a greater number of battle-deaths and, therefore, a more severe civil war²⁴. This leads to two rival hypotheses.

H3a: A leader's belief in ability to control events should be negatively related to civil war severity.

H3b: A leader's belief in ability to control events should be positively related to civil war severity.

Additionally, a leader's sense of self should be related in some way to the severity of a civil war. A leader's self-confidence refers to his or her sense of his or her ability to navigate and overcome obstacles in the political world (Hermann 2003). This sense of self is the lens through which individuals view themselves and the world around them. In the context of an ongoing civil war, this can make a leader less likely to adequately process incoming information. A leader who is more self-confident is likely discount information that – to a less confident leader – may indicate that the conflict is not going well. More confident leaders are more likely to discount potentially negative information because of the belief that they can overcome the obstacles they face. Alternatively, less self-confident leaders may become frustrated as the conflict persists, or victory occurs more slowly than initially expected. These two processes, lead to the establishment of two competing hypotheses.

H4a: A leader's self-confidence will be positively related to civil war severity

H4b: A leader's self-confidence will be negatively related to civil war severity.

²⁴ As with chapter two, the discussion of my expectations for belief in ability to control events also applies to the conceptually similar – though operationally distinct – operational code variable P-4 (a leader's belief about how much control he or she has over historical developments). Therefore, P-4 is also included in the statistical models presented below.

Another characteristic that may affect the severity of a civil war is a leader's conceptual complexity. Conceptual complexity refers to an individual's ability to see situations and people in shades of grey or black and white (Hermann 2003). Moreover, conceptual complexity also refers to an individual's ability to process complex information and his or her ability to perceive how many policy options are available in a given situation (Hermann 2003; Foster and Keller 2014). Civil conflicts – like interstate conflicts – are complex situations with a variety of factors that a leader needs to consider. These include: the demands of the opposition (i.e. secession, control of the state, etc.), the capabilities of the opposition to wage war against the state (i.e. outside support, types of weapons, and number of fighters), and the capabilities and resolve of the leader's own government (i.e. the resolve of the state's military, the state's capabilities, support within the government for the rebels, etc.). Some leaders are better able to process and understand this vast amount of information. This makes a leader's ability to see these factors in shades of grey important. Leaders who score lower on conceptual complexity tend to be unable to do this. As a result, the lack of differentiated thinking results in ignoring potentially negative incoming information that can result in continuing a conflict. The same could be true of potentially positive incoming information indicating that the government could comfortably settle the conflict through negotiation.

H5: Conceptual complexity will be negatively related to the severity of civil conflict.

Another potentially important characteristic is a leader's beliefs about his or her group and other groups within their state. A leader's in-group bias refers to how much importance he or she places on the advancement or supremacy of his or her ethnic, religious, or national identity (Hermann 2003, 203). Leaders who score higher on in-group bias tend to view outgroups with

suspicion and – sometimes – outright hostility. These leaders are also likely to engage in the dehumanization of an outgroup and possibly even pursue policies akin to ethnic cleansing (Keller and Foster 2012). During the conduct of a civil conflict, leaders with higher in-group bias are more likely to wage the war more aggressively because they perceive the rebels as an outgroup that poses an existential threat to their in-group. If the rebels are pursuing wars of secession, the higher in-group bias leaders are going to perceive the rebels as a threat to national unity that must be quashed. Alternatively, if the rebel group is seeking control of the government, the high in-group bias leader is likely to perceive the rebel outgroup as an existential threat to the leader's group for a variety of reasons. If, as is the case in Syria, a minority ethnic or religious sect controls the state largely at the expense of the majority group, the high in-group bias leader is more likely to wage a more aggressive war because there could be long-term consequences for his or her group if the state loses or capitulates to the rebels.

H6: In-group bias will be positively related to civil war severity

Finally, there are three beliefs that leaders hold that can affect the severity of a civil war. The first is a leader's belief about the fundamental nature of the political universe (P-1). Leaders can perceive the nature of the political universe as being one of conflict or harmony (Walker, Schafer, and Young 2003). If a leader perceives the political universe as one that is inherently conflictual, he or she is likely to see the civil conflict as just a normal outcome of the political universe. This should lead the leader to wage a more aggressive war against a rebel group.

H7: A leader with a view that the political universe is conflictual will wage a more severe civil war

Additionally, a leader can hold beliefs about the most appropriate strategy for achieving his or her political goals (I-1). A leader can believe that either conflict or cooperation are more appropriate means to achieve political goals (Walker, Schafer, and Young 2003). Leaders who believe that conflict is the most appropriate way to achieve his or her political goals are more likely to choose strategies and tactics that could lead to a more severe civil conflict.

H8: A leader who believes that conflict is the best way to achieve political goals will preside over a more severe civil war.

Research Design

Sampling Criteria and Unit of Analysis

Because the dependent variable – discussed in greater detail below – is the severity of a civil war, the appropriate unit of analysis is the civil conflict-year. This is appropriate because severity is often measured using annual battle-deaths and those can only occur *during* a civil conflict. Therefore, including non-civil conflict-years within the data set would create far too many false negatives. A state is considered to be experiencing a civil war in any year that there is contestation between the government and some internal group in which there are more than 25 battle-related deaths per year (Gleditsch, et al. 2002). The baseline population is all civil conflict-years from 1989 to 2016. This creates a population of 336 conflict-years. However, the nature of my key independent variables greatly limits this sample. To generate scores for the psychological characteristics of interest I rely on open-source speech transcripts of world leaders. Furthermore, to generate accurate scores for world leaders I have to code 4,000 to 5,000 spoken words. Because of the rare nature of civil wars and the general difficulty finding speech transcripts of world leaders, I am limited to a sample of 31 civil conflict-years. This sample is further limited

by the availability of key economic control variables making my final sample-size 28 civil conflict-years²⁵. Despite the small sample-size, my sample looks very similar to the civil conflict-year population. The states in my sample have only slightly higher GDP per capita (Mean: 7.87, SD: 1.66) than the population of civil conflict country-years (mean: 6.5, SD: 1.92). However, my sample does have a smaller range battle-related fatalities than the population²⁶. I discuss the broader implications of these findings in the conclusion.

Variables, Sources, and Procedures

Dependent and key independent variables

The dependent variable for this chapter is the severity of a civil war. Severity is measured as the number of total battle-deaths during an active conflict-year. These battle-death counts are generated by the Uppsala Conflict Data Program (UCDP) Battle-Related Deaths Dataset (Allansson and Croicu 2017). I utilize the “best” battle-death estimate provided in the data set instead of the high or low estimates. My sample has an annual battle-death range between 25 and 4,755. These numbers capture the total number of battle-deaths experienced by both actors in the civil conflict-year.

Control Variables

The coding procedures for my psychological variables were mentioned in the previous chapter. Therefore, to avoid repetition, I will omit the discussion here and focus only on my key control variables. To control for the effects of variables other than psychological characteristics,

²⁵ This sample includes 18 different leaders from 12 different countries experiencing civil conflicts.

²⁶ My sample ranges from 25 to 4,755 battle-related deaths, while the population ranges from 25 to 13,443.

I will include a variety of economic indicators in each model that have been linked to civil war severity. The first economic indicator of potential interest is a state's GDP growth from the previous year. I utilize a logged version of GDP growth – measured in 2005 constant U.S. dollars – to control for the possibility that the severity of a civil war is informed by the amount of economic growth a state experienced.

Additionally, I control for GDP per capita (in constant U.S. Dollars). This variable is often used as a proxy for state-capacity to implement effective counter-insurgency policies. I expect both measures to be positively related to civil war severity. The predominate argument for this assertion is that an economically growing state creates incentives for rebels to pursue control of the state while at the same time making it easier for the state to apply effective counter-insurgency tactics resulting in more severe civil conflicts (Bazzi and Blattman 2014; Fearon and Laitin 2003). Additionally, I control for a state's dependence on fuel exports (as a percentage of total merchandise exports) in a given year. A state that is more dependent on fuel exports should experience more severe civil conflicts, because there is greater incentive, for both the opposition and the government, to seek to acquire or to protect the available rents generated by these exports (Bazzi and Blattman 2014; Fearon and Laitin 2003).

Additionally, I control for one demographic factor and one key political variable. I control for a state's (logged) population in a given year. These data are provided by the World Bank. I expect population to be positively related to civil conflict severity. Additionally, I generate a binary indicator for the presence or absence of a democratic government. To generate this measure, I utilize the Polity IV score (Marshall and Jaggers 2007) for each state and code

any state with a score of 6 or higher as a democracy; all other states are coded as non-democracies. I expect democracy to be negative related to civil war severity.

Statistical Method

Because the dependent variable is a count of the number of yearly battle-related fatalities, the appropriate method is some form of count modeling. This leaves two primary choices at my disposal: Poisson or negative binomial regression models. The choice of the appropriate method needs to be informed by the dispersion of the dependent variable. If the dependent variable exhibits signs of over-dispersion, then a negative binomial regression is the most appropriate model. If the mean and variance of the dependent variable in my sample are relatively similar, then the poisson method is appropriate. This is clearly not the case (see summary statistics in Appendix C). Therefore, I apply a random-effects negative binomial regression to test my hypotheses about leader psychology and civil war severity²⁷.

Findings

Table 2 presents the findings of the quantitative tests²⁸. Model one presents the effects of only my psychological variables on the severity of civil conflicts. First, model one shows that there is initial support for the distrust hypothesis. More distrustful leaders tend to preside over more severe civil conflicts. Additionally, self-confidence approaches statistical significance and decreases the severity of civil conflicts. Leaders who are more self-confident tend to preside over less severe civil conflict than less self-confident leaders. Interestingly, conceptual complexity

²⁷ The fixed-effects estimator controls for unobserved unit heterogeneity.

²⁸ Pairwise correlation tests for multicollinearity are presented in Appendix C.

seems to be positively related to civil conflict severity. Rather than decreasing the level of violence used during the civil conflict, more complex leaders tend to preside over bloodier civil conflicts. I-1, consistent with my hypothesis, is negatively related to civil conflict severity. A leader who believes that he or she should utilize cooperative tactics to achieve political goals will preside over less severe civil wars. Finally, P-4 is positively related to civil war severity. This indicates that a leader who believes he or she has greater control over historical development tends to preside over more severe civil wars in a given year. However, need for power, in-group bias, belief in ability to control events, and P-1 fail to achieve statistical significance in model one. Moreover, P-1 and in-group bias have coefficients that run contrary to the hypothesized direction.

Model one presents tentative support for some of my hypotheses regarding how leaders can affect the severity of civil wars. Models two and three include additional economic and political control variables that have been identified as important for understanding civil conflict severity. Model two considers the effect of leader psychology on civil conflict severity while controlling for a democratic regime, a logged measure of GDP growth, a logged measure of population, and a measure of fuel exports (as a percentage of total merchandise exports). The first notable fact about model two is that, largely, the findings in model one hold true, with two exceptions. Self-confidence and P-4 fail to approach or achieve statistical significance once economic and political factors are controlled for. However, distrust remains statistically significant and positively related to civil conflict severity. Moreover, once economic and political factors are controlled for, the coefficient becomes larger, indicating the effect of a leader's distrust on conflict severity is even more pronounced. Conceptual complexity continues

to be significantly related to more severe civil conflicts and I-1 continues to significantly decrease the severity of civil conflicts. As with distrust, the coefficients are larger in their respective directions (i.e. I-1 is more negative and conceptual complexity is more positive) when economic and political control variables are included. However, it is noteworthy that the control variables fail to approach or achieve statistical significance.

Model three controls for GDP per capita, rather than the rate of growth from the previous year. Distrust and conceptual complexity remain significantly related to more severe civil conflicts. These two variables also have larger coefficients – reflecting a stronger effect – than either models one or two. Again, I-1 is consistently related to less severe civil conflicts, indicating that leaders who believe their most appropriate strategy is one of cooperation will preside over less severe civil wars. Finally, P-4 approaches statistical significance in model three. Once again, the direction of the relationship is positive, indicating that a leader with a belief that he or she has greater control over historical developments and outcomes will preside over more severe civil wars. In model three, the control variables approach and achieve statistical significance – contrary to model two. States that are more economically developed (i.e. have a higher GDP per capita) experience less severe civil conflicts. This indicates that, rather than linking GDP per capita to the ability of a government to adopt stronger counter-insurgency institutions (which should make civil conflicts more violent), GDP per capita appears to capture broader access to economic activities outside of rebel participation. Additionally, states that are more dependent on fuel exports tend to experience more severe civil conflicts, as anticipated.

All three models provide evidence that indicate preliminary support for my hypotheses for distrust and I-1. Moreover, all three models show that there is a relationship between

conceptual complexity and civil conflict severity, but that relationship is positive and contrary to my hypothesis. P-4 however, is rather sensitive to which economic control variable is included in the model; when controlling for GDP growth, P-4 does not achieve significance, but P-4 approaches significance when controlling for GDP per capita. These findings provide promising preliminary support for the effect that leaders can have on the conduct of civil conflicts²⁹.

²⁹ Alternative model tests are presented in Appendix C. These additional models test the effects of my independent variables while correcting for potential multicollinearity. The findings remain consistent and do not merit detailed discussion in the body of the text.

Table 2 - Civil War Severity

Civil Conflict Severity			
VARIABLES	Model 1	Model 2	Model 3
Distrust	8.672** (2.785)	11.85** (3.653)	12.90*** (3.724)
Belief in Ability to Control Events	-0.982 (4.861)	1.626 (5.938)	2.813 (5.437)
In-Group Bias	-0.340 (5.378)	3.766 (10.47)	2.240 (8.195)
Need for Power	4.761 (6.760)	3.037 (5.797)	0.469 (5.269)
Self-Confidence	-4.123+ (2.271)	-2.541 (5.415)	-2.959 (4.245)
Conceptual Complexity	7.559* (3.142)	9.910* (3.897)	11.14** (3.422)
I-1	-4.031** (1.438)	-4.597* (2.124)	-4.895** (1.714)
P-1	1.328 (1.542)	2.275 (1.756)	2.666 (1.731)
P-4	7.112* (3.290)	5.666 (4.310)	6.252+ (3.606)
Democracy		0.160 (1.013)	0.834 (0.671)
Population _(log)		-0.554 (0.860)	-0.839 (0.780)
GDP Growth _(log)		-0.226 (0.305)	
Fuel Exports		0.0826 (0.158)	0.256+ (0.153)
GDP Per Capita _(log)			-0.516* (0.256)
Constant	-4.533 (3.009)	2.656 (16.18)	10.64 (14.38)
Observations	30	22	22
Number of ccode	8	7	7

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Discussion and Conclusions

This chapter opened by asking how the leaders of states can influence civil conflict severity. As with the previous chapter exploring civil conflict onset, I argued that the strategic and tactical choices that are made by the leaders of a state can affect the severity of the conflict in noticeable ways. I then proceeded to build a theory of civil conflict severity that explained how the individual beliefs and psychological characteristics of world leaders affect strategic and tactical preferences during armed internal conflict. The findings of this chapter continue to strengthen the assertions made in the introduction: leaders consistently matter when we seek to understand both the origins and conduct of civil conflict.

Consistent with the international conflict literature, distrustful leaders tend to preside over more severe civil wars than their more trusting counterparts (see Driver 1977; Foster and Keller 2014). Because more distrustful leaders are more apt to perceive the rebel group as a greater threat, they are more likely to prefer strategic and tactical choices that rely more on violence and overwhelming force than they are to rely on smaller-scale or (possibly) more precise tactics. Additionally, leaders' beliefs about the most appropriate strategy for achieving political goals have a consistent effect on the severity of a civil conflict. A leader who believes that he or she will be more likely to achieve his or her political goals using cooperative methods will preside over less severe civil wars. It is also clear that conceptual complexity is consistently related to civil conflict severity, though not in the hypothesized direction. However, the context of a civil conflict may be useful in explaining this finding.

Conceptually complex leaders may be better at processing information generated about the resolve of or the threat posed by the internal opponent. Therefore, a conceptually complex leader may be willing to utilize tactics that are more forceful and result in a greater number of battle-related fatalities. Moreover, the ability of more complex leaders to process incoming information may cause the complex leader to see the proverbial “writing on the wall” about the opponents’ willingness (or lack thereof) to seek a negotiated settlement to the conflict, causing the leader to continue the conflict using more violent tactics to achieve a decisive end. Additionally, these leaders are likely to pursue a greater array of tactical and strategic choices than less complex leaders. Therefore, a conceptually complex leader may be more likely to choose strategies and tactics that are more targeted or effective against the opponent resulting in a greater number of battle-related deaths. Put somewhat differently, the nature of civil conflicts may cause some leaders to engage in the heuristic of wishful-thinking (i.e. believing that a domestic opponent cannot be that bad). On the other hand, a more conceptually complex leader, who is better at information processing, may see the real threats that are there and respond accordingly. Regardless, the findings about the effect of a leader’s conceptual complexity on internal conflict choices merits further investigation.

The key takeaway, however, is that leaders continue to shape the trajectory of contentious domestic politics. Moreover, leaders continue to do so in consistent and somewhat predictable ways. Individual leaders tend to have their own unique approaches to the pursuit of domestic and foreign policy goals, and these unique approaches are often affected by personality characteristics and beliefs. In the previous chapter, I demonstrated that leaders can affect the likelihood that a state will experience an onset of an armed conflict or high-intensity civil war. In

this chapter, I added another piece of valuable information about the way in which leaders can shape the trajectories of domestic civil conflict.

CHAPTER 4: CIVIL WAR DURATION

Introduction

How do the psychological characteristics of world leaders affect the duration of civil wars? Many conflict studies scholars have been intrigued by the large variation in the duration of civil wars (Wucherpfenning et al. 2012, 79). Such variation in the duration of civil wars has led scholars to investigate what factors may lead to longer or shorter civil wars. However, many of the studies detailed below rely heavily on theories that are based upon the rational calculation of the costs and benefits associated with continued fighting. This common approach homogenizes both the information processing and cost-benefit calculation capabilities of world leaders. However, there is a large body of research in economics and political science that casts doubt on the rational actor model of decision-making (for a thorough review of the application of bounded rationality in political science and foreign policy analysis see Schafer and Smith 2018).

In previous chapters, I have presented evidence that suggests there is an interesting relationship between certain psychological characteristics of heads of state and the onset and severity of civil wars respectively. Therefore, it seems just as appropriate to investigate the presence of a possible relationship between these characteristics and the duration of civil wars. To investigate this relationship, I build a theory that begins by emphasizing just how important political leaders are when negotiating or agreeing to end a civil conflict. I then create specific hypotheses that are based upon how these different characteristics can help or hinder a leader's ability to process information that is being created by the ongoing conflict and thus make the decision to continue fighting or pursue an end to the conflict. This chapter continues the

contributions of earlier chapters by bringing at-a-distance profiling methods to the study of civil conflict, thus broadening the application of these methods to more conflict studies research and helping to better understand the duration of intrastate conflict.

Structural Explanations for Civil War Duration

A sizable body of research has been generated that attempts to explore what factors can lead to longer or shorter civil conflicts. As with most conflict studies research, however, much of this research focuses on the effects of structural (i.e. political institutions, legal constraints, etc.) and situational (i.e. economic development, political events, etc.) variables. While this approach has provided useful insights into the effects of certain variables on the length of civil wars, this review of the existing literature will demonstrate that there is indeed room to include the psychological characteristics of world leaders in the study of civil war duration.

A large proportion of the literature tends to investigate the question of conflict duration by considering the bargaining theory of war. In particular, there is a strong emphasis on the effects of information asymmetry and commitment problems (e.g. DeRouen and Sobek 2004; Fearon 2004; Hultquist 2013; Porok 2016; Thyne 2017). The primary goal of much of this literature is to explain how certain political or economic factors can generate information about the likelihood of victory or defeat for both the government and opposition. Theoretically, as more information becomes available, it is more likely that both actors will better understand the war fighting capability and the bargaining range of the other and thus come a negotiated settlement (Blainey 1988; Filson and Werner 2002; Smith and Stam 2002).

A key concept to understanding what political factors can affect civil war duration is the concept of “veto players.” Veto players are individuals who hinder or block negotiated settlements with rebel groups. Cunningham (2006) argues that the presence of these veto players inside a government can make civil conflicts more difficult to settle for a few key reasons. First, as the number of veto players operating within a government increases, there are more parties present with different interests and/or goals who can block or hinder the acceptance or implementation of a negotiated settlement. This makes it more challenging for the government to send clear signals to the opposition about the range of acceptable agreements. Therefore, an increased number of veto players worsens the information asymmetry problem associated with bargaining. Second, a larger number of potential veto players can make it more difficult for the government to credibly commit to enacting any potential agreement. This is because, even if a tentative agreement is reached, these veto players have the ability to reject the settlement. Cunningham’s (2006) empirical tests indicate that an increased number of veto players do indeed lead to longer civil wars. Cunningham later finds that a similar process is at work when considering third party interveners as additional veto players (2010). These findings have led subsequent scholars to explore additional factors about governments that can help to alleviate the problems created by an excess of veto players.

One such example is Thyne’s (2012) work that investigates how the structures of governments can affect the duration of civil wars. Thyne (2012) expands on Cunningham’s (2006) argument that the number of veto players can exacerbate the information asymmetry and credibility problems by linking factors such as institutional constraints, government polarization, power-sharing with opposition parties, types of governments, and the ruler’s tenure in office, to

civil war duration. He demonstrates that there are four key factors that can lead to shorter civil wars. The first is the presence of a presidential style of government. This effect is driven by the fact that presidential systems tend to be more predictable than their parliamentary counterparts. The second key finding is that executives with broad institutional powers tend to preside over shorter civil wars. Leaders who have broad autonomy can more credibly negotiate with an opposition without the fear of any potential agreement being overridden by a third-party. Finally, governments that are stable and those made up of leaders with longer tenures (parties or executives) tend to have shorter internal conflicts (Thyne 2012, 319). Overall, the key takeaway from both Cunningham (2006) and Thyne (2012) is that civil wars will tend to be shorter when rebels have the opportunity to negotiate with a predictable adversary, thereby lessening fears of the government reneging and increasing the amount of information available to them.

More recently, Thyne (2017) has demonstrated that other factors can contribute to shortening civil wars in ways most scholars would not expect. Thyne (2017) explores how coups d'état that take place during a civil conflict can affect the duration of that conflict. He points out that, while traditional wisdom would expect coups to make an already unstable situation worse (i.e. Geddes 1999; Onwumechil 1998), there is a good reason to believe that coups can actually help to resolve either the commitment problems, information asymmetry, or both by sending useful signals to the opposing actors (Thyne 2017). Thyne argues that coups during civil wars can resolve the commitment problem by consolidating government powers and constraining potential veto players, while also signaling to the opposition that they will be negotiating with a

government that prefers settlement to continued fighting (2017)³⁰. The empirical findings of this research indicate that coups during civil wars tend to decrease the duration of civil wars. Moreover, the findings lend support for the idea that coups tend to lessen the commitment problem rather than problems of information asymmetry (2017). While there is support for the argument that structures of governments play an important role in explaining the duration of civil conflicts, recent research also investigates the effects of punishment on the incentives of leaders to pursue settlements.

In addition to general information about the prospects of victory or defeat that is generated by the ongoing war, a similar area of research explores what actions can be taken to shorten the duration of civil wars by increasing the costs of continued conflict or by tampering with the perceived balance of power between rebels and the government. For example, some scholars have investigated the effect of economic sanctions on the duration of civil conflicts. The primary theoretical mechanism through which sanctions can affect civil war duration is the effect on actors' perceptions of the conflict situation. For example, Strandow (2006) constructs a bargaining model that shows that economic sanctions can alter the perceptions of the balance of dyadic power during a civil conflict and can thus influence the decision to pursue a resolution to the conflict. However, this finding is largely dependent on the consistent and fair application of these sanctions. Strandow's (2006) findings are consistent with other research that shows that economic and/or military sanctions lengthen civil wars by making it more difficult for both actors to truly diagnose the balance of power and likelihood of success or defeat (Balch-Lindsay

³⁰ The information that is generated by the coup is often conveyed by the military junta because coup actors often seize control of media outlets and announce the motivation for their seizure of power.

and Enterline 2000; Collier, Hoeffler, and Soderbam 2004; Regan 2000; Regan and Aydin 2006). Others have found, however, that the method of sanction implementation can affect the duration of civil wars. For example, Escriba-Falch (2010) finds that unilateral sanctions are more likely to result one in side achieving a military victory, while multilateral sanctions are more likely to encourage parties to come to a negotiated settlement. This finding is largely reinforced by Lektzian and Regan (2016).

Beyond these structural factors, there has been limited attention paid to the ways in which leaders decide to end a civil conflict. Prorok (2016) represents a notable exception. She argues that the willingness of leaders to pursue negotiated settlements to civil conflict can be shaped by whether or not that leader is in power at the start of a civil conflict (Prorok 2016). Prorok points out that both rebel and state leaders are beholden to some domestic audience that has the ability to punish them for incompetence (2016). She theorizes that leaders who are in power at the outset of a civil conflict are more likely to be perceived as responsible for the conflict. Additionally, she theorizes that leaders who are perceived as “responsible” for the onset of civil conflict are more likely to be perceived as incompetent when the conflict begins to go poorly (Prorok 2016)³¹. Prorok argues that leaders who are perceived as being incompetent have a perverse incentive to avoid negotiated settlements because they failed to achieve the goals they implicitly promised to achieve by choosing violence over negotiation (2016). Her results indicate that leaders who are in power at the start of the conflict are more likely to experience more

³¹ A conflict can be considered to be going poorly if the leader’s group (the state or the rebel group) begins suffering losses that indicate a substantially decreased likelihood of victory.

severe outcomes (i.e. total victory or total defeat) and less likely to make concessions that are central to the leader's war aims (Prorok 2016).

This review of the existing literature demonstrates that there are two broad ideas used to explain the duration of civil wars: resolving information asymmetry and/or commitment problems and making fighting costlier than reaching a negotiated settlement. The key assumption of both approaches to the study of civil war development is that the assessment of costs or assessment of incoming information is uniform across all individuals in the civil war. However, as alluded to in the introduction, there is a lack of convincing empirical evidence that this kind of rational calculation is common among most people. Therefore, studying how potential costs and/or incoming information can affect civil war duration requires the inclusion of variables that can influence the perceptions of what constitutes a cost and the ability of the chief executive to process incoming information.

Theory and Hypotheses

I follow the existing literature by utilizing the bargaining approach to explain variance in the duration of civil wars. I contribute to the civil war duration literature by including how personality characteristics of chief executives can affect the perception of costs and the processing of information generated by results from the battlefield³². The first key difference between my theory and the existing literature is the rejection of the assumptions of the rational actor model. Actors – heads of state or rebel leaders - involved in civil wars do not process

³² The theoretical mechanism used to explain why heads of state choose to pursue negotiation to end fighting will broadly mirror the theoretical process described in Chapter 2. Therefore, the discussion of the theoretical mechanism here will be much briefer and focus on the differences between the period before the outbreak of war and the period of ongoing civil conflict.

information in the same way, nor do they perceive costs in the same way. Therefore, it is impractical to assume that simply increasing costs of continued fighting or upsetting the balance of power between actors should make all actors more willing to pursue negotiation and shorten civil wars.

Therefore, while interventions – be they military interventions or economic sanctions – may indeed make continued fighting costlier or alter *ex ante* expectations of victory, we can expect individuals to *perceive* these effects differently. These differing perceptions are driven by two key processes. First, individual personality characteristics and beliefs can affect how open individuals are to incoming information. Conceptual complexity and self-confidence can both have independent effects on the way that leaders process incoming contextual information. Self-confident leaders have a strong belief that they are able to navigate most political situations and overcome any obstacles they may experience (Hermann 2003, 194). Therefore, more self-confident leaders are likely to discount or downplay the effects of military defeats, external sanctions, or military interventions. Additionally, the high self-confidence leader should also be more likely to discount signs that there is growing political discord among key supporters. Similarly, leaders who score lower on conceptual complexity should be closed to incoming information. These leaders tend to think in zero-sum terms and be more rigid in their interpretations of events (Hermann 2003, 195). Therefore, while information generated by the ongoing war may signal that defeat is imminent or stalemate is politically costly, the less conceptually complex leader is likely to discount this information because he or she likely has a pre-existing opinion about the nature of the conflict. Moreover, these types of leaders are more

likely to discount information generated by external intervention. With these effects in mind, the first two hypotheses become clear.

H1: Self-confidence will be positively related to civil war duration.

H2: Conceptual complexity will negatively related to civil war duration.

Additionally, a leader's belief in his or her ability to control events should affect the way he or she processes the incoming information from the conflict or external intervention³³.

Leaders who believe that they can control political events are more likely to discount incoming information because they are more likely to believe that they can shape the events in their favor.

This should be the case when the civil conflict is trapped in a costly and politically unpopular stalemate or when it appears that the rebels have the upper-hand. All things equal, these leaders are likely to believe that they can shape the political environment to be more favorable to them regardless of information generated by the ongoing conflict. Therefore, they are likely to believe that they can survive negative events generated by an ongoing civil war and will be more likely to continue fighting regardless of incoming information that suggests the contrary.

H3: Belief in ability to control events will be positively related to civil war duration.

Another way that individual personality characteristics and beliefs can affect the duration of civil wars is the way that actors perceive the potential costs of continued fighting versus negotiation. The first factor that can affect the perception of what constitutes an unacceptable cost is a leader's need for power. Leaders who are motivated by power and influence tend to be

³³ As with previous chapters, I will discuss belief in ability to control events and a leader's belief about his or her ability to affect historical outcomes (P-4) in the same way.

those who utilize violence in the domestic and international context and also tend to pursue positions of authority (Hermann 2003). For leaders motivated by a desire for power and influence, the principal and unacceptable cost would be losing their position of power and influence. Moreover, external economic or military interventions are more likely to be seen as an affront to the authority of the power-motivated leader. A leader with a high need for power is more likely to perceive both negotiation and military defeat as a potential threat to his or her position of authority. This should cause these leaders to choose continuing the fight against rebel groups.

H4: Need for power will be positively related to civil war duration.

Two personality characters that can have a key influence on what constitutes a “cost” in the context of a civil conflict are distrust and in-group bias. Both of these characteristics make fighting appear less costly than reaching negotiated settlements because the process of negotiation is perceived as far riskier and uncertain than continued fighting. More distrustful leaders are wary because they fear being taken advantage of by the other actor or they generally believe that the other actor is not negotiating in good faith and, therefore, is simply trying to manipulate them (Hermann 2003). Additionally, distrustful leaders are likely to believe that the other actor is far more likely to renege on any agreement. This results in the distrustful leader believing that he or she is taking a bigger risk by negotiating than continuing to fight, thus lengthening the civil war. In-group bias has a similar effect on the perception of costs. Leaders who have a higher in-group bias can perceive negotiation as more costly because they may come to believe that any negotiated settlement may include provisions that weaken or threaten their

ethnic group. In both cases, the uncertainty of the negotiation process may make negotiation more costly than continued conflict.

H5: Distrust will be positively related to civil war duration.

H6: In-group bias will be positively related to civil war duration.

A final contribution of this chapter is the inclusion of a leader's perception of the efficacy of negotiation. As discussed previously, operational code analysis provides variables that capture a leader's belief about the nature of the political universe and about which strategies they should pursue to achieve political goals. If a leader believes that the political universe is fundamentally conflictual (P-1), he or she is less likely to perceive negotiation as a reasonable approach to ending the civil conflict. Additionally, if a leader believes that the most effective tactic for achieving political goals is to use conflict, he or she is less likely to perceive negotiation as a plausible approach to ending conflict. In the former case, the leader believes that conflict is a natural occurrence in the political universe. In the latter, the leader believes that he or she achieves more with conflictual tactics than with cooperative ones (Walker, Schafer, and Young 2003). These beliefs generate the final two hypotheses.

H7: P-1 will be negatively related to civil war duration.

H8: I-1 will be negatively related to civil war duration.

Research Design

To quantitatively test my expected relationships, I construct a data set that uses the conflict country-month as the unit of analysis and excludes all cases where the UCDP/ACD data codes coups d'état as civil conflicts (see Thyne 2017). A civil war is considered to be ongoing so

long as the conflict involves at least one internal actor and the government of a state and continues to generate at least 25 battle-related fatalities in a given year (Gleditsch et al. 2002). Conflict termination data come from the UCDP Conflict Termination Dataset (Kreutz 2010). Civil wars can end in a variety of ways. They can end by negotiated settlement, the total military defeat of one of the principal actors, the dissolution of one of the actors, or there can be a lull in the conflict of more than one calendar year (Kreutz 2010). Therefore, my dependent variable – civil war duration – is operationalized as the number of months from the conflict’s beginning to the point where one of the above conditions is met. The month in which one of the above events occurred is coded as the end of the civil war. A conflict is coded as a new civil war if there is a lull in fighting of at least one year (Thyne 2017). I begin by utilizing the replication data set of Thyne (2017) as my base population of cases. I then add the key psychological variables discussed above. It merits repeating that the availability of speech texts is central to generating scores for these psychological characteristics, resulting in my sample differing from Thyne’s (2017)³⁴. My final sample-size is 1,649 civil conflict-months³⁵.

Once more, since I have described the coding procedures for my psychological variables in earlier chapters, I will concentrate on describing the operationalization of my relevant control variables. The first control variable captures the effect of veto-players. Many scholars argue that democratic regime types have a larger number of potential veto players (e.g. Cunningham 2006; Thyne 2012, 2017; Wucherpfennig et al. 2012). Therefore, I utilize the Polity IV score for the state experiencing a civil conflict to generate a binary indicator of democracy as a proxy for a

³⁴ For a detailed discussion of the missing data issue, I refer the reader back to Chapter 2.

³⁵ This sample differs from a potential population of 17,319 civil conflict months. This difference is, as in previous chapters, the availability of digitally archived speech materials needed to generate psychological variables.

high number of veto players. A state is coded as being a democracy if the Polity score is six or higher (Marshall and Jaggers 2007). All other states are coded as non-democratic. I expect democratic states to have a more difficult time resolving a civil conflict than non-democratic states because an increased number of potential veto players may serve to worsen the information and commitment problems associated with negotiations. Additionally, I control for economic development using a logged measure of per capita GDP provided by the World Bank. I expect conflicts in states with a lower GDP per capita will last longer because poverty is often associated with longer civil wars (e.g. Collier, Hoeffler, and Soderbom 2004).

Additionally, aspects of the conflict itself can affect the duration of a civil conflict. Thyne argues that government facing multiple armed opposition groups are going to find it more difficult to resolve conflicts (2017, 12). Therefore, I utilize his measure of a “parallel conflict,” which is measured as the number of ongoing conflicts in a state at time t (Thyne 2017, 12). Additionally, the severity of the conflict can greatly influence the duration of the conflict. For some, a more intense civil conflict can signal that the fighting is becoming costlier and encourage actors to pursue a negotiated settlement (Zartman 1989). Alternatively, conflict severity may also signal resolve and encourage actors to continue fighting. Therefore, I utilize a binary indicator of civil war intensity that is coded as a one when the conflict passes the 1,000 battle-death threshold and zero if otherwise (Balch-Lindsay and Enterline 2000; Fearon 2004; Regan 2002; Thyne 2017). Finally, following Thyne (2017), I control for the effect of coups on the duration of civil war. A coup is coded as successful if the plotters are able to maintain power

for at least 7 days (Powell and Thyne 2011; Thyne 2017)³⁶. Recent research demonstrates that successful coups during a civil conflict can shorten a civil war (Thyne 2017).

Because the dependent variable of interest is the duration of civil conflicts, the most appropriate method for testing my hypotheses is some variant of survival analysis. The Cox (1972) proportional hazard is ideal for this sort of research because the model does not require strict assumptions about the existence of an underlying hazard function³⁷. It is also important to choose a method to control for potential ties (i.e. events with the exact same survival time) among my observations. Survival models that have multiple observations with the exact same failure time can bias the results. Therefore, I utilize the Efron (1977) method to control for potential ties³⁸. Finally, rather than presenting hazard ratios in my tables, I present simple coefficients. A negative coefficient indicates that the covariate results in a longer civil conflict by decreasing the hazard of failure, while a positive coefficient indicates that a covariate is associated with a shorter civil conflict.

Findings

Table three presents two quantitative models used to test my hypothesized relationship³⁹. Model one presents the effect of my psychological variables without controlling for economic or

³⁶ Thyne excludes all non-military coups (2017, 11) because military coups are believed to generate the most clear and easily interpreted information.

³⁷ For example, the oft-used Weibull distribution model assumes that the hazard rate increases or decreases monotonically for each unit over time.

³⁸ This method is preferable to the default Breslow (1975) approximation, based on the smaller AIC/BIC statistics that capture the goodness of fit. Moreover, past research has shown that the Efron method for tied survival data are both more efficient and better at reducing bias in simulation studies (Hertz-Picciotto and Rockhill 2005).

³⁹ Appendix E presents the pairwise correlation tests for the variables tested in Table 3. The appendix shows that there is minimal collinearity among the independent and control variables.

political variables. The initial results from model one do not look promising. First, only one psychological variable approaches statistical significance: conceptual complexity. However, conceptual complexity's effect on civil conflict duration mirrors its effect on civil conflict severity. More conceptually complex leaders are likely to preside over longer civil conflicts than their less complex counterparts. However, many of my hypotheses fail to achieve support in model one. Distrust, belief in ability to control events, in-group bias, need for power, self-confidence, I-1, P-1, and P-4 fail to approach or achieve statistical significance in model one.

Model two presents the findings for the effect of leader psychology on civil war duration while controlling for the political and economic control variables discussed above. Once economic and political variables are included, three key psychological characteristics are related to civil conflict duration. First, a leader's level of in-group bias is significantly related to longer civil conflicts. This is consistent with my hypothesized relationships. A leader who has a higher level of in-group bias is more likely to perceive any negotiated settlement as representing a threat to the leader's in-group and, therefore, be more likely to carry on a conflict regardless of the potential costs associated with ongoing civil conflict.

Additionally, we see that self-confident leaders tend to preside over longer civil conflicts than their less confident counterparts. This finding is consistent with the hypothesized relationship. It appears that there is credible evidence that, as leaders become more self-confident, they tend to be more willing to discount incoming information about the likelihood of success or failure. Moreover, it appears that they are more likely to believe that they can overcome any present situation that would possibly make the pursuit of a negotiated settlement

preferable to continued conflict. This finding provides additional evidence in favor of the idea that different individuals process incoming information differently.

Another psychological characteristic that appears to be significantly related to the duration of civil conflicts is a leader's conceptual complexity. However, the relationship runs contrary to my hypothesized direction. Rather than making leaders more open to incoming information about the likelihood of success or failure and shortening the conflict, conceptual complexity is associated with a *longer* internal armed conflict. Leaders who are more complex in their thinking are likely to experience longer civil conflicts than their less complex counterparts. This may be driven, in part, by the types of information that the complex leader is focusing on. While information about the likelihood of victory or defeat is indeed generated by the ongoing conflict, it is also possible that the complex leader may see beyond the conflict and see information about what happens after the conflict. Information about the likelihood of the leader's survival (be it political or literal) could influence the leader's willingness to pursue negotiated settlements. Moreover, the more complex leader may also be better at perceiving information generated about the resolve, capabilities, and/or support available to the armed opposition. This may lead the complex head of state to perceive negotiated settlement as uncertain and impractical given this kind of information. Despite the fact that more of the psychological variables achieve statistical significance in the fully-specified model, many of my hypotheses continue to fail to find support. Distrust, belief in ability to control events, need for power, I-1, P-1, and P-4 appear statistically unrelated to the duration of civil conflicts.

Among the control variables, two are significantly related to civil war duration. The first, a successful coup, significantly decreases the duration of a civil conflict. This reinforces the

findings presented by Thyne (2017) that coups d'état can help to resolve the commitment problem associated with negotiating an end to an internal armed conflict. Additionally, GDP per capita approaches significance and makes civil conflicts shorter. Put more plainly, the more economically developed a state is, the more quickly a civil conflict comes to an end. This is likely driven by increased counter-insurgency capacity and, therefore, a decreased need to settle a conflict. What is most notable about the inclusion of psychological characteristics in models of civil conflict duration is the effect it has on the quality of model.

Table 3 - Civil Conflict Duration

Civil Conflict Duration			
VARIABLES	Model 1	Model 2	Model 3
Distrust	1.837 (4.328)	11.62 (8.489)	
Belief in Ability to Control Events	5.328 (4.662)	-18.87 (14.82)	
In-Group Bias	-1.593 (6.081)	-46.57* (19.76)	
Need for Power	-10.71 (7.453)	5.177 (12.09)	
Self-Confidence	-4.989 (3.911)	-15.67*** (4.302)	
Conceptual Complexity	-13.11+ (6.830)	-32.10* (16.26)	
I-1	-0.900 (2.526)	-6.005 (5.244)	
P-1	1.599 (2.336)	3.030 (2.313)	
P-4	-5.463 (5.605)	-3.656 (11.08)	
Successful coup		22.84* (11.30)	3.13* (1.54)
Fight for government		0.636 (0.695)	-0.56 (0.68)
Democracy		-5.776 (3.881)	-1.39+ (0.83)
GDP per capita		2.195+ (1.244)	0.89** (0.32)
Parallel war		0.930 (0.768)	0.41+ (0.21)
Intensity		-0.677 (1.001)	-0.32 (0.78)
Observations	1,649	1,649	1,649
	AIC: 80.67434	AIC: 70.83648	AIC: 74.47033
	BIC: 129.3457	BIC: 135.7316	BIC: 106.9179

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

There are a variety of ways to test for the quality of model fit when working with observational data. One approach is to compare the Akaike and Bayesian Information Criteria (AIC and BIC statistics). At the most basic-level, these approaches to goodness of fit tell the researcher the probability that his or her model closely reflects the underlying data generating

processes (for a detailed explanation of the method and its assumptions, see Kuha 2004). The interpretation of these goodness of fit statistics (presented in table three) is quite simple; the closer to negative infinity either or both statistics are, the more the model reflects genuine data generating process. To describe how adding the psychological characteristics of world leaders to models of civil war duration can generate more reflective models, I begin by utilizing Thyne's (2017) replication data and re-running his models with my sample. The AIC and BIC statistics for the structural controls are smaller than the psychology-only models, but larger than the fully-specified model (AIC: 74.47; BIC: 106.9179)⁴⁰. This initially demonstrates that, in my sample, the model that tests only the effects of political and economic variables performs slightly better than the model that tests only the effects of psychological variables. However, I have argued that neither category of variables can adequately explain civil conflict duration by itself. Rather, a combination may generate a model that is a better fit. This idea is supported by the AIC and BIC statistics at the bottom of model two. Compared to the other two models, a model that includes a combination of both psychological characteristics and political and economic variables is the better fit and should be utilized when trying to investigate the factors that influence civil conflict duration.

Discussion and Conclusions

This chapter started by asking how the personalities and beliefs of state leaders can influence the duration of civil conflicts. After exploring and discussing the way that previous

⁴⁰ Interestingly, Thyne's (2017) full data set – which is not presented here - generates AIC and BIC scores that are vastly larger indicating that there is likely significant deviation from the data generating process (AIC: 2,611.214; BIC: 2,657.772).

scholars have investigated civil conflict duration, I generated a theory that argued that, while civil conflicts do generate important information about the costs of continued fighting or the likelihood of success or failure, it was highly unlikely that any two leaders processed such information in similar or even efficient ways. I tested a series of hypothesized relationships utilizing survival models to determine which key variables had an effect on the number of months a civil war lasted. The findings presented above provide support for two of my hypothesized relationships and are especially strong when controlling for relevant political and economic variables. Moreover, a comparison of the AIC and BIC statistics associated with each model indicates that the fully-specified model is a better fit than either the model with only situational variables or the model with only psychological variables.

Three key psychological characteristics are statistically linked to longer civil conflicts: in-group bias, self-confidence, and conceptual complexity. Leaders who emphasize the importance of advancement for their group or protection of their groups' interests often face longer civil conflicts. The reason for this appears rather intuitive; the costs of pursuing a negotiated settlement are likely *perceived* by these types of leaders as being existential. More precisely, while the costs of conflict may be high, the risk to one's group may be worsened by choosing a negotiated settlement instead of continued fighting. This represents a case where a leader's personality characteristics can affect which possible facts are *perceived* as being more costly.

Additionally, self-confident leaders are likely to experience longer civil wars than their less self-confident counterparts. Rather than influencing how a head of state perceives potential costs associated with fighting, self-confidence affects the way the head of state processes

incoming information. A central theoretical process in the civil conflict duration literature asserts that information generated by ongoing conflict – be it information about the cost of continued fighting or information about the likelihood of victory or defeat – can alter an actor’s expectation and make him or her more likely to choose negotiation over continued fighting. While I do not dispute the fact that ongoing conflicts generate these kinds of information, it is unreasonable to assume that leaders act in the same efficient manner when processing the information. I theorized that self-confident leaders are far more likely to discount incoming information that indicates that they are either going to lose the war or that the costs of continued fighting is high. This affects the ability of the leader to “rationally” calculate the costs and benefits of continued fighting. This effect appears to play out in the quantitative tests above. Self-confident leaders face longer civil conflicts than leaders who are less self-confident.

Finally, I theorized that leaders who were more conceptually complex should experience shorter civil wars because they tend to be more open to incoming information, and therefore are better able to process information and accurately determine when it is most prudent to pursue a negotiated settlement. While the findings in both models indicate that conceptual complexity is related to civil conflict duration, the direction of the relationship runs contrary to my hypothesis. However, this contrary finding is consistent with the findings observed in the civil war severity chapter. Conceptually complex leaders tend to process a great deal of information about the world around them and they tend to perceive themselves as having many potential options at their disposal for achieving their goals. Conflict generates a great deal of information about the other actor. The conflict can send signals about an opponent’s resolve and/or capabilities. One would imagine that a conceptually complex leader would be more apt to better determine the

likelihood of victory or defeat because he or she takes in more information. However, the information about the resolve and/or capabilities of the other actor appears to actually cause the head of state to continue fighting rather than pursuing a negotiated settlement. For example, when the conceptually complex leader receives information from the ongoing conflict that the rebel leader is resolved to continue fighting to pursue and/or achieve his or her political goals, the conceptually complex leader will choose to forego negotiation and continue fighting.

Finally, utilizing Thyne's (2017) replication data, I compare my two empirical models to a model that uses purely political and economic variables to explain civil conflict duration. The comparison indicates that including variables that capture the psychological characteristics of world leaders along with the oft-used economic and political control variables generate models that are a better fit than models that look at either psychology or structure alone. To this point, I have presented the findings of three empirical studies that show that world leaders and their individual personality characteristics and beliefs are consistently related to different facets of civil war behaviors. What is clear from this chapter is that leaders matter when trying to explain intrastate conflict duration. Therefore, the effect of leaders and their psychological characteristics should be an integral part of future studies of civil conflict.

CHAPTER 5: THE EFFECT OF CIVIL WARS ON LEADER PSYCHOLOGY

Introduction

Do the events that take place during a civil war affect the personality characteristics of leaders? Recently, there has been a growing interest in studying the ways that key life experiences can shape world leaders. For example, Horowitz, Stam, and Ellis (2015) constructed the Leader Experience and Attribute Dataset (LEAD) with the goal of investigating how the life experiences of world leaders shape their risk profiles. The LEAD project identifies the way that past life experiences influence a leader's willingness to accept risks. Though the LEAD project presents theories that are informed by theories in social psychology, that is where LEAD's application of psychology ends. LEAD assumes that life experiences have a static long-run effect on a leader's risk-acceptance⁴¹. However, including individual psychological characteristics allows scholars to examine how the characteristics change over time. This is particularly important because leaders' personalities can – and often do – change over time or in response to events. Heads of state are often deeply affected by shocking political events⁴².

Armed internal conflicts present a good opportunity to investigate how world leaders are affected by the varying levels of violence associated with such conflicts. Moreover, they represent an opportunity to investigate this possible relationship utilizing time series methods

⁴¹ Horowitz, Stam, and Ellis (2015) treat risk in their models slightly differently than prospect theorists. Horowitz and colleagues conceptualize risk from a psychological (i.e. individuals being more willing to make choices with high costs) rather than from an economic (i.e. where risk refers to an individual's preference for the outcome of a gamble) perspective.

⁴² For example, Barack Obama was deeply troubled by the mass shooting at Newtown Elementary School and Donald Trump actually changed his position regarding the use of military force in Syria after the Syrian government used chemical weapons against its own civilian population.

that make it possible to determine if changes occur and, more importantly, if these changes are lasting. The importance of exploring this relationship is made even more evident given the findings presented in the three preceding chapters. If the psychological characteristics of world leaders can affect civil war onset, severity, and duration, it is imperative to determine if these same psychological characteristics can be shaped by an ongoing civil conflict.

To investigate this relationship, I examine the time serial properties of the psychological characteristics of United Kingdom (U.K.) Prime Ministers during the period of armed conflict in Northern Ireland known as “The Troubles.” In the next section, I explore what the existing literature says about the effect that experiences can have on preferences for risk and beliefs about the nature of the political universe. I follow this section with the construction of a theory based on the expected effect of certain shocking events on certain personality characteristics and beliefs. I then move into a discussion of the methods I utilize to diagnose and test the long- and short-run relationships between the severity of the conflict in Ireland and the characteristics of prime ministers. Finally, I conclude with a discussion of the findings and the implications of these findings for the application of at-a-distance methods to the study of civil violence and our broader understanding of the stability of personalities and beliefs.

Literature Review – Leaders and Their Responses to Events

Political psychologists have long been interested in the origins of personalities and beliefs of world leaders. Many early attempts to explain how leaders developed individual personality characteristics relied on the psychobiographical approach. The quintessential example of this approach is *Woodrow Wilson and Colonel House: A Personality Study* by Alexander and Juliet

George (1956). While the overall goal of this psychobiography was to explain why Woodrow Wilson was so intransigent during the negotiations with the U.S. Senate over the Treaty of Versailles, the role of Wilson's childhood was foundational for explaining the development of his personality and the resulting behavior (George and George 1956). The Georges argued that Wilson's overbearing and impossible-to-please father instilled in Wilson a higher than average need for achievement, which made him less likely to compromise when debating proposed policies (1956). Jerrold Post points out that this work still serves as an example of a rigorous psychobiography. However, this approach to explaining the origins of the personalities and beliefs of world leaders has largely fallen out of favor because of the inherent subjectivity and limited generalizability of this approach (Post 2013, 466).

More recently, scholars exploring the origins of leaders' preferences have emphasized the role of a wide variety of life experiences. The Leader Experiences and Attributes Dataset (LEAD) is a broad database of key life experiences of world leaders (Ellis, Horowitz, and Stam 2015; Horowitz, Ellis, and Stam 2015). The authors of this dataset argue that the experiences and attributes of leaders should play a pivotal role in explaining the risk-taking behaviors of leaders once in office (Horowitz and Stam 2014; Horowitz, Stam, and Ellis 2015). For example, they find that military service – without the experience of frontline combat – should lead individuals to believe that military force is an effective tool for achieving foreign policy goals because they are not directly exposed to the human costs of military force (Horowitz and Stam 2014; Horowitz, Stam, and Ellis 2015). However, individuals who experience frontline combat should be less likely to believe that military force is an effective policy tool because they have

seen the human costs of military combat first-hand (Ellis and Stam 2014; Horowitz, Stam, and Ellis 2015).

Additionally, leaders who have a history of service in rebel groups should be generally more risk-acceptant than individuals who do not have these experiences. Arguably, because service in a rebel group is an inherently risky choice, these individuals should carry this risk-acceptant behavior with them into positions of power (Horowitz, Stam, and Ellis 2015). Empirical analysis of the effect of prior rebel group membership has explored how it can influence the likelihood that a leader will try to acquire nuclear weapons. Fuhrmann and Horowitz (2014) argue that leaders who have served in rebel groups are more willing to accept the risks associated with pursuing nuclear weapons. While the pursuit of nuclear weapons represents a rare event in international relations, the authors find that leaders who have a history of rebel group membership are significantly more likely to try to acquire nuclear weapons (Fuhrmann and Horowitz 2014).

While the life experiences discussed above tend to take place during young adulthood, the dataset also captures the importance of childhood trauma. For example, the authors include measures of early life experiences like growing up in poverty. The authors argue that leaders who grew up poor should tend to be more risk-acceptant, because poverty has a fundamental effect on the psychological development of children. More precisely, individuals who grow up poor tend to engage in more short-term thinking than individuals who grow up in homes that are economically stable (Horowitz, Stam, and Ellis 2015). However, the findings in this area are mixed. While the LEAD dataset represents a broad and useful inclusion of key leadership variables, it does have some limitations that leave some key questions unanswered.

The key limitation is that these variables are time-invariant for individual leaders. For example, these factors assume that a leader's past military service has a constant effect on the individual leader's risk preferences during his or her time in office. More precisely, the underlying assumption of this dataset is that leaders cease to learn from experiences once they enter office. This assumption is not only logically questionable, there are several empirical studies that provide evidence to the contrary.

Several at-a-distance studies of world leaders indicate that the operational codes of world leaders can – and often do – shift during a leader's tenure. For example, Crichlow (1998) demonstrates that the operational codes of both Shimon Peres and Yitzhak Rabin shift significantly from greater pessimism about achieving political goals, to greater optimism (P-2) between the periods of the 1970s and 1990s. Additionally, Walker, Schafer, and Young (1998) provide evidence that shows Jimmy Carter's operational code shifted significantly after the Soviet Union's invasion of Afghanistan. They find that, after the Soviet invasion of Afghanistan, Carter's normally cooperative beliefs about the nature of the political universe (P-1) and his optimism about the likelihood of achieving his political goals (P-2) shifted markedly in the negative direction (Walker, Schafer, and Young 1998, 185-186). Another analysis of the operational code of a U.S. president demonstrated that Lyndon Johnson's political beliefs shifted during the planning process of the Vietnam War (Walker and Schafer 2000). The evidence suggests that Johnson believed he had less control over historical events (P-4), attributed a greater role to chance (P-5), and was more averse to taking risks (I-3) (Walker and Schafer 2000, 537).

Broadly construed, the findings discussed above provide support for the idea that the belief systems of world leaders can change over time in response to shocks (i.e. Feng 2005; Walker, Schafer, Young 1998) and as a function of learning as they are in office (i.e. Crichlow 1998; Walker and Schafer 2000). However, Jonathan Renshon (2008) sought to investigate both of these processes at work during the Bush administration. Renshon argued that the belief systems of George W. Bush should be affected by the changing of roles from candidate to president, in response to the shocks of the 9/11 terrorist attacks, and as a function of learning the longer he was in office (2008, 828). Generally, George W. Bush's positive beliefs about the nature of the political universe were reinforced during his transition from candidate to president. In contrast, the period following 9/11 showed a significant negative – conflictual - shift in Bush's belief system. Finally, Bush's final year in office showed that he came to believe that he had less of an effect on the shaping of historical political events (Renshon 2008, 835-837).

All of the studies discussed above demonstrate that there is a broader interest in understanding how the personality characteristics and beliefs of world leaders are shaped. Additionally, there is an interest in determining what factors cause these characteristics to change. Beyond demonstrating an interest in the origins and changes of leader beliefs and personalities, this brief literature review demonstrates the problems associated with the different approaches. While scholars interested in the shifts in operational codes demonstrate that there can be meaningful changes between time periods or resulting from shocks, the research in this area lacks cross-sectional variation. More precisely, the vast majority investigate the changes of individual leaders, thereby limiting the generalizability of the findings. Additionally, given the advances in the application of time series methods in political science, the past methods utilized

to test the changes in beliefs and characteristics of world leaders do not effectively capture the effect that time has on the changes in these variables. Finally, the effects of internal armed conflict on the psychological characteristics of world leaders have not yet been studied.

Conversely, the large-n LEAD data project is broad in its cross-sectional and temporal scope and includes a large number of potential important life experience and attribute variables that can – in fact – affect conflict preferences and/or risk-acceptance. This dataset allows scholars to explore how life experiences can explain differences in risk-acceptance *between* leaders. Unfortunately, the dataset does not allow scholars to measure how the effect of these life experiences wax and/or wane over time *within* individual leaders. Therefore, there is a need to examine time-variant measures of leaders' beliefs and characteristics and how they can change in response to outside shocks or learning over time. To address these issues, I utilize time-series methods to investigate the variance in beliefs and personality characteristics of U.K. Prime Ministers during an internal armed conflict.

Theory and Hypotheses

The key building block of this theoretical argument is that leaders not only shape events but can also be shaped by events. Certain personality characteristics and beliefs of world leaders can change in response to both short-term shocking events and long-term political changes (i.e. through the learning process). An additional assumption is that personalities and beliefs should change to reflect the realities of a given situation. At its heart, this assumption implies that there is some sort of long-run relationship between a leader's beliefs and personality and the reality of

political situation. Therefore, all individual hypotheses in this section seek to explain how shifts in the reality of the “Troubles” affect different personality characteristics and beliefs.

The first personality characteristic that can be influenced by a civil conflict is a leader’s need for power. Recall that need for power refers to a leader’s motivation to influence the behaviors and goals of others (Hermann 2003; Winter 1993). Leaders who score highly on this trait tend to not only be more aggressive in their policy conducted (Hermann 2003; Winter 1993, 2004), they also tend to be adept politicians who are often effective at achieving their political goals (Hermann 2003). Moreover, Winter (1993) notes that this motive profile can change as conflict dynamics change⁴³. As civil conflicts become more severe, leaders should be motivated more by a need to exert authority over the rebels and motivated more by the desire to end the conflict. Increasing conflict severity demonstrates to these leaders that an aggressive approach is not achieving its desired goal.

H1: Need for power will show a long-run increase as a conflict becomes more severe.

Another characteristic that may be sensitive to the severity of a civil conflict is a leader’s distrust. Distrustful leaders tend to view other actors’ motivations with wariness (Hermann 2003). As a civil conflict becomes more violent, it is likely that the leader will trust the opposition less and less because the opposition has demonstrated a desire to continue utilizing violence to achieve its goals. More precisely, as a conflict becomes more severe, a leader’s belief

⁴³ For example, Winter’s (1993) article shows evidence that the need for power of all participants in World War I decreased as the war neared its end, while their scores for need for affiliation increased.

about other actors should shift to more accurately reflect the potential reliability of the opposition to negotiate in good faith because of the opposition's continued reliance on violent methods.

H2: Distrust will show a long-run increase as a conflict becomes more severe.

A third psychological characteristic that can be influenced by the severity of a civil conflict is a leader's conceptual complexity. Conceptual complexity reflects the leader's ability to see the world in zero-sum "black and white" terms or in shades of gray (Hermann 2003). Conceptual complexity also relates to the strategies leaders perceive as available to them (Foster and Keller 2014). A leader's ability to perceive situations and strategies with degrees of differentiation can also be affected by changes in the environment. As civil conflicts continue to rage, a leader is likely to harden his or her beliefs about the appropriate strategies for mitigating the conflict. This hardening of beliefs should be related to lower conceptual complexity in a leader.

H3: Conceptual complexity will show a long-run decrease as a conflict becomes more severe.

A fourth psychological characteristic that may be affected by conflict severity is a leader's self-confidence. Self-confidence refers to an individual's belief that he or she can overcome or adeptly navigate various political obstacles (Hermann 2003). The relationship between conflict severity and a prime minister's self-confidence is rather intuitive. As the conflict becomes more severe, the individual responsible for providing security within the state may become less and less confident that he or she can provide security or navigate the fraught political situation. The relationship between self-confidence and conflict severity should reflect a leader's beliefs about himself or herself matching the reality of the situation.

H4: Self-confidence will show a long-run decrease as conflict severity increases.

Another variable of interest is a leader's belief in his or her ability to control events. A leader's belief in ability to control events refers to how much a leader perceives himself or herself as being able to shape certain historical outcomes or manipulate the current political situation (Hermann 2003). I expect that information generated by the ongoing conflict should affect just how much control a leader believes he or she has over a political situation. As the conflict becomes more severe, a leader should believe that he or she has less control over the political situation. This could be the result of increased battle-deaths experienced by the state's military forces or by the general instability created by ongoing civil violence.

H5: Belief in ability to control events will show a long-run negative shift as the conflict becomes more severe⁴⁴.

Another psychological characteristic that could be sensitive to conflict severity is a leader's in-group bias. Leaders who score high on this characteristic are likely to pursue policies that enhance the standing of their in-group, sometimes at the expense of the outgroup (Hermann 2003). As conflicts become more severe, leaders are likely to view the opposition more as an outgroup than an in-group (i.e. individuals with a shared national or group identity). This is driven by the internalization of losses associated with more severe civil conflict. It is likely that as the casualty numbers increase, the prime ministers serving during the troubles may rely more on in-group versus outgroup heuristics when considering strategies.

⁴⁴ There is another variable that is conceptually similar to belief in ability to control events. P-4 refers a leader's belief about the ability of individuals to shape historical outcomes (Walker, Schafer, and Young 2003). This variable is coded differently, but the hypothesized relationship and process mirrors that of belief in ability to control events. Therefore, as with previous chapters, I do not present a formal hypothesis for P-4 in the text.

H6: In-group bias will show a long-run positive shift as the conflict becomes more severe.

Finally, there are two operational code beliefs that could be sensitive to the severity of civil conflicts. The first is a leader's belief about the fundamental nature of the political universe (P-1). A leader can believe that the political universe is inherently conflictual or cooperative (Walker, Schafer, and Young 2003). The relationship between P-1 and conflict severity is rather intuitive. As the severity of the civil conflict increases, leaders are more likely to believe that the political universe is more conflictual. Additionally, a leader's belief about the most appropriate strategy for achieving his or her goals (I-1) should be affected by conflict severity. A leader can believe that his or her most appropriate strategy for achieving political goals can be conflictual or cooperative (Walker, Schafer, and Young 2003). As conflict becomes more severe, the prime ministers may begin to lose faith in cooperative strategies. As the opposition continues to rely more on violence to achieve its political goals, prime ministers are likely to believe in doing the same.

H7: P-1 will show a long-run negative shift in response to increased conflict severity.

H8: I-1 will show a long-run negative shift in response to increased conflict severity.

Research Design

Background – The Troubles

The Troubles in Northern Ireland can be traced back to the partition of Ireland in 1921. This partition of Ireland divided it between the independent Republic of Ireland in the south and Northern Ireland – which remained a member of the United Kingdom with limited forms of self-

government. This partition left Northern Ireland divided by those who sought to unify Ireland under the banner of an independent Ireland (referred to as Republicans) and those who wished to protect the union between Northern Ireland and the United Kingdom (referred to as Unionists). In addition to differing political goals, these two groups were largely divided along religious lines, with Protestants making up the majority of Unionists and Catholics making up the majority of Republicans.

Over time, successive Unionist governments began to politically and economically discriminate against the Catholic (Republican) minority. By 1969, many Republicans came to accept the idea of a separate Northern Ireland, so long as they were granted legal equality. Civil rights protests began in an effort to convince the Unionist government to end its discriminatory policies. The protests were widespread and eventually it became evident that the Unionist government could not maintain order. In 1972, the British government dissolved the government of Northern Ireland, assumed direct control over the country, and used the British military as an occupation force to restore order.

By the early 1970s, the dynamics of the civil conflict in Northern Ireland changed from conflicts between Republican and Unionist paramilitary groups, to a direct confrontation between the leading Republican paramilitary group – the Provisional Irish Republican Army (IRA) – and the British military. The conflict between the groups raged from 1969 until the signing of the Good Friday Agreement in 1998, which resulted in the restoration of the home rule in Northern Ireland but left the question of lasting status unanswered (Darby n.d.). While civil violence has largely subsided since 1998, there are still heightened tensions between

Republicans and Unionists (i.e. Catholics and Protestants) that continue to simmer beneath the surface.

The Troubles in Ireland represent a useful base to construct time series data for a variety of reasons. The first is the availability of speeches by British Prime Ministers throughout the duration of the entire conflict. Hansard and Prime Minister databases make it possible for me to present uninterrupted time series data from the beginning of the unrest in 1968, until the signing of the Good Friday Agreement in 1998. The second benefit of using the Troubles as a case stems from the detailed archives about the case. The Conflict Archives on the Internet (CAIN) – housed at Ulster University – provide a variety of detailed records about the politics of Northern Ireland and the Troubles. Detailed records are useful for identifying potentially shocking moments in the conflict that can be missed in large cross-sectional data sets. Finally, the Troubles makes a useful case for investigating how civil conflict severity affects the personalities and beliefs of world leaders because the prime ministers of the U.K. were directly responsible for any policies regarding Northern Ireland from 1972 until 1998. Additionally, it was the British military that bore the brunt of the casualties caused by the IRA. The time-series sample generated covers a total of 32 years from 1968 to 1999, which includes a total of 7 prime ministers.

Variables and Sources

The coding procedures for the psychological variables have been discussed in detail in chapter 2, and for the sake of brevity will be omitted in this discussion. The key independent variable of interest is the number of deaths associated with the Troubles in a given year. These

data come from the Sutton Index of Deaths (1994)⁴⁵. Malcolm Sutton maintains a detailed database of deaths associated with the conflict in Northern Ireland. These include assassinations, bombings, and armed conflict between militias on either side of the conflict. This measure is preferable to large cross-sectional data sets (i.e. ACD/PRIO) because it does not omit acts of terrorism or random murders associated with the conflict that send relevant information to prime ministers about the state of the intercommunal conflict. Therefore, the measure provides a more accurate reflection of the severity of the unrest in Northern Ireland over time. Moreover, it includes years where the death threshold falls below 25 (i.e. the threshold utilized by PRIO/ACD civil conflict data) but there was still active violence⁴⁶.

Vector Autoregression – Leaders’ Psychological Response to Violence

The vector autoregression (VAR) approach to time series analysis is widely used in economics and somewhat prevalent in political science. However, before discussing assumptions and modeling, it is necessary to discuss the concept of autoregression and its implication in data analysis. The most basic description of an autoregressive (AR) process is a process by which a behavior at time t is significantly explained by the behavior at time $t-1$. This process is typically referred to as an AR(1) process. Clearly, there is the inherent implication there can be longer-run autoregressive processes in economic and political data (i.e. AR(2), AR(3), etc.). If time series

⁴⁵ Though the initial database was published in 1994, Sutton continued to update the database through 2001. For details, see <http://cain.ulst.ac.uk/sutton/>.

⁴⁶ This is particularly important because time series analysis methods often cannot be utilized when there are time gaps. Therefore, this alternative measure of conflict severity allows me to prevent treating years where the conflict falls below the ACD/PRIO minimum battle-deaths as missing data, while also capturing some of the unique dynamics of the Troubles.

data contain one of these AR processes and the analyst fails to include such processes in his or her model, then he or she runs the strong risk of having biased results.

Another important concept that VAR was originally designed to investigate is the possibility of causal feedback between independent and dependent variables. Traditional models present hypotheses that assert that X_t has some causal effect on Y_t . However, single equation models that test such hypotheses are not equipped to handle the possibility that Y_t can have its own effect on X_t . Many responses to this particular problem have been approached using simultaneous equation (SEQ) models (Box-Steffensmeier et al. 2014, 97-106). Unfortunately, this approach to exploring the potential endogenous relationships between X_t and Y_t relies on very strict modeling restrictions.

VAR models address the restrictive nature of SEQ models by allowing analysts to eschew the use of theoretical assumptions about endogeneity and exogeneity when modeling the relations between variables and establishing model restrictions. Instead VAR utilizes information from the data to statistically justify certain modeling restrictions (Box-Steffensmeier et al. 2014, 107). In this case, there may indeed be reason to believe that personality characteristics and beliefs about the political universe may be sensitive to the severity of a civil conflict. Additionally, as demonstrated in earlier chapters, the psychology of leaders can affect the onset and severity of civil conflicts as well. Therefore, there is the distinct possibility of a feedback loop between these two variables. What is not clear from this theoretical justification is just how long such feedbacks may last. More precisely, it is possible that there may be a weak and short-run feedback relationship or a strong long-run feedback relationship. The VAR model is constructed to base model structure decisions (i.e. inclusions of appropriate lag lengths) on the

data, rather than potentially weak theoretical assumptions, making it particularly useful for the analysis of the relationship between conflict severity and leader psychology.

The first step to modeling a VAR model involves determining the appropriate lag-length to control for. Once the lag-lengths are specified, the VAR process models the separate equations using ordinary least squares (OLS) regression with the inclusion of the appropriate lags of each variable. If the chosen lag-length is the correct specification, the OLS model will be efficient since the error term for each equation will be serially uncorrelated. Finally, the VAR model allows the analysts to specify a variety of visual impulse response functions that demonstrate whether or not certain events result in long-term shift in the mean of a leader's various psychological characteristics, or if the leaders return to a steady average on these characteristics quickly or slowly.

Limitations of the Data

Before discussing the findings of the statistical tests in the following section, it is prudent to discuss a prominent shortcoming of my data and, subsequently, modeling. My data are presented as being purely time series (i.e. looking at changes in the psychology of leaders year-to-year). However, it is arguable that this approach assumes away the effect of psychological differences *between* prime ministers (i.e. unit heterogeneity). This modeling choice potentially introduces issues when trying to interpret the estimates of things like structural breaks. For example, if the estimates show the presence of a shock to a psychological characteristic, it is difficult to determine whether or not the “shock” was a result of something related to the civil conflict, or if the “shock” was simply a function of a new prime minister taking office. This

modeling choice is a strategic one, however. I have limited access to enough speech acts for a disaggregated time period (i.e. month) which would allow me to focus on one prime minister's time in office during the Troubles with a sample-size large enough to support a multivariate test of the relationship between the conflict severity and the leader's psychological characteristics.

The shortcomings of my current data set require the relaxation of assumptions about potential unit heterogeneity which may lead readers to be skeptical about the inferences drawn from the findings. The data set is well-suited for presenting descriptive information about the time-serial properties of psychological characteristics in the context of a civil conflict (see Stock and Watson 2001, 101-103). However, the data set is not well-suited to confidently draw inferences about the effect of "shocks" to conflict severity on psychological characteristics. Therefore, I am not interpreting these findings as definitive. Rather, I am treating these findings as *suggestive* of a possible long-run connection between these series, and we should be careful about what inferences are drawn from these results.

Findings

The VAR model is a useful foundation for identifying long-run relationships between variables. But, the output of VAR models tends to be large and difficult to meaningfully interpret. Therefore, rather than presenting the VAR models in this section, I rely on interpreting two key post-estimation tests that provide more useful information about the relationship between conflict severity and the psychology of leaders⁴⁷: Granger causality tests and impulse response functions (IRF).

⁴⁷ The VAR models can be found in Appendix F.

Granger causality tests are often performed after running basic VAR models with the appropriate number of specified lags. Granger causality tests provide information about whether or not the relationship between two variables is simply an autoregressive process, whereby a variable at time t is best predicted by the variable at time $t-1$, or if the value of a variable is best predicted by controlling for the autoregressive process and another variable such as X_t . A variable can be said to “Granger-cause” another variable if, even including the lags of Y_t , the lags of X_t are also statistically significant. Failure to achieve statistical significance indicates that the variables do not “Granger-cause” each other; rather, Y_t is best explained by lagged values of itself.

Granger causality tests are useful for statistically identifying the presence of a potential relationship. However, the test is not useful for identifying the duration or direction of the relationship. Additionally, the test is not well-suited for explaining how long such an effect lasts. Therefore, there is not a discussion of direction or duration when discussing the Granger results below. Rather, the discussion of both the direction and duration of the relationship between conflict severity and psychological variables are reserved for the discussion on IRFs.

IRFs are graphical representations of both the direction of the potential relationship and the duration of that relationship. IRFs, like Granger-causality tests, are calculated after running the underlying VAR model. They are calculated by simulating the introduction of a one standard-deviation “shock” in X_t and examining whether the shock increases or decreases Y_t . Additionally, IRFs show how the impulse at t affect Y at $t+1$ and beyond. Graphical representations help scholars to visualize the potential effects found in Granger-causality tests and give clearer information about whether or not these effects are short-lived or long-lasting.

Granger Causality Tests

In table 4, I present the Granger causality tests where conflict severity is X_t and each of the psychological characteristics of interest in this research serve as Y_t . Most of the psychological variables do not have a meaningful feedback relationship with conflict severity. There are two interesting exceptions: distrust and P-4. Distrust is Granger-caused by the severity of the civil conflict. In this case, distrust is not simply explained by lagged values of itself, but also by lagged values of conflict severity. Therefore, there is preliminary evidence that distrust and conflict severity may be endogenous. P-4 also appears to be affected by conflict severity, though the p-value indicates that the evidence of a relationship is only suggestive..

Table 4 - Granger Causality: Severity & Psychology.

Equation	Excluded	Chi ²	DF	p-value
nPower	Deaths	0.95273	2	0.621
BACE	Deaths	2.8821	2	0.237
Self-Confidence	Deaths	2.6344	2	0.268
Conceptual Complexity	Deaths	0.23035	2	0.891
Distrust	Deaths	6.1833	2	0.045
In-Group Bias	Deaths	0.20569	2	0.902
I-1	Deaths	0.1143	2	0.944
P-1	Deaths	0.14341	2	0.931
P-4	Deaths	4.9227	2	0.085

Table 5 presents the Granger-causality tests with results for how individual psychological characteristics affect conflict severity. Much like the findings in Table 4, most of the psychological characteristics of British Prime Ministers do not Granger-cause conflict severity. This indicates that the inclusion of lagged values of most of the psychological characteristics does not result in a model that performs better than a model that simply regresses battle-deaths on the variables' own lagged values. The exception in this situation is conceptual complexity. Conceptual complexity does Granger-cause conflict severity. Granger-causality tests provide useful information about the presence or absence of endogeneity between two time series of interest; however, there is little useful information about the nature (i.e. direction) of such a relationship. Therefore, it is prudent to present visual illustrations of the nature of the relationship between variables that appear to be endogenous. The following section will utilize impulse response functions to illustrate these interesting dynamics.

Table 5 - Granger Causality: Psychology & Severity

Equation	Excluded	Chi ²	DF	p-value
Deaths	nPower	1.351	2	0.509
Deaths	BACE	0.18385	2	0.912
Deaths	Self-Confidence	3.3157	2	0.191
Deaths	Conceptual Complexity	6.9739	2	0.031
Deaths	Distrust	2.0868	2	0.352
Deaths	In-Group Bias	1.1652	2	0.558
Deaths	I-1	0.0119	2	0.994
Deaths	P-1	0.6567	2	0.720
Deaths	P-4	1.3065	2	0.520

Impulse Response Functions – Visualizing the Relationships

Impulse response functions (IRF) give analysts a way to visualize the effect of a shock to an endogenous variable on itself and/or another endogenous variable. IRFs graph the effect of one-standard deviation “impulse” or shock to the dependent variable in question⁴⁸. Figure 6 presents the IRF exploring the relationship between conflict severity and a leader’s distrust. Above, the results indicate that conflict severity Granger-causes a leader’s distrust at time t . However, the results indicate that it is possible that the relationship is quite short-lived. Figure 6 shows that a shock to conflict severity at t briefly increases the distrust of the leader; however, by time $t+1$ it is clear that distrust is beginning to return to its baseline and in-fact back to its baseline by time $t+2$. This sort of pattern persists through the forecasted period. However, any real inferences about the effect of conflict severity on distrust should be made cautiously, as the shock-responses are never truly statistically significant (i.e. the 95% confidence intervals

⁴⁸ I only present IRFs for the relationships that showed Granger-causality between severity (X_t) and psychology (Y_t).

continuously include zero, indicating that the relationship between the impulse and changes in distrust cannot safely be distinguished from zero).

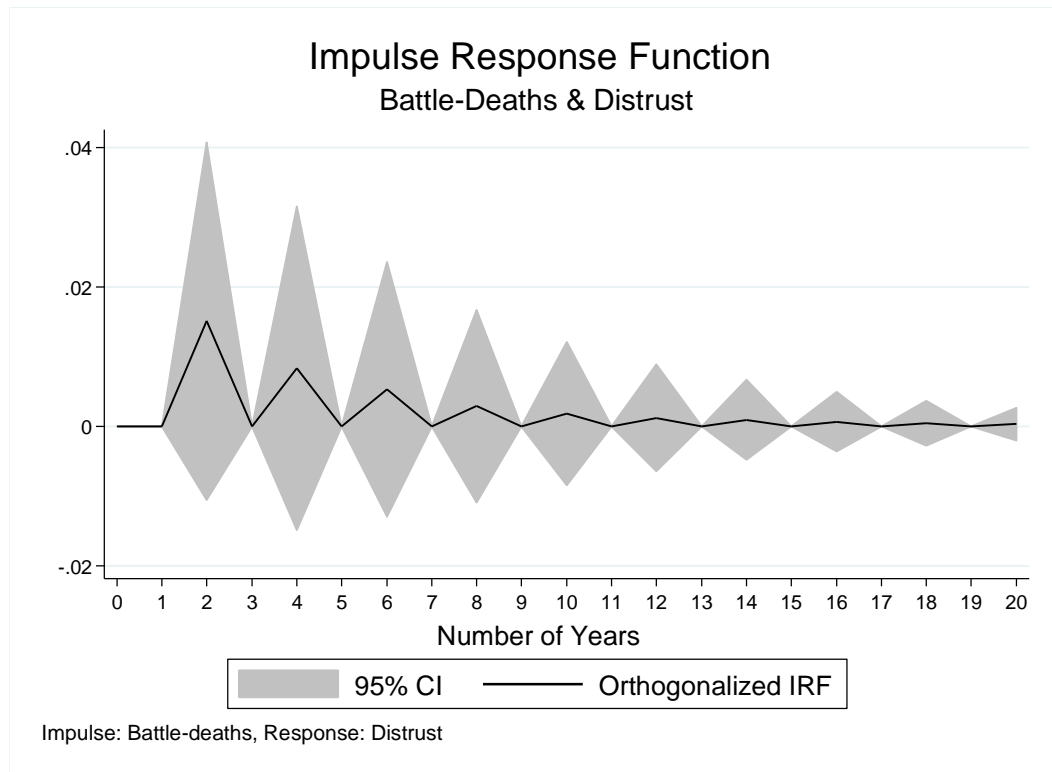


Figure 6: Impulse Response Function

Figure 7 illustrates the effect of shocks on a prime minister’s belief about his or her ability to control and shape historical events (P-4). The pattern is very similar to the pattern observed for distrust: the introduction of a shock to conflict severity has a minimal, and very short-lived effect on P-4. Therefore, despite evidence suggestive of Granger-causality presented above, it is not clear that the severity of the Troubles had a lasting effect on the psychological characteristics of British Prime Ministers. However, also like distrust, any inferences drawn about the potential impulse response of P-4 to shocks in conflict severity should be made carefully, as they never achieve statistical significance. The implications of these findings – or

lack thereof - are quite relevant to the study of leadership psychology and how it affects foreign and domestic policy behaviors, as I discuss in the next section.

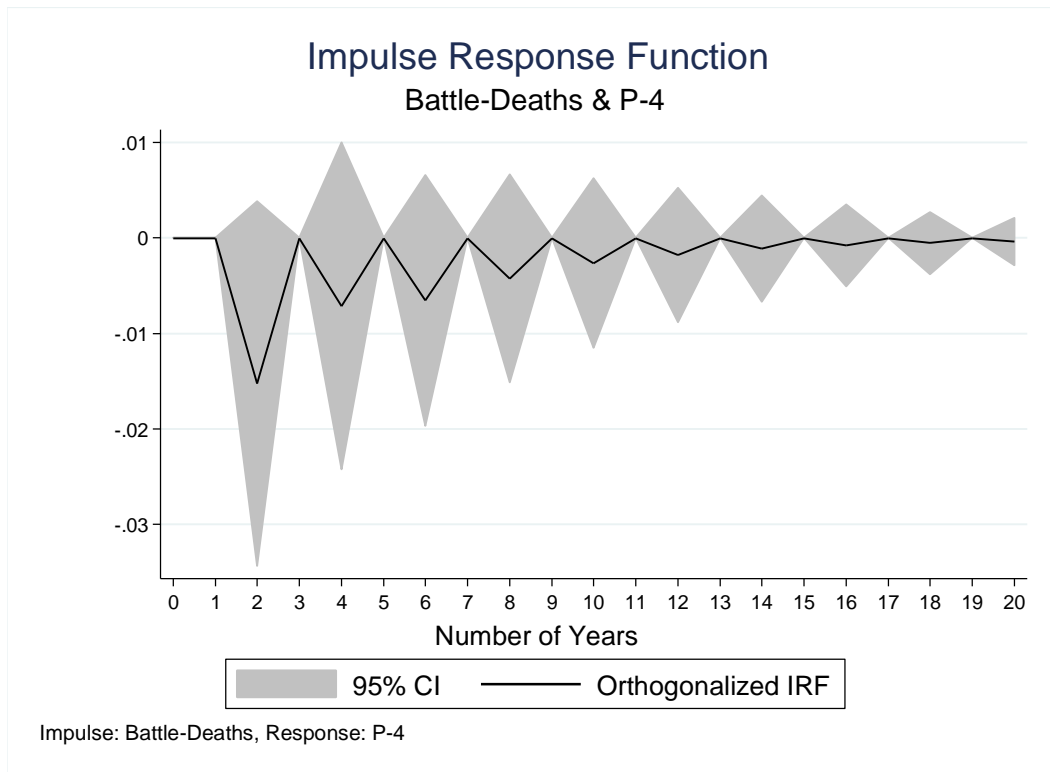


Figure 7: Impulse Response Functions - Severity and P-4

Discussion and Conclusions

This chapter opened by asking what effect, if any, variance in civil conflict severity had on the psychological characteristics of world leaders. In an earlier chapter, preliminary evidence indicated that contemporaneous measures of psychological characteristics could be useful for understanding conflict severity at time t . However, that chapter did not address just how leaders respond to surprises or shocks during the conflict, nor did it address the potential cyclical (i.e. endogenous) relationship between those characteristics and conflict severity. It has been

theoretically assumed that certain characteristics and beliefs of world leaders would be sensitive to surprise, but very few empirical studies have investigated the long-run relationship between these shocks and psychological characteristics.

This shortcoming in existing research was ripe for exploration and the application of time series analysis. Utilizing information about the Troubles in Northern Ireland, I was able to construct a time series data set that spanned from the beginning of the civil conflict with British Loyalist forces and Irish Republican forces and included measures of the psychological characteristics of prime ministers. Several interesting factors emerge from this chapter about the potential feedback relationship between conflict severity the psychological characteristics of British Prime Ministers.

The first interesting factor is that there is limited evidence that conflict severity has any lasting effect on the psychological characteristics of leaders. Only two psychological characteristics – distrust and P-4 – appear to be Granger-caused by conflict severity. Moreover, P-4 fails to achieve the standard level of statistical significance. This represents a case where failing to reject the null hypothesis may be more interesting than rejecting it. There are, indeed, good theoretical reasons to think that the all too often horrific nature of civil conflicts could have pronounced and lasting effects on a leader's beliefs and broader personality characteristics. However, the statistical analysis finds that such an effect is unlikely. Even the characteristics that appear to be Granger-caused by conflict severity produce impulse response functions that indicate that shocks to conflict severity produce only small, short-lived, and statistically insignificant shifts in a prime minister's distrust and belief in ability to control historical outcomes.

This finding is well-illustrated by examination of the time series graph in figure 8 below. This graph displays shifts in distrust, P-4, and a standardized measure of conflict severity. The graph shows that personality characteristics do shift over time, but the shifts are *independent* of the severity of the conflict in Northern Ireland. So, this finding has implications for how political psychologists think about their research designs (i.e. dealing with potential endogeneity) and it establishes a justification for future research questions. If conflict severity does not affect personality characteristics and beliefs, then what events do? Would the relationship be different if scholars choose to observe cases where the opposition is demanding control of the central government (i.e. threatening the leader's position and personal security) instead of engaging in a secessionist conflict? Would examining the types of conflict-related deaths separately yield different results (i.e. treating acts of terrorism, assassinations, attacks on British military forces, and inter-militia violence as different types of severity)? These questions have become easier to answer with advances in statistical methods and a better understanding of the effect that time can have on changes to social sciences variables. This research may not completely reject the possibility that there may be an endogenous relationship between leader psychology and conflict severity, but it does provide evidence that we scholars can begin to rethink the relationship between these two variables in future research.

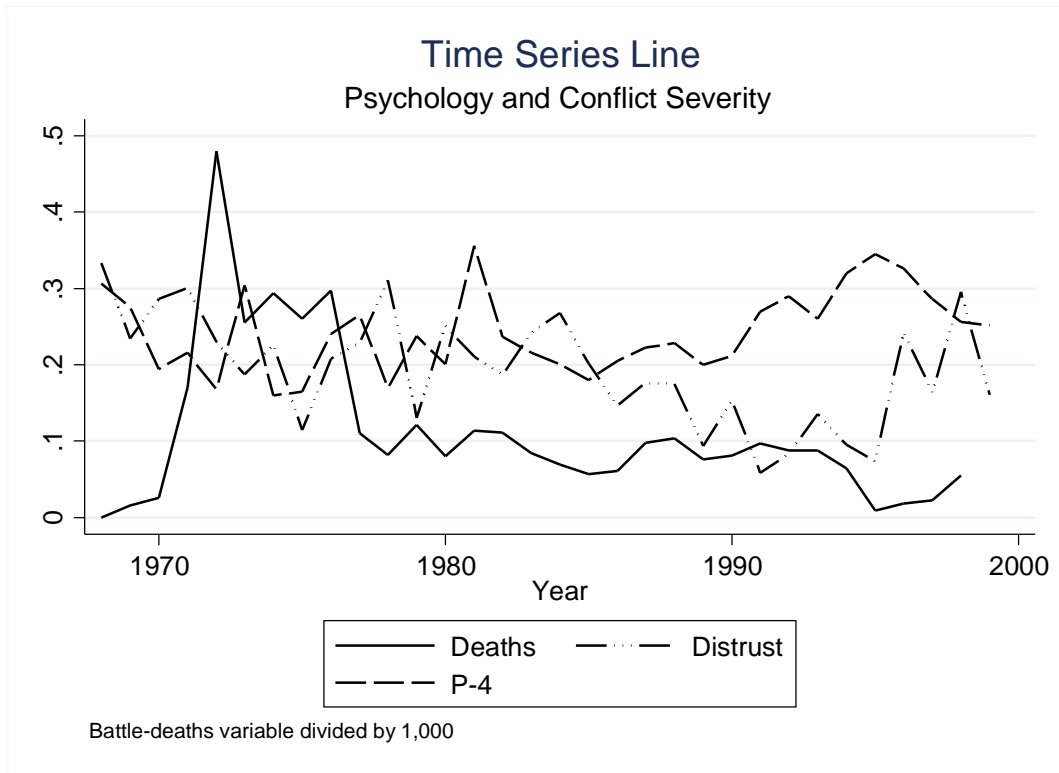


Figure 8: Time Series Line

CHAPTER 6: CONCLUSION: LEADERS MATTER

What Have We Learned?

This dissertation project opened by asking how political leaders can affect civil conflicts within their countries. Chapter 2 paid particular attention to how leaders can influence the likelihood of civil conflict onset. It can sometimes be difficult to link the outbreak of civil conflict directly to the behaviors of political leaders. This is because scholars tend to assume that there are institutional and political constraints that make it easier to separate individual political leaders from responsibility for starting civil conflicts. However, I argued that these political leaders often served as the chief policy-makers and chief negotiators with political opponents. I make this argument because chief executives often act as the last veto power for any potential agreement that could avoid the onset of a conflict. It would be difficult, for example, to avoid arguing that J. R. Jayewardene was not responsible for the failure of negotiations with the initially peaceful Tamil political leaders.

The findings indicate that there are indeed identifiable relationships between the psychology of chief executives and the onset of civil conflict. When examining all armed conflict onsets (i.e. any armed conflict that starts in a given year and has a battle-death threshold of greater than 25), many psychological variables stand out as important. A leader's belief in his or her ability to control events, in-group bias, and belief about the fundamental nature of the political universe (P-1) all increase the likelihood of armed conflict onset. Conversely, need for power, self-confidence, a belief that a cooperative strategy is the best way to pursue one's political goals (I-1), and a belief that he or she can shape or affect historical outcomes (P-4)

decrease the likelihood of armed conflict onset in a given year. These findings are generally replicated when looking only at the onset of high-intensity conflicts (i.e. those with more than 1,000 battle-deaths in a given year). Belief in ability to control events and in-group bias make the onset of these types of conflicts more likely, whereas a more positive I-1 score makes these types of conflicts less likely. Interestingly, however, distrust is significant and negatively related to the likelihood of a high-intensity civil war onset.

The connection between the psychology of leaders and civil war behavior becomes more direct when investigating the severity and duration of civil conflicts. The underlying assumption of Chapter 3, which investigates how leaders affect civil war severity, is that the chief executive is heavily involved in shaping strategic goals and informing broader tactics. The link between the psychology of the chief executive and the severity of civil conflict is supported in the statistical analysis. Leaders who are more distrustful and have a stronger belief in their ability to shape historical outcomes (P-4) often preside over civil conflicts that are more severe. Alternatively, leaders who are more self-confident and believe that their best strategy for achieving political goals is cooperation are likely to preside over less severe civil conflicts.

In chapter 4, I asked how the psychological characteristics of chief executives affected civil conflict duration. The key theoretical assumption of this section was that these political leaders often acted as the final veto player when deciding to settle a conflict with an armed opposition group. Therefore, their personalities and beliefs should play an important role in explaining why some civil conflicts are longer or shorter than others. Once again, the statistical analysis supported this theoretical assumption. Leaders with higher scores for self-confidence,

conceptual complexity, and in-group bias presided over longer civil conflicts than leaders who had lower scores on these characteristics.

Finally, in chapter 5, I investigated the effect that civil conflict severity could have on the psychological characteristics of world leaders. By examining time series data about the severity of the conflict in Northern Ireland as well as the time serial properties of the psychology of British Prime Ministers, I sought to identify which psychological variables may be more or less sensitive to civil conflict severity. After running VAR models to test the possible relationship, I presented the findings of the more easily interpreted post-estimation tests for Granger causality and impulse response functions. The findings were interesting to say the least. The Granger-causality tests indicated that conflict severity did appear to Granger-cause distrust and P-4. However, the impulse response functions illustrated that the effects were weak, short-lived, and largely insignificant. Broadly, these findings indicate that scholars should continue to investigate just how certain events can shape the psychological characteristics of chief executives.

All of the findings presented above (with the exception of those in chapter 5) demonstrated that – even when controlling for key structural and situational variables – leadership matters. More importantly, the psychological characteristics of those individuals in leadership matter. In all instances, leaders affected the likelihood of civil conflict onset, the severity of civil conflicts, and the duration of civil conflicts. These findings have meaningful implications for both the study of civil war and for the broader field of political psychology.

A common theme throughout each chapter of this project has been that the overwhelming reliance on both the rational actor model of decision-making and situational and/or structural

variables has resulted in a body of civil war literature that is missing the major pieces of political leaders. It bears repeating that no political psychologist would ever argue that those situational and structural factors do not matter; rather, they argue that those factors and their effects are filtered through the personalities and belief systems of decision-makers. Therefore, the leader in question decides how important an indicator is, it is the leader who determines whether potential constraints are minor obstacles or genuinely binding checks on their individual powers, and it is the leader who prioritizes certain policy outcomes over another when dealing with politically contentious situations. Therefore, the argument promoted here is that scholars of civil conflicts need to consider how leaders can exert independent influence on civil wars when controlling for structural or situational variables. Political psychology, particularly as it relates to the study of political executives and world leaders, emphasizes how these characteristics and beliefs relate to foreign policy outcomes and management style. However, this research demonstrates that these at-a-distance measures of psychological characteristics and beliefs have a place in the study of domestic conflict. This analysis further indicates that we can continue to expand at-a-distance research methods to address a broader array of questions relating to political behavior.

Where do We Go from Here?

While these findings, taken together, represent useful contributions to both the study of civil conflicts and the study of leaders, there is still room to expand and improve both of these research agendas. Each chapter in this work not only answered interesting and relevant questions, they each also raised more questions for future study. The remainder of this section will be dedicated to discussing some of the shortcomings of each section and additional questions that, being beyond the scope of this work, remain unanswered.

Civil War Onset – The Issue of Sample and Data Availability

As discussed above, this chapter provides a more direct link between the psychological characteristics and beliefs of world leaders and the likelihood of civil conflict. However, there remain some shortcomings and unanswered questions that should be addressed in future research. The most prominent shortcoming in this section is the issue of sample selection. While the majority of the civil conflict onset research is able to generate samples that generally reflect the broader global population of states, there are many countries in my data set that are missing. Recall from the discussion of coding in chapter 2, that generating a score for these psychological characteristics requires a minimum of 5,000 spoken words in a given year. Finding enough speech material for leaders in developing countries obviously presents a unique challenge. This challenge is particularly acute when relying on the availability of digitally-available archives.

The availability of speech materials (or lack thereof) often creates samples that are limited in both their cross-sectional and temporal scope. Many developing countries that do have these kinds of archives are largely limited to speeches made in the last decade. Therefore, my sample tends to slightly over-represent well-developed countries and countries in the last ten to twenty years. Obviously, this means that my sample may not be as representative as those that are able to include *most* states in *most* years. Nevertheless, as mentioned in chapter 2, my sample manages to be relatively representative with only slight over-representation of developed states. Additionally, my sample does not over- or under-represent civil conflict onsets relative to the full population. Nevertheless, it would be folly for me to argue that any missingness in my data is non-random. It would be more prudent for me to point out that such a non-random process is

beyond the ability of most researchers to control until such time as a broader array of countries emphasize the expansion and maintenance of speech archives for world leaders.

In addition to the potential sampling issue, there is a subject worthy of future attention that highlights both problems of data availability and an interesting question for future research. What role do opposition leaders – who may eventually become armed rebel leaders – play in the success or failure of bargaining with the state? More precisely, who is responsible for the failure of bargaining and the initiation of armed violence? Bargaining breakdown need not result in internal armed conflict. Instead, opposition groups may continue to pursue other forms of political protest. However, if civil conflict does start, one side has to fire the first shot. It is uncontroversial to argue that, in many cases, the first shot is not fired by the government. Therefore, the psychology of these opposition leaders is just as potentially interesting as the psychology of the chief executives of the state.

However, gathering at-a-distance data for these leaders runs into challenges that may be even greater than gathering data for heads of state. In many cases, opposition groups – particularly those that take up arms against the government – lack the developed resources needed to maintain reliable archives of speeches by their leaders. Moreover, in many cases, governments facing armed opposition have a strategic incentive to censor any meaningful attempts by the group to get their general message out to the public, lest the group appear to be fighting in good faith for perfectly reasonable demands. Some notable exceptions to this case may be the leaders who succeed in coming to power (i.e. Mao Zedong, Lenin, etc.). In this situation, the rebel turned state leader may attempt to enshrine all speeches and writing from the time of the civil conflict. These challenges would make it quite difficult to ensure that a

representative number of potential rebel leaders are available for coding and inclusion and a dyadic data set. These issues may become easier to circumvent in the future, however, as the internet has begun to give many typically marginalized groups a means to get their message to the masses.

Civil War Severity – The Issue of Rare Events

Once civil wars begin, it is important to know what factors make these conflicts more or less severe. As discussed above, there is some evidence that links civil conflict severity to individual leaders. However, there is the issue of the rather small sample of civil conflict-years available in my models. This represents an issue where the previously discussed difficulty with access to speech data is exacerbated by the rare nature of civil conflicts. Because civil conflicts are rare, the population of potential civil conflict-years is smaller than the population of all possible state-years. Additionally, states that are experiencing civil conflicts are inherently unstable. Such instability can conceivably result in a diversion of resources from something as trivial as archiving leader speeches in order to provide more funding for the security apparatus.

Similar to the discussion of civil conflict onset, there would ideally be a way to investigate the psychological characteristics of rebel leaders. Such an approach would allow scholars to identify not only which actor – the rebels or the government – are inflicting more casualties from year to year, but also open the door to associating psychological characteristics of each actor with strategic choices. For example, is one leader more likely to pursue policies of more indiscriminate violence or policies of winning “hearts and minds” than another? Are these policy approaches informed by economic, political, or military situations? Or are they driven by

an individual's broad psychology? The issue with these questions, as well as those of civil conflict onset, is the issue of data. More and better data continue to be needed to address these open questions and solve these research design issues.

Civil War Duration – Disaggregating how they End

The matter of civil war duration remains one of particular concern for policymakers and scholars. The findings here indicate that we learn more about when civil conflicts end by including the psychological characteristics of leaders. However, some questions still remain that are worth exploring. The first among these is the issue of how civil wars end. As discussed in chapter 4, civil conflicts can end through total victory, negotiated settlement, or a stalemate where the conflict ceases to reach the minimum number of required battle-deaths. There is a strong theoretical reason to believe that the effect of personalities and beliefs may have a greater effect on the likelihood of reaching a negotiated settlement. In this case, leaders are particularly important as they tend to serve as the ultimate veto player in accepting or rejecting a negotiated settlement with rebels. It is far easier to credit circumstance with the conflict fizzling out than the choice to pursue negotiation. Additionally, it is somewhat easier to assign more credit to military leaders and/or capabilities when focusing only on total victory by either side. Conflating how civil conflicts end limits the insights that we can generate from models of civil conflict duration.

Leaders' Responses to Civil War Severity – Operationalizing Severity

The findings in chapter 5 provide useful insights into designing at-a-distance research studies. While the preliminary findings indicate that leader psychology may well not be sensitive to general conflict severity, they present additional questions for future research. Does the type

of attack actually affect the psychological characteristics of leaders in a lasting way? In chapter 5, I aggregate all types of deaths associated with the Irish Troubles into an annual measure of the total number of conflict related deaths. On one hand, this is prudent because the aggregated number captures the general severity of the unrest and conflict in the region. On the other, it is distinctly possible that prime ministers may be more sensitive to the type of attack. The measure used in chapter 5 includes deaths caused by fighting between paramilitary groups, terrorist attacks (both against the government and against domestic opponents), fighting with British government forces, and assassinations of leaders of militias and/or British political figures.

However, this highlights an issue inherent in aggregation in general. Operationalizing severity as the aggregate number of deaths associated with the conflict tends to wipe away the real possibility that some conflict related deaths are simply more “shocking” than others. It is distinctly possible that prime ministers in the U.K. would be more deeply affected by the assassination of political leaders than they would be hearing about non-government armed groups killing one another. Therefore, subsequent research may wish to explore just how different prime ministers respond to different shocks in the context of the Troubles.

In addition to disaggregating the categories of battle-deaths, it may also be prudent to disaggregate the data temporally as well. Perhaps looking at the severity and psychological characteristics month-to-month, rather than year-to-year, may paint a more discrete feature of the effect of conflict severity. It is possible that a particularly severe month does cause a shock to certain characteristics, but that shocked characteristic may return to the leader’s mean before the end of the year. This may indeed paint a clearer picture of the short- or long-run relationship between conflict severity and leadership psychology.

Conclusion: The Takeaway

What does all of this mean for scholars of conflict studies and political psychology?

There are some broad takeaways for those interested in these types of questions. First, we need more and better data for world leaders. So long as we lack access to enough speech data to generate a truly representative sample, at-a-distance political psychologists will be vulnerable to accusations of selection bias in their research. Progress continues to be made in gaining access to these useful resources, but we still have work to do in this area.

The second, and most important, takeaway from this research project is one that bears repeating over and over again: leaders matter. Chief executives play a pivotal role in shaping the pre-war bargaining range and, therefore, affect how likely negotiations are to succeed in avoiding civil conflict. If bargaining fails and civil conflict breaks out, these political leaders play an even greater role in shaping strategic and tactical styles and priorities. In most cases, these leaders are the commanders-in-chief of the armed forces. This leaves the responsibility for processing information about the conflict (i.e. costs and benefits of continued fighting, likelihood of victory, etc.) to individuals. More importantly, the responsibility for processing information and calculating the right strategic and tactical choices falls to individuals who are *not* rational actors. Rather, political leaders tend to not only be fallible, but prone to hubris and miscalculation.

Finally, leaders matter when it comes time to bring an end to civil conflict. Chief executives often act as the last veto player to any potential negotiated settlement. The same fallible individuals must weigh complex information generated by the political environment, the

international community, and the war itself and make a decision to carry on the war or bring it to an end. All of these processes vary from person-to-person and leader-to-leader. If one chooses to construct a model or theory that excludes the important role leaders play in every stage of a civil conflict, one is choosing to construct a model or theory that not only has flawed assumptions, but does not represent reality.

APPENDIX A: ALTERNATIVE MODELS

Table 6 - Armed Conflict (Ongoing=0)

Armed Conflict Models

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5
Distrust _(t-1)	-0.843 (0.827)	-1.795* (0.747)	-1.838* (0.764)		
BACE _(t-1)	3.019** (1.023)	3.011** (1.030)	2.178* (0.992)	2.450* (1.004)	1.769+ (0.967)
In-Group Bias _(t-1)	-0.652 (1.340)		-2.093+ (1.266)		-1.602 (1.248)
nPower _(t-1)	-2.850* (1.191)	-2.946** (1.116)		-2.530* (1.115)	
Conceptual Complexity _(t-1)	0.799 (1.086)	0.586 (1.063)	0.304 (1.106)	1.131 (1.051)	0.941 (1.082)
Self-Confidence _(t-1)	0.438 (0.448)	0.452 (0.456)	0.427 (0.461)	0.183 (0.454)	0.174 (0.458)
Task-Orientation _(t-1)	-0.251 (0.748)	0.394 (0.713)	0.0351 (0.743)	0.0162 (0.743)	-0.243 (0.766)
I-1 _(t-1)	-0.891** (0.319)	-0.666* (0.315)	-0.620+ (0.317)		
P-4 _(t-1)	-2.346* (0.965)	-1.703+ (0.948)	-1.486 (0.958)		
P-1 _(t-1)	1.392** (0.483)			0.990* (0.407)	0.971* (0.411)
GDP Per Capita _(log t-1)	-0.0526 (0.0337)	-0.0627+ (0.0341)	-0.0563 (0.0344)	-0.0584+ (0.0327)	-0.0515 (0.0331)
Population _(log t-1)	0.0323 (0.0215)	0.0395+ (0.0217)	0.0318 (0.0219)	0.0337 (0.0212)	0.0268 (0.0215)
Personalist Regime	-0.551 (0.384)	-0.535 (0.390)	-0.511 (0.395)	-0.744+ (0.388)	-0.706+ (0.391)
Party Regime	-1.127* (0.453)	-1.337** (0.455)	-1.369** (0.460)	-1.169* (0.461)	-1.195** (0.466)
Military Regime	-2.013** (0.686)	-2.240** (0.694)	-2.338*** (0.700)	-2.010** (0.691)	-2.087** (0.696)
Anocracy	0.114 (0.205)	0.176 (0.208)	0.173 (0.210)	0.147 (0.208)	0.142 (0.210)
Constant	-2.326* (0.970)	-2.248* (0.878)	-2.014* (0.986)	-3.492*** (0.803)	-3.331** (0.893)
Observations	282	282	282	282	282

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Table 7 - Armed Conflict (Ongoing Missing)

Armed Conflict Models					
VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5
Distrust _(t-1)	-1.093 (0.700)	-1.467* (0.668)	-1.298+ (0.698)		
BACE _(t-1)	2.571** (0.887)	2.530** (0.889)	2.069* (0.882)	2.190* (0.901)	1.757* (0.883)
In-Group Bias _(t-1)	1.934+ (1.173)		0.526 (1.064)		1.185 (1.044)
nPower _(t-1)	-2.808** (1.054)	-2.038* (0.941)		-1.740+ (0.960)	
Conceptual Complexity _(t-1)	1.153 (0.997)	0.587 (0.950)	1.059 (1.008)	1.005 (0.975)	1.545 (1.012)
Self-Confidence _(t-1)	-1.132** (0.384)	-1.083** (0.386)	-1.214** (0.393)	-1.211** (0.395)	-1.347*** (0.397)
Task-Orientation _(t-1)	-0.360 (0.667)	-0.649 (0.603)	-0.580 (0.643)	-0.417 (0.644)	-0.276 (0.668)
I-1 _(t-1)	-0.584* (0.270)	-0.615* (0.260)	-0.531* (0.267)		
P-4 _(t-1)	-0.412 (0.861)	-0.236 (0.789)	-0.413 (0.799)		
P-1 _(t-1)	0.216 (0.446)			0.135 (0.384)	0.0970 (0.387)
GDP Per Capita _(log t-1)	-0.0910** (0.0292)	-0.0876** (0.0293)	-0.0866** (0.0298)	-0.0613* (0.0264)	-0.0677* (0.0271)
Logged Population _(log t-1)	0.0459* (0.0182)	0.0429* (0.0182)	0.0398* (0.0185)	0.0287+ (0.0168)	0.0298+ (0.0171)
Personalist Regime	3.883*** (1.089)	3.639*** (1.054)	4.193*** (1.088)	3.708*** (1.105)	4.356*** (1.128)
Party Regime	0.0248 (0.691)	-0.124 (0.690)	-0.0628 (0.706)	0.0433 (0.707)	0.126 (0.715)
Anocracy	-0.409 (0.275)	-0.408 (0.273)	-0.490+ (0.277)	-0.537+ (0.280)	-0.602* (0.280)
Constant	-1.859* (0.810)	-1.154 (0.707)	-1.809* (0.829)	-2.067** (0.655)	-2.792*** (0.735)
Observations	195	195	195	195	195

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Military Regime Excluded for Collinearity

Table 8 - High-Intensity Conflict (Ongoing = 0)

Armed Conflict Models					
VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5
Distrust _(t-1)	-2.020** (0.682)	-2.481*** (0.607)	-2.367*** (0.632)		
BACE _(t-1)	2.319** (0.846)	2.230** (0.838)	1.339 (0.823)	1.743* (0.844)	1.033 (0.822)
In-Group Bias _(t-1)	0.719 (1.107)		-0.828 (1.049)		-0.0574 (1.061)
nPower _(t-1)	-3.464*** (0.984)	-3.184*** (0.908)		-2.651** (0.937)	
Conceptual Complexity _(t-1)	0.268 (0.897)	-0.00513 (0.865)	0.00635 (0.916)	0.751 (0.883)	0.847 (0.919)
Self-Confidence _(t-1)	0.277 (0.370)	0.284 (0.371)	0.250 (0.382)	0.00366 (0.382)	-0.00151 (0.390)
Task-Orientation _(t-1)	-0.126 (0.618)	-0.0323 (0.581)	-0.212 (0.616)	-0.0538 (0.625)	-0.111 (0.652)
I-1 _(t-1)	-0.854** (0.263)	-0.784** (0.256)	-0.696** (0.263)		
P-4 _(t-1)	-1.248 (0.798)	-0.952 (0.772)	-0.776 (0.794)		
P-1 _(t-1)	0.529 (0.399)			0.599+ (0.342)	0.565 (0.349)
GDP Per Capita _(log t-1)	-0.0517+ (0.0277)	-0.0540+ (0.0276)	-0.0494+ (0.0284)	-0.0336 (0.0274)	-0.0314 (0.0281)
Population _(log t-1)	0.0414* (0.0177)	0.0423* (0.0175)	0.0363* (0.0180)	0.0307+ (0.0178)	0.0271 (0.0182)
Personalist Regime	-0.380 (0.317)	-0.393 (0.317)	-0.323 (0.327)	-0.614+ (0.326)	-0.516 (0.333)
Party Regime	-0.979** (0.374)	-1.076** (0.369)	-1.087** (0.380)	-0.947* (0.387)	-0.954* (0.395)
Military Regime	-1.506** (0.563)	-1.601** (0.561)	-1.720** (0.576)	-1.258* (0.577)	-1.383* (0.588)
Anocracy	0.0198 (0.169)	0.0367 (0.169)	0.0458 (0.174)	-0.0208 (0.174)	-0.00493 (0.178)
Constant	-1.727* (0.801)	-1.389+ (0.715)	-1.685* (0.817)	-2.862*** (0.674)	-3.228*** (0.758)
Observations	282	282	282	282	282

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Table 9 - High-Intensity Armed Conflict Onset (Ongoing Missing)

Armed Conflict Models					
VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5
Distrust _(t-1)	-1.478*	-1.608**	-1.450*		
	(0.616)	(0.594)	(0.622)		
BACE _(t-1)	1.846*	1.737*	1.295+	1.616*	1.184
	(0.754)	(0.764)	(0.760)	(0.795)	(0.776)
In-Group Bias _(t-1)	1.991+		0.575		1.430
	(1.017)		(0.932)		(0.930)
nPower = L,	-2.905**	-2.049*		-1.635+	
	(0.930)	(0.837)		(0.872)	
Conceptual Complexity _(t-1)	0.523	0.250	0.695	0.470	1.037
	(0.857)	(0.817)	(0.870)	(0.863)	(0.895)
Self-Confidence _(t-1)	-0.437	-0.408	-0.536	-0.553	-0.682+
	(0.332)	(0.339)	(0.343)	(0.353)	(0.352)
Task-Orientation _(t-1)	-0.270	-0.879+	-0.817	-0.341	-0.175
	(0.573)	(0.528)	(0.562)	(0.576)	(0.594)
I-1 _(t-1)	-0.745**	-0.896***	-0.813***		
	(0.235)	(0.227)	(0.233)		
P-4 _(t-1)	0.185	-0.222	-0.439		
	(0.758)	(0.707)	(0.718)		
P-1 _(t-1)	-0.520			-0.515	-0.542
	(0.377)			(0.334)	(0.336)
GDP Per Capita _(log t-1)	-0.0272	-0.0238	-0.0197	0.00805	0.00466
	(0.0248)	(0.0252)	(0.0256)	(0.0234)	(0.0237)
Population _(log t-1)	0.0123	0.00839	0.00403	-0.00755	-0.00753
	(0.0160)	(0.0162)	(0.0164)	(0.0154)	(0.0155)
Personalist Regime	3.648***	3.073***	3.524***	3.496***	4.062***
	(0.900)	(0.887)	(0.922)	(0.940)	(0.961)
Party Regime	0.127	-0.0656	-0.0430	0.110	0.181
	(0.599)	(0.604)	(0.620)	(0.633)	(0.638)
Anocracy	-0.362	-0.292	-0.344	-0.525*	-0.561*
	(0.222)	(0.224)	(0.229)	(0.230)	(0.231)
Constant	-1.292+	-0.679	-1.326+	-1.658**	-2.437***
	(0.692)	(0.609)	(0.715)	(0.586)	(0.656)
Observations	218	218	218	218	218

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Table 10 - High-Intensity Onset (Ongoing = 0, Population)

High-Intensity Models					
VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5
Distrust _(t-1)	-1.702* (0.662)	-2.180*** (0.588)	-2.103*** (0.614)		
BACE _(t-1)	2.431** (0.850)	2.355** (0.842)	1.466+ (0.824)	1.825* (0.843)	1.113 (0.820)
In-Group Bias _(t-1)	0.610 (1.113)		-0.908 (1.054)		-0.184 (1.056)
nPower _(t-1)	-3.378*** (0.989)	-3.125*** (0.914)		-2.627** (0.939)	
Conceptual Complexity _(t-1)	0.141 (0.901)	-0.131 (0.869)	-0.130 (0.918)	0.598 (0.875)	0.681 (0.907)
Self-Confidence _(t-1)	0.293 (0.373)	0.301 (0.374)	0.267 (0.384)	0.0211 (0.383)	0.0143 (0.390)
Task-Orientation _(t-1)	0.0549 (0.615)	0.200 (0.573)	-0.00933 (0.609)	0.0869 (0.616)	0.00319 (0.645)
I-1 _(t-1)	-0.849** (0.265)	-0.767** (0.258)	-0.684** (0.264)		
P-4 _(t-1)	-1.454+ (0.796)	-1.144 (0.772)	-0.951 (0.793)		
P-1 _(t-1)	0.589 (0.401)			0.563+ (0.342)	0.533 (0.348)
Population _(log t-1)	0.0167 (0.0116)	0.0168 (0.0116)	0.0130 (0.0118)	0.0148 (0.0119)	0.0121 (0.0122)
Personalist Regime	-0.439 (0.318)	-0.452 (0.318)	-0.382 (0.327)	-0.650* (0.325)	-0.555+ (0.331)
Party Regime	-0.761* (0.357)	-0.853* (0.354)	-0.885* (0.364)	-0.805* (0.370)	-0.825* (0.378)
Military Regime	-1.242* (0.547)	-1.331* (0.546)	-1.471** (0.559)	-1.109* (0.564)	-1.242* (0.573)
Anocracy	-0.00979 (0.170)	0.00886 (0.169)	0.0192 (0.174)	-0.0310 (0.175)	-0.0163 (0.178)
Constant	-1.877* (0.803)	-1.570* (0.714)	-1.810* (0.819)	-2.913*** (0.675)	-3.230*** (0.759)
Observations	282	282	282	282	282

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Table 11 - High-Intensity (Ongoing = 0, GDP Per Cap)

High-Intensity Models					
VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5
Distrust _(t-1)	-1.710*	-2.187***	-2.142***		
	(0.675)	(0.600)	(0.626)		
BACE _(t-1)	2.294**	2.227**	1.374+	1.760*	1.071
	(0.857)	(0.849)	(0.830)	(0.849)	(0.825)
In-Group Bias _(t-1)	0.447		-0.990		-0.242
	(1.115)		(1.056)		(1.057)
nPower _(t-1)	-3.218**	-3.014**		-2.542**	
	(0.990)	(0.917)		(0.941)	
Conceptual Complexity _(t-1)	0.350	0.117	0.0680	0.774	0.830
	(0.908)	(0.876)	(0.924)	(0.889)	(0.923)
Self-Confidence _(t-1)	0.276	0.284	0.252	0.0122	0.00533
	(0.375)	(0.376)	(0.385)	(0.384)	(0.391)
Task-Orientation _(t-1)	-0.0736	0.0960	-0.122	0.0153	-0.0730
	(0.626)	(0.586)	(0.620)	(0.628)	(0.654)
I-1 _(t-1)	-0.858**	-0.772**	-0.694**		
	(0.267)	(0.260)	(0.265)		
P-4 _(t-1)	-1.330+	-1.014	-0.830		
	(0.807)	(0.782)	(0.801)		
P-1 _(t-1)	0.605			0.581+	0.553
	(0.403)			(0.344)	(0.350)
GDP Per Capita _(log t-1)	-0.00239	-0.00340	-0.00592	0.00162	-0.000193
	(0.0183)	(0.0183)	(0.0188)	(0.0185)	(0.0188)
Personalist Regime	-0.453	-0.462	-0.393	-0.658*	-0.566+
	(0.320)	(0.320)	(0.328)	(0.327)	(0.332)
Party Regime	-0.732*	-0.824*	-0.874*	-0.762*	-0.795*
	(0.363)	(0.359)	(0.369)	(0.375)	(0.382)
Military Regime	-1.184*	-1.274*	-1.434*	-1.039+	-1.184*
	(0.551)	(0.550)	(0.561)	(0.565)	(0.573)
Anocracy	-0.0389	-0.0191	-0.00461	-0.0549	-0.0379
	(0.170)	(0.169)	(0.174)	(0.174)	(0.178)
Constant	-1.600*	-1.329+	-1.545+	-2.732***	-3.039***
	(0.810)	(0.724)	(0.821)	(0.674)	(0.750)
Observations	282	282	282	282	282

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Table 12 - High-Intensity (Ongoing Missing, Population)

High-Intensity Models					
VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5
Distrust _(t-1)	-1.202* (0.557)	-1.357** (0.524)	-1.245* (0.555)		
BACE _(t-1)	1.945** (0.749)	1.827* (0.758)	1.380+ (0.751)	1.574* (0.783)	1.158 (0.761)
In-Group Bias _(t-1)	1.920+ (1.015)		0.560 (0.930)		1.461 (0.916)
nPower _(t-1)	-2.809** (0.926)	-1.992* (0.835)		-1.650+ (0.868)	
Conceptual Complexity _(t-1)	0.375 (0.846)	0.134 (0.806)	0.589 (0.856)	0.542 (0.835)	1.088 (0.856)
Self-Confidence _(t-1)	-0.411 (0.332)	-0.386 (0.337)	-0.515 (0.342)	-0.563 (0.351)	-0.690* (0.350)
Task-Orientation _(t-1)	-0.151 (0.562)	-0.762 (0.512)	-0.723 (0.546)	-0.384 (0.561)	-0.195 (0.583)
I-1 _(t-1)	-0.746** (0.235)	-0.895*** (0.227)	-0.815*** (0.233)		
P-4 _(t-1)	0.152 (0.758)	-0.250 (0.706)	-0.457 (0.716)		
P-1 _(t-1)	-0.518 (0.377)			-0.493 (0.327)	-0.531 (0.329)
Population _(log t-1)	-0.00189 (0.00940)	-0.00395 (0.00952)	-0.00614 (0.00964)	-0.00351 (0.00996)	-0.00520 (0.00993)
Personalist Regime	3.562*** (0.897)	3.011*** (0.884)	3.463*** (0.917)	3.521*** (0.936)	4.088*** (0.953)
Party Regime	0.140 (0.600)	-0.0486 (0.603)	-0.0289 (0.618)	0.102 (0.631)	0.180 (0.636)
Military Regime	-	-	-	-	-
Anocracy	-0.433* (0.213)	-0.355+ (0.214)	-0.396+ (0.219)	-0.509* (0.224)	-0.554* (0.225)
Constant	-1.363* (0.689)	-0.762 (0.601)	-1.378+ (0.711)	-1.658** (0.585)	-2.449*** (0.652)
Observations	218	218	218	218	218

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

Table 13 - High-Intensity (Ongoing Missing, GDP Per Cap)

High-Intensity Models					
VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5
Distrust _(t-1)	-1.307* (0.570)	-1.485** (0.539)	-1.393* (0.570)		
BACE _(t-1)	1.866* (0.752)	1.753* (0.761)	1.308+ (0.756)	1.593* (0.792)	1.148 (0.771)
In-Group Bias _(t-1)	1.918+ (1.010)		0.570 (0.928)		1.493 (0.919)
nPower _(t-1)	-2.800** (0.918)	-1.998* (0.830)		-1.682+ (0.864)	
Conceptual Complexity _(t-1)	0.511 (0.856)	0.252 (0.815)	0.692 (0.867)	0.488 (0.861)	1.077 (0.890)
Self-Confidence _(t-1)	-0.422 (0.331)	-0.399 (0.337)	-0.531 (0.341)	-0.563 (0.352)	-0.696* (0.350)
Task-Orientation _(t-1)	-0.253 (0.572)	-0.855 (0.525)	-0.807 (0.559)	-0.353 (0.574)	-0.179 (0.592)
I-1 _(t-1)	-0.751** (0.234)	-0.898*** (0.227)	-0.816*** (0.232)		
P-4 _(t-1)	0.183 (0.757)	-0.219 (0.706)	-0.435 (0.715)		
P-1 _(t-1)	-0.511 (0.376)			-0.495 (0.331)	-0.524 (0.333)
GDP Per Capita _(log t-1)	-0.0117 (0.0146)	-0.0132 (0.0148)	-0.0146 (0.0151)	-0.000730 (0.0151)	-0.00424 (0.0152)
Personalist Regime	3.619*** (0.898)	3.067*** (0.884)	3.517*** (0.919)	3.503*** (0.938)	4.092*** (0.958)
Party Regime	0.146 (0.598)	-0.0470 (0.602)	-0.0333 (0.617)	0.0893 (0.630)	0.165 (0.636)
Military Regime	-	-	-	-	-
Anocracy	-0.415* (0.212)	-0.330 (0.212)	-0.363+ (0.217)	-0.499* (0.223)	-0.536* (0.224)
Constant	-1.273+ (0.691)	-0.682 (0.607)	-1.319+ (0.712)	-1.697** (0.580)	-2.505*** (0.640)
Observations	218	218	218	218	218

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

APPENDIX B: ONSET TESTS

Table 14 - Onset Correlation Matrix

	Dis	BACE	Bias	nPwr	CC	SC	Task	P-1	I-1	P-4	GDP	Pop	Pers	Part	Mil	An
Dis	----															
BACE	.165*	----														
Bias	-.04	-.02	----													
nPwr	-.01	.18*	.539*	-----												
CC	-.14*	.11	-.40*	-.37*	----											
SC	-.12*	.11*	-.24*	-.27*	.39*	----										
Task	.07	-.05	-.25*	-.09	.26*	.05	----									
P-1	-.61*	-.15*	-.10	-.08	.05	.15*	.05	----								
I-1	-.37*	-.14*	-.04	-.095	-	-.03	-.05	.48*	---							
P-4	-.36*	.05	-.02	-.04	.07	.17*	-	.45*	.15*	---						
GDP PC	-.33*	-.08	-.09	-.19*	.23*	.34*	-.25*	.23*	.05	.37*	----					
Population	-.09	.05	-.09	-.10	.24*	.23*	-.01	.09	-.10	.23*	.73*	----				
Personal	.01	-.11	.009	-.07	.009	.009	.03	.11*	.11*	.06	.04*	.16*	----			
Party	.34*	.21*	.028	.09	-	-	.24*	-	-	-	.07*	.18*	-	----		
Military	.08	.004	.04	.16*	-	-	.13*	-.03	.17*	-	.05*	.14*	-	-	---	
Anocracy	-.02	-.09	.08	.17*	-	-	-.15*	.16*	.16*	.07	-	-	-	-	-	---
Democracy	-.33*	-.09	-.11	-	.24*	.21*	-.15*	.23*	.10	.36*	.37*	.05	-	-	-	-
				.197*									.28*	.28*	.15*	.02*

APPENDIX C: CIVIL WAR SEVERITY TESTS

Table 15 - Summary Stats. Battle-Deaths

Variable	Obs	Mean	Std Dev.	Variance	Skewness	Min	Max
Battle-Deaths	30	1211.933	1342.757	1802996	0.9293624	26	4755

Table 16 - Pairwise Correlation Matrix (Severity)

	DIS	BACE	BIAS	PWR	SC	CC	I-1	P-1	P-4	DEM	POP	GDP
DIS	-----											
BACE	.1761*	-----										
BIAS	-.0559	-.0413	-----									
PWR	-.0173	.1641*	.5420*	-----								
SC	-.0984+	.0785	-.2259*	-.2537*	-----							
CC	-.1269*	.1175*	-.3893*	-.3747*	.3901*	-----						
I-1	-.3559*	-.1581*	-.0383	-.0810	-.0194	-.0060	-----					
P-1	-.5737*	-.1396*	-.1126+	-.0668	.1841*	.0645	.4824*	-----				
P-4	-.3879*	.0533	-.0493	-.0670	.1909*	.0844	.1806*	.4762*	-----			
DEM	-.0632	-.1494	-.2957*	-.1749	.2935*	.3467*	.0032	.0577	.0067	-----		
POP	-.3867*	-.0614	-.0474	-.0878	.1292	.0419	.0720	.2183+	.2931*	.0087	-----	
GDP	-.2000	.0218	-.1054	-.1495	.3574*	-.1981	-.0977	.1616	.3622*	.0982*	.5629*	-----
FUEL	-.1788	.0057	.0967	-.2056	.1470	-.1074	.1698	.0954	.2496*	.0939*	.1672	.1850*

APPENDIX D: ALTERNATIVE SEVERITY MODELS

Table 17 - Alternative Model Specifications

Civil Conflict Severity			
ARIABLES	Model 1	Model 2	Model 3
Distrust	1.110 (2.431)		
BACE	4.808 (5.294)	0.715 (2.849)	-0.256 (1.258)
In-group Bias	6.183 (7.430)	-5.045 (3.201)	-4.307*** (1.056)
nPower	-2.951 (7.612)	5.353* (2.087)	-2.504+ (1.325)
Self-Confidence	4.743** (1.619)	-9.252*** (2.228)	-10.87*** (1.036)
Concept. Complex.	7.800+ (4.353)	4.180+ (2.499)	9.270*** (1.099)
I-1		-1.509+ (0.812)	
P-1			-2.717*** (0.555)
P-4		8.252* (3.770)	
Democracy	-0.707* (0.346)	0.0879 (0.226)	-0.463** (0.164)
Population _(log)	-3.353** (1.220)	0.363 (0.892)	3.257*** (0.660)
GDP Per Cap _(log)	2.493* (1.016)	0.851 (0.812)	0.184 (0.552)
Fuel Export	0.0436** (0.0162)	0.0501*** (0.0107)	0.0664*** (0.00551)
Constant	35.77* (14.68)	-14.05 (13.33)	-52.83*** (9.282)
Observations	28	28	28
Number of ccode	6	6	6
AIC	333.0985	346.3418	318.0588
BIC	347.7527	342.3283	332.713

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

APPENDIX E: DURATION DATA TESTS

Table 18 - Pairwise Correlation Matrix

	Dis	BACE	Bias	nPwr	SC	CC	I-1	P-1	P-4	Coup	Gov	Dem	GDP	Par.
Dis	-	-	-	-	-	-	-	-	-					
BACE	.20*	-	-	-	-	-	-	-	-					
Bias	-.15*	-.08*	-	-	-	-	-	-	-					
nPwr	.11*	.38*	.26*	-	-	-	-	-	-					
SC	.09*	.04*	-.30*	-.16*	-	-	-	-	-					
CC	-.19*	-.07*	-.19*	-.20*	.02	-	-	-	-					
I-1	-.40*	-.39*	.12*	-.21*	-.07*	.06*	-	-	-					
P-1	-.55*	-.39*	.09*	-.15*	-.03	-.06*	.54*	-	-					
P-4	.05*	.17*	.07*	.03	.02	-.20*	-.17*	.05*	-					
Coup	-.08*	.17*	.37*	.05*	-.04	-.12*	.05*	-.09*	-.02	-				
Gov	-.19*	-.12*	.06*	-.21*	.13*	.04	.007	.007	-.007	-.03*				
Dem	-.19*	-.17*	.15*	-.34*	.07*	-.06*	.099*	.14*	.05*	-.03*	.26*			
GDP	.09*	.02	.09*	-.06*	.32*	-.50*	-.11*	.02	.25*	-.11*	.03*	.25*		
Par	-.33*	-.27*	.17*	-.20*	-.47*	.35*	.22*	.35*	-.09*	.0002	-.34*	.21*	-.36*	
Int.	.03	.02	.15*	.15*	-.21*	.03	-.07*	-.11*	.09*	.02*	-.20*	-.23*	-.14*	-.09*

APPENDIX F: VECTOR AUTOREGRESSION TABLE

VARIABLES	Model 1 nPower	Model 2 BACE	Model 3 CC	Model 4 SC	Model 5 Distrust	Model 6 IGB	Model 7 I-1	Model 8 P-1	Model 9 P-4	Model 10 Deaths
nPwr _(t-1)	0.163 (0.260)	0.160 (0.521)	0.266 (0.472)	-1.016 (0.840)	1.454* (0.705)	-0.142 (0.303)	3.018 (3.692)	1.260 (1.664)	-0.0885 (0.642)	-11.76 (10.14)
nPwr _(t-2)	-0.0809 (0.230)	-0.115 (0.461)	0.264 (0.418)	0.0486 (0.743)	0.508 (0.624)	-0.436 (0.268)	1.470 (3.268)	1.344 (1.473)	0.418 (0.568)	-1.763 (8.977)
BACE _(t-1)	0.0929 (0.231)	0.670 (0.462)	0.0984 (0.419)	0.240 (0.745)	-0.134 (0.625)	-0.124 (0.269)	-0.0687 (3.274)	-0.737 (1.476)	-0.108 (0.569)	-3.835 (8.995)
BACE _(t-2)	0.0640 (0.204)	0.165 (0.408)	-0.415 (0.370)	-0.168 (0.658)	-0.322 (0.552)	0.413+ (0.237)	-1.804 (2.891)	-0.502 (1.303)	-0.546 (0.503)	-0.0113 (7.944)
CC _(t-1)	0.0496 (0.218)	-0.549 (0.436)	0.154 (0.395)	-1.149 (0.704)	0.178 (0.591)	0.337 (0.254)	1.754 (3.094)	-1.288 (1.394)	1.099* (0.538)	-21.95** (8.500)
CC _(t-2)	0.307 (0.275)	0.425 (0.549)	0.341 (0.498)	-1.644+ (0.886)	0.154 (0.744)	-0.156 (0.320)	0.898 (3.898)	-1.407 (1.757)	0.350 (0.678)	-13.57 (10.71)
SC _(t-1)	-0.0699 (0.0917)	-0.00417 (0.183)	0.145 (0.166)	0.179 (0.296)	-0.678** (0.248)	-0.120 (0.107)	-0.314 (1.301)	0.0185 (0.586)	-0.0530 (0.226)	4.048 (3.574)
SC _(t-2)	0.0141 (0.121)	0.155 (0.243)	-0.115 (0.220)	0.234 (0.392)	-0.236 (0.329)	0.0166 (0.141)	-1.457 (1.723)	-0.393 (0.776)	-0.229 (0.300)	6.048 (4.733)
Distrust _(t-1)	0.129 (0.149)	0.453 (0.299)	-0.0520 (0.271)	0.539 (0.482)	-0.117 (0.404)	-0.0363 (0.174)	-3.333 (2.118)	-1.802+ (0.954)	-0.392 (0.368)	8.200 (5.818)
Distrust _(t-2)	-0.0260 (0.110)	0.0138 (0.220)	-0.156 (0.199)	0.105 (0.354)	0.356 (0.297)	-0.0543 (0.128)	-1.113 (1.558)	-0.829 (0.702)	-0.524+ (0.271)	3.319 (4.279)
IGB _(t-1)	-0.672* (0.263)	0.0560 (0.527)	-0.0252 (0.478)	1.605+ (0.850)	-0.895 (0.714)	0.175 (0.307)	-2.548 (3.739)	-0.578 (1.685)	-0.0324 (0.650)	-4.376 (10.27)
IGB _(t-2)	0.511 (0.363)	0.903 (0.727)	-0.119 (0.659)	-0.947 (1.173)	1.679+ (0.985)	0.144 (0.423)	-1.597 (5.157)	-2.092 (2.324)	-0.845 (0.897)	-14.89 (14.17)
I-1 _(t-1)	0.0343 (0.0520)	0.209* (0.104)	-0.0196 (0.0943)	0.227 (0.168)	-0.0615 (0.141)	0.0143 (0.0605)	-0.541 (0.738)	-0.00903 (0.332)	-0.131 (0.128)	0.191 (2.027)
I-1 _(t-2)	0.0581 (0.0588)	0.0974 (0.118)	-0.0538 (0.107)	0.151 (0.190)	0.0568 (0.159)	0.0900 (0.0684)	-0.388 (0.834)	-0.143 (0.376)	-0.148 (0.145)	-0.0155 (2.291)
P-1 _(t-1)	0.0379 (0.0710)	-0.122 (0.142)	0.120 (0.129)	-0.422+ (0.229)	0.111 (0.192)	-0.116 (0.0827)	0.427 (1.007)	-0.459 (0.454)	0.152 (0.175)	-1.909 (2.768)
P-1 _(t-2)	-0.238** (0.0749)	-0.0523 (0.150)	-0.0217 (0.136)	-0.0812 (0.242)	-0.199 (0.203)	-0.143 (0.0873)	0.326 (1.064)	0.0565 (0.479)	0.159 (0.185)	1.244 (2.922)
P-4 _(t-1)	0.235+ (0.133)	0.369 (0.265)	-0.0534 (0.241)	0.295 (0.428)	0.460 (0.359)	-0.143 (0.154)	-0.653 (1.882)	-0.459 (0.848)	-0.00669 (0.327)	-0.874 (5.171)

P-4 _(t-2)	0.168 (0.116)	-0.0789 (0.231)	-0.213 (0.210)	-0.00208 (0.373)	0.147 (0.313)	0.179 (0.135)	0.216 (1.641)	0.942 (0.740)	0.184 (0.285)	-4.310 (4.509)
Deaths _(t-1)	0.00326 (0.0134)	0.0456+ (0.0269)	0.0117 (0.0244)	-0.00690 (0.0434)	0.00655 (0.0364)	0.00514 (0.0157)	-0.0206 (0.191)	-0.0117 (0.0859)	0.0311 (0.0332)	-0.328 (0.524)
Deaths _(t-2)	0.00616 (0.00917)	-0.0159 (0.0183)	-0.00472 (0.0166)	0.0430 (0.0296)	0.0498* (0.0248)	-0.00469 (0.0107)	-0.0278 (0.130)	0.0218 (0.0586)	-0.0498* (0.0226)	0.339 (0.357)
Constant	-0.0555 (0.316)	-0.328 (0.631)	0.340 (0.573)	1.710+ (1.019)	-0.379 (0.855)	0.132 (0.368)	0.660 (4.479)	2.503 (2.019)	-0.0349 (0.779)	23.93+ (12.31)
Observations	29	29	29	29	29	29	29	29	29	29

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.10

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