

Rebel Leader Attributes in Civil Wars: Introducing the ROLE Database

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Abstract:

Existing literature on civil wars relies predominantly on national and group-level factors to explain their dynamics and outcomes. In contrast, we propose in this paper that individual rebel leaders' personal attributes help explain the behavior of the organizations they lead. Just as IR scholarship has long highlighted the importance of state leaders' biographical attributes in explaining interstate war and diplomacy, so we build on existing studies in political science and psychology to suggest that the characteristics of rebel leaders affect their groups' decisions and actions in civil wars. In order to do so, we introduce original data from the Resistance Organization Leaders (ROLE) Database, which contains a range of biographical information on all rebel, insurgent, and terrorist leaders in civil wars between 1980 and 2011. We first explain the construction and content of the database, and then use it to present a number of descriptive statistics on rebel leaders as well as to replicate and extend a recent study by Wood and Thomas (2017). Ultimately, our paper urges a new research agenda that goes beyond rebel groups or campaigns as the units of analysis to examine the importance of the people who organize and lead them in conflict studies.

Do leaders' personal characteristics matter in violent conflicts? Might the fight for South Sudanese independence have unfolded differently had someone other than John Garang led the secessionist rebel group? Would the Lord's Resistance Army (LRA) exist without Joseph Kony? As individuals with distinct beliefs, character traits, and life experiences, how central were Gulbuddin Hekmatyar to the turn of events in the Afghan civil war in the 1990s or Yasser Arafat to the Israeli-Palestinian conflict? A large body of scholarship in International Relations (IR) and other areas of political science collectively asserts that individual leaders' attributes and experiences have significant bearing on the course of political events. In their book on state leaders in war, Horowitz, Stam, and Ellis (2015, 11) write, "the formative experiences of political leaders influence everything from the way they evaluate the costs and benefits of using force to the types of military grand strategies they view as most likely to be successful." Many other recent works examine how state elites' dispositional traits, experiences, and situational stakes influence their political decisions during their time in office (see, e.g., Gallagher and Blackstone 2015, Gift and Krcmaric 2017, Kertzer and Tingley 2018).

When it comes to civil war dynamics and outcomes, however, existing literature is virtually silent on the issue of rebel leadership. Scholars have mounted major efforts in recent years to collect data on rebel organizations – their size, strength, alliances, sources of support, governance and administration, and post-conflict fates – enabling a vibrant scholarship on how group-level factors affect the duration, intensity, social impacts, and military outcomes of civil wars (e.g., Cunningham, Gleditsch, and Salehyan 2013, Maoz and San-Ackka 2012, Wucherpfennig et al. 2012, Heger and Jung 2017). While a fruitful turn away from a narrow focus on states' structural attributes, this work provides little to no insight into *who* leads these armed organizations, *where* they come from, and *how* they choose to fight once war commences. This is a peculiar and

notable gap in our understanding of nonstate resistance groups, since such organizations do not simply emerge on their own but rather are formed and led by particular individuals. Moreover, a number of these individuals – Nelson Mandela, Charles Taylor, Usama bin Laden, Paul Kagame, and Masoud Barzani, to name a few – enjoy prominent positions in both scholarly as well as popular accounts of civil war, either as a celebrated figure or in global ignominy. This suggests that they, *as leaders*, played unique and decisive roles in the conflicts they led. Likewise, it is reasonable to assume that groups such as the National Resistance Army of Uganda, the Sendero Luminoso of Peru, and the Lebanese National Movement (LNM) behaved in the ways they did in no small part because their *leaders* – figures such as Yoweri Museveni, Abimael Guzman, and Kamal Jumblatt – made decisions about how to steer their organizations through their respective conflicts. Given that nothing in the theories linking *state* leaders’ attributes to their political decisions in office pertains exclusively to heads of state – rather, they are general theories of political leaders’ behavior – we have compelling reasons to believe *rebel* elites’ decisions in civil war are as much informed by leaders’ personal attributes and experiences as are state elites’ decisions in interstate war and international politics more broadly.

This paper introduces a new database of rebel leader attributes that will, for the first time, enable the kind of studies of non-state leaders in civil war that IR scholars have conducted on state leaders in international politics. The Resistance Organization Leaders (ROLE) Database contains a gamut of biographical information on nearly 500 top rebel, insurgent, and terrorist leaders who fought in civil wars between 1980 and 2011. In this paper, we first describe how we constructed the database and what types of information on rebel leaders it provides. Then, we present a number of intriguing descriptive statistics on these leaders in order to illustrate some of the database’s potential insights, and finally we replicate and extend a recent and influential

study of civil war dynamics with newly collected leader attributes (Wood and Thomas 2017). Ultimately, these data will allow scholars to bring the “first image” of international politics (Waltz 1959) more fruitfully into the empirical study of civil wars and other types of conflict.

Leaders, Wars, and Politics

Recent empirical work on violent conflict has overwhelmingly focused on assessing how the characteristics of states and rebel organizations – as well as the context in which they fight – shape conflict dynamics, patterns of violence, and war outcomes (e.g., Lyall 2010, Cederman et al. 2013, Abrahms and Potter 2015). Indeed, a plethora of data collection efforts over the last dozen or so years have enabled scholars to go beyond case studies of rebel organizations to conduct systematic cross-national studies of rebels’ behavior and of state-rebel dyadic interactions. These studies examine how rebel groups’ organizational characteristics, such as the number of troops, mobilization capacity, and governance efforts affect their use of violent strategies, receipt of third-party support, conflict outcomes, and postwar trajectories (Asal and Rethmeyer 2008, Salehyan, Siroky, and Wood 2014, Huang 2016, Heger and Jung 2017). Remarkably, however, this literature has rarely asked whether and how organizational leadership matters for explaining the outcomes of interest. The implicit assumption is that state attributes, rebels’ organizational features, and situational imperatives override any idiosyncratic differences in leader traits across conflicts.

A wealth of research on the role of leader attributes in world politics, however, suggests that this assumption is likely to be untenable upon closer scrutiny. Rather, the effect of rebel leadership on civil wars is likely an area of inquiry in which a lack of systematic data has led scholars to eschew asking certain kinds of questions, while the introduction of new group-level

data has encouraged scholars to privilege certain kinds of arguments. A result is that although the theories and empirical analysis fueled by group-level data has been highly productive, on the whole conflict scholarship sustains a blind spot with regard to how leaders matter in determining important outcomes such as levels of civilian targeting or the use of terrorism in conflict, armed groups' willingness to negotiate a war settlement, or their likelihood of achieving victory.

Studies of state leaders in IR have shown, for instance, that American presidents held different beliefs about the origins of threats, which shaped their military intervention strategies during the Cold War (Saunders 2011); that prior military (though not combat) experience make leaders more prone to militaristic behavior (Horowitz, Stam, and Ellis 2015); that a history of interactions between two heads of state influence how they settle later crises (Goemans, Gleditsch, and Chiozza 2009); and that leaders vary systematically in their social preferences, affecting how they bargain with other states (Kertzer and Rathbun 2015). Moreover, this echoes similar results in American and Comparative Politics, where scholars have found that the characteristics of state leaders can influence everything from their tendency to use executive orders (Gallagher and Blackstone 2015) to their propensity to democratize (Gift and Krcmaric 2017). These findings motivate us to ask whether rebel leaders, too, are influenced in their decision-making by their personal backgrounds and experiences. Ample anecdotal evidence suggests such factors do in fact shape their wartime behavior, yet scholars have thus far lacked data with which to examine such questions.

To be sure, scholars do recognize the critical role of rebel leadership in explaining how conflicts unfold. Existing studies examine rebel leaders' strategic calculus in the face of decisions about whether or not to pursue war termination (Prorok 2016, 2018), as well as the effects of leadership decapitation on the fates of the organizations they lead (e.g. Johnston 2012; Tiernay

2015). None of these studies, however, examine *who* the leaders are *as individuals* and how their biographies might bear on their conduct in war. Of note, the growing literature on the micro-foundations of political violence offers theories about the decision calculus of either rank-and-file fighters or civilians (e.g. Kalyvas 2006, Lyall, Blair, and Imai 2013, Silverman 2018); rebel leadership is, once again, largely left out of the analysis.

The Resistance Organization Leaders (ROLE) Dataset

To examine the ways in which rebel leader attributes influence war dynamics and outcomes, we developed the Resistance Organization Leaders (ROLE) Database. To our knowledge, ROLE marks the first dataset of its kind. It provides a wide range of information on the personal attributes and biographies for 490 top rebel leaders who fought in anti-state wars between 1989 and 2011. The list of leaders included in ROLE is based on work done by Prorok (2016), who in turn derives her record of rebel groups from the Non State Actors in Armed Conflict Dataset (NSA) (Cunningham, Gleditsch, and Salehyan 2013). Following Prorok (2016, 76), we define the leader of a rebel group as “the individual who exerts ultimate decision-making authority over major group policies,” identifiable as such either because the individual holds the group’s top position or because sources agree that he or she is its major power-holder.

The origins of ROLE also confer on it an additional benefit. The NSA data used as its foundation all rebel organizations in the Uppsala Conflict Data Project (UCDP) dyadic dataset. This means that ROLE is highly compatible with the widely used UCDP/PRIO datasets on armed conflict, making it easy to pair with existing information on conflict outcomes, political violence, organizational characteristics, peace agreements, external intervention, and international peacekeeping. Moreover, we also built ROLE to be compatible with other key datasets such as

the Revolutionary and Militant Organizations Dataset (REVMOD) (Acosta 2016), especially as its coverage is expanded substantively and temporally in the future.

The ROLE database provides detailed information on the familial, educational, and occupational backgrounds, pathways to power, physical and mental health, and political, military, and travel experiences of rebel leaders. Table 1 presents the full list of variables included in ROLE, along with a description of their contents or values. In crafting this list, we drew heavily on the Leader Experience and Attribute Descriptions (LEAD) dataset (Ellis, Horowitz, and Stam 2015) – the most comprehensive source of information on state leaders. This was done for two crucial reasons. First, rather than reinvent the wheel, it enabled us to build on and draw from existing efforts to collect a theoretically useful (yet empirically feasible) list of leader attributes and characteristics. Second, it allows scholars to compare state and rebel leaders along the same dimensions, and to include the same variables (e.g., leaders’ age, education, or military experience) in dyadic state-rebel analyses.

Table 1: Variables Included in the ROLE Database

Variable	Description
Leader name	From Prorok (2016)
State name	From Prorok (2016)
Conflict description	From Prorok (2016)
Alias/nom de guerre	Alternative name of leader, if exists
Deceased	1 = Yes 0 = No
Powersharing	1 = Yes 0 = No
<i>Childhood Variables</i>	
Oldest child	1 = Yes 0 = No
Middle child	1 = Yes 0 = No
Youngest child	1 = Yes 0 = No
From political elite family	1 = Yes 0 = No
From largest communal group	1 = Yes 0 = No
<i>Education Variables</i>	
Did not finish primary	1 = Yes 0 = No
Finished primary	1 = Yes 0 = No
Finished high school	1 = Yes 0 = No
Finished bachelors	1 = Yes 0 = No

Finished master's	1 = Yes 0 = No
Finished doctorate	1 = Yes 0 = No

Religion Variables

Christianity	1 = Yes 0 = No
Islam	1 = Yes 0 = No
Hinduism	1 = Yes 0 = No
Judaism	1 = Yes 0 = No
Buddhism	1 = Yes 0 = No
Sikhism	1 = Yes 0 = No
Other	1 = Yes 0 = No
None	1 = Yes 0 = No

Pre-Leader Occupation Variables

Teacher/Academic/Professor	1 = Yes 0 = No
Journalism	1 = Yes 0 = No
Law	1 = Yes 0 = No
Engineering	1 = Yes 0 = No
Medicine	1 = Yes 0 = No
Sciences	1 = Yes 0 = No
Agriculture	1 = Yes 0 = No
Military career	1 = Yes 0 = No
Religion	1 = Yes 0 = No
Labor	1 = Yes 0 = No
Activist	1 = Yes 0 = No
Career politician	1 = Yes 0 = No
Writer	1 = Yes 0 = No
Film/music	1 = Yes 0 = No
Economics	1 = Yes 0 = No
Aristocrat/landowner	1 = Yes 0 = No
Police	1 = Yes 0 = No
Business/entrepreneurship	1 = Yes 0 = No
Other	1 = Yes 0 = No

Leadership Entry Variables

Founded/co-founded group	1 = Yes 0 = No
Appointed/designated leader	1 = Yes 0 = No
Elected leader	1 = Yes 0 = No
Seized power	1 = Yes 0 = No
Entry method unclear	1 = Yes 0 = No
Entry age	Age when assumed power

Adult Family and Personal Variables

Married	1 = Yes 0 = No
Children	1 = Yes 0 = No
Marriage age	Age when married
Physical health	1 = Healthy 0 = Impaired
Mental health	1 = Healthy 0 = Impaired

Adult Political and Military Variables

Military experience	1 = Yes 0 = No
Non-state military experience	1 = Yes 0 = No
Political movement affiliation	1 = Yes 0 = No
High government experience	1 = Yes 0 = No
Incarceration	1 = Yes 0 = No
Assassination attempt	1 = Yes 0 = No

Combat experience	1 = Yes 0 = No
Exile outside home country	1 = Yes 0 = No
<i>Travel History Variables</i>	
Study abroad	1 = Yes 0 = No
Military training abroad	1 = Yes 0 = No
Work abroad	1 = Yes 0 = No
<i>Death Variables</i>	
Disease/natural causes	1 = Yes 0 = No
KIA (killed in battle)	1 = Yes 0 = No
Assassinated by state forces	1 = Yes 0 = No
Assassinated by rival group	1 = Yes 0 = No
Executed	1 = Yes 0 = No
Fratricide	1 = Yes 0 = No
Accident	1 = Yes 0 = No
Suicide	1 = Yes 0 = No
Homicide	1 = Yes 0 = No
Friendly fire	1 = Yes 0 = No
<i>Language Variables</i>	
English primary language	1 = Yes 0 = No
English secondary language	1 = Yes 0 = No

A key feature of ROLE is that for each leader in the database, a “coding supplement” documents every coding decision (that is, the leader’s value on every variable) and cites at least one source used to justify it. This documentation practice gives ROLE a high level of transparency that we believe significantly enhances its contribution, as we will release these full coding supplements along with the dataset so that scholars can evaluate (and, we hope, improve) our coding.

We relied on a wide variety of sources to code the variables.¹ While these are too numerous to list here, they include the scouring of major international and local newspapers (leader obituaries proved particularly useful), scholarly books and articles (on specific leaders or, more often, on their groups or conflicts), existing conflict databases with organizational profiles (e.g.,

¹ The data in ROLE were coded mainly by trained research assistants (RAs) working under careful supervision of the authors (in addition to the authors themselves in select cases in which they had particular expertise or which proved particularly challenging). To date, the ROLE coding effort has taken roughly three years and involved the contributions of about a dozen RAs. The authors have taken great care to standardize coding with the creation of detailed coding guides and templates as well as close monitoring and frequent spot-checks of RA work (both by themselves as well as by other RAs).

the *Mapping Militancy Project* or the *South Asia Terrorism Portal*), encyclopedic sources on different types of conflict and violence (e.g., Paul Bartrop's *A Biographical Encyclopedia of Contemporary Genocide* or Michael Newton's *Famous Assassinations in World History: An Encyclopedia*), and publications put forth by international and non-governmental organizations, local and foreign governments, and the rebels themselves. In order to obtain relevant information, coders used sources in a variety of languages in addition to English, including Spanish, French, Arabic, Hindi, Russian, and Indonesian.

Despite our best efforts, the collection of detailed biographical information on at least some of the leaders in the database proved quite challenging. Here, it is worth noting that even in the LEAD database of national leaders or heads of state, the coding of some aspects of leaders' family backgrounds – such as their birth order or father's occupation – contained many missing values (see Ellis, Horowitz, and Stam 2015). While rebel leaders are typically celebrities within their own culture (either as villains or as heroes), there is *generally* less information on them than is available on state leaders due to their comparably lower international stature and their organizations' lower capacities and levels of bureaucratization than the state (which leads to less of a paper trail). Thus far, we have been able to code complete or near-complete entries for 361 (74 percent) of the 490 leaders in ROLE, with another 106 (22 percent) partially coded to varying degrees. Careful inspection of these cases reveals that the missingness concentrates in poorer, non-English speaking countries outside of the strategically critical Middle East (such as Chad, Ethiopia, and Myanmar). We plan to enlist country experts either informally or via an expert survey in order to fill in some of the remaining gaps in the data.

Rebel Leader Profiles: ROLE Descriptive Statistics

In this section, we take an initial look at *who* leads rebel organizations. ROLE enables scholars to analyze a wealth of descriptive information on rebel leaders across conflicts. Table 2 displays summary statistics for all of the variables included in ROLE, providing a broad descriptive overview of the database.

Table 2: Summary Statistics on All Variables in ROLE

	Mean	SD	Min	Max	N
<i>General</i>					
Deceased	0.55	0.50	0	1	415
Powersharing	0.17	0.38	0	1	412
<i>Childhood</i>					
Oldest child	0.31	0.47	0	1	54
Middle child	0.46	0.50	0	1	54
Youngest child	0.22	0.42	0	1	54
Elite family	0.39	0.49	0	1	251
Largest group	0.33	0.47	0	1	388
<i>Education</i>					
No primary	0.03	0.17	0	1	330
Primary	0.10	0.30	0	1	330
High school	0.17	0.37	0	1	330
Bachelors	0.48	0.50	0	1	330
Masters	0.14	0.34	0	1	330
Doctorate	0.08	0.27	0	1	330
<i>Religion</i>					
Christian	0.40	0.49	0	1	381
Muslim	0.48	0.50	0	1	381
Hindu	0.04	0.21	0	1	381
Jewish	0.00	0.00	0	1	381
Buddhist	0.04	0.19	0	1	381
Sikh	0.00	0.00	0	1	381
Other	0.01	0.10	0	1	381
None	0.01	0.13	0	1	381
<i>Occupation</i>					
Teacher	0.14	0.35	0	1	373
Journalist	0.02	0.16	0	1	373
Lawyer	0.02	0.14	0	1	373
Engineer	0.02	0.14	0	1	373
Medicine	0.02	0.15	0	1	373
Sciences	0.02	0.14	0	1	373
Agriculture	0.01	0.09	0	1	373
Military	0.14	0.35	0	1	373

Religion	0.04	0.20	0	1	373
Labor	0.04	0.19	0	1	373
Activist	0.24	0.43	0	1	373
Politician	0.10	0.30	0	1	373
Writer	0.02	0.14	0	1	373
Film/music	0.00	0.00	0	1	373
Economics	0.00	0.05	0	1	373
Aristocrat	0.00	0.05	0	1	373
Police	0.01	0.10	0	1	373
Business	0.04	0.20	0	1	373
Other	0.12	0.32	0	1	373

Leadership Entry

Founded	0.37	0.48	0	1	422
Appointed	0.25	0.44	0	1	422
Elected	0.18	0.39	0	1	422
Seized	0.03	0.17	0	1	422
Unclear	0.16	0.37	0	1	422
Entry age	41.62	13.00	9	113	380

Adult Personal

Married	0.83	0.37	0	1	354
Children	0.76	0.43	0	1	345
Marriage age	29.73	10.75	15	70	90
Physical health	0.11	0.31	0	1	391
Mental health	0.01	0.10	0	1	390

Adult Political

Military experience	0.28	0.45	0	1	380
Rebel experience	0.48	0.50	0	1	386
Political affiliation	0.70	0.46	0	1	375
Govt. experience	0.26	0.44	0	1	378
Imprisonment	0.39	0.49	0	1	388
Assassination attempt	0.24	0.43	0	1	351
Combat experience	0.45	0.50	0	1	348
Exile	0.49	0.50	0	1	382

Travel History

Study abroad	0.34	0.48	0	1	362
Military training abroad	0.24	0.43	0	1	360
Work abroad	0.13	0.34	0	1	361

Death Cause

Disease/natural	0.01	0.11	0	1	415
KIA	0.22	0.42	0	1	415
State assassination	0.05	0.21	0	1	415
Rival assassination	0.15	0.35	0	1	415
Executed	0.03	0.17	0	1	415
Fratricide	0.01	0.11	0	1	415
Accident	0.01	0.11	0	1	415
Suicide	0.02	0.13	0	1	415
Homicide	0.00	0.07	0	1	415
Friendly	0.00	0.05	0	1	415
Other causes	0.04	0.20	0	1	415

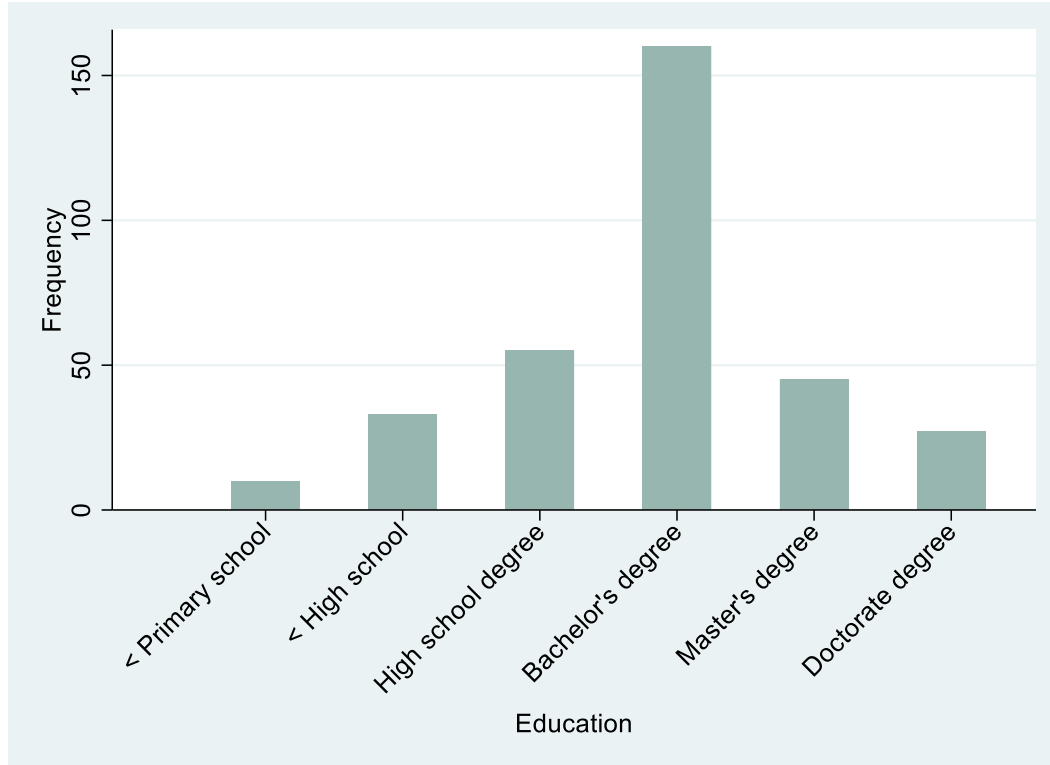
Language

English primary	0.03	0.17	0	1	490
English secondary	0.20	0.40	0	1	490

To probe more deeply, we highlight several findings here in particular that constitute basic information about contemporary conflict and yet have not been systematically documented. First, ROLE shows that rebel leaders active in civil wars since 1980 have been overwhelmingly well-educated. As Figure 1 depicts, a remarkable 70 percent of rebel leaders on whom we located schooling information (330 leaders) held degrees in higher education. Breaking this down further, nearly 50 percent of all rebel leaders held a bachelor’s degree or its equivalent, and more than 1 in 5 (72 leaders) acquired a master’s or doctorate degree. In fact, leaders with postgraduate degrees far outnumber leaders who never finished high school (72 compared to 43 individuals).² The most common areas of study for rebel leaders holding postgraduate degrees are law (22 leaders), political science or economics (10 leaders), medicine, including public health and dentistry (8 leaders), and Islamic/Qur’anic studies (7 leaders), but there are also historians and specialists of military science in the mix. In general, this means that rebel leaders tend not to be representative of the populations they claim to represent. This finding is consistent with scholars’ more general observation that leaders of social movements tend to be highly educated and come from the middle or upper classes of society (see, e.g., Morris and Staggenborg 2004, 174). ROLE shows this to be the case even among leaders of violent rebel organizations

² It is possible that the rebel leaders on whom we lack schooling data are less educated on average than those on whom we have the data. Nevertheless, even in the extreme case in which *none* of the leaders on whom we presently lack data earned at least a bachelor’s degree, roughly 50 percent of the entire set of leaders in ROLE will still have earned a bachelor’s degree or more.

Figure 1: Rebel Leaders' Educational Attainment



Furthermore, we find that 34 percent of the rebel leaders in ROLE studied abroad prior to becoming leader.³ About 46 percent of those who eventually attained degrees in higher education studied abroad, while about 21 percent of those without degrees in higher education did so. This suggests that many leaders are not only well educated, but also fairly cosmopolitan. Examples of leaders who pursued degrees abroad include Kamal Jumblatt, head of the LNM, who obtained a bachelor's degree at the Sorbonne in Paris – and while there becoming strongly influenced by Marxist revolutionary activism – before returning to Beirut for a law degree; and Nurul Islam, leader of Myanmar's Arakan Rohingya Islamic Front, who completed a diplomacy training course at the University of New South Wales in Australia and obtained a law degree in human rights from the University of East London. In contrast, neither Vellupillai Prabhakaran, head of

³ This excludes military training abroad, which is its own variable.

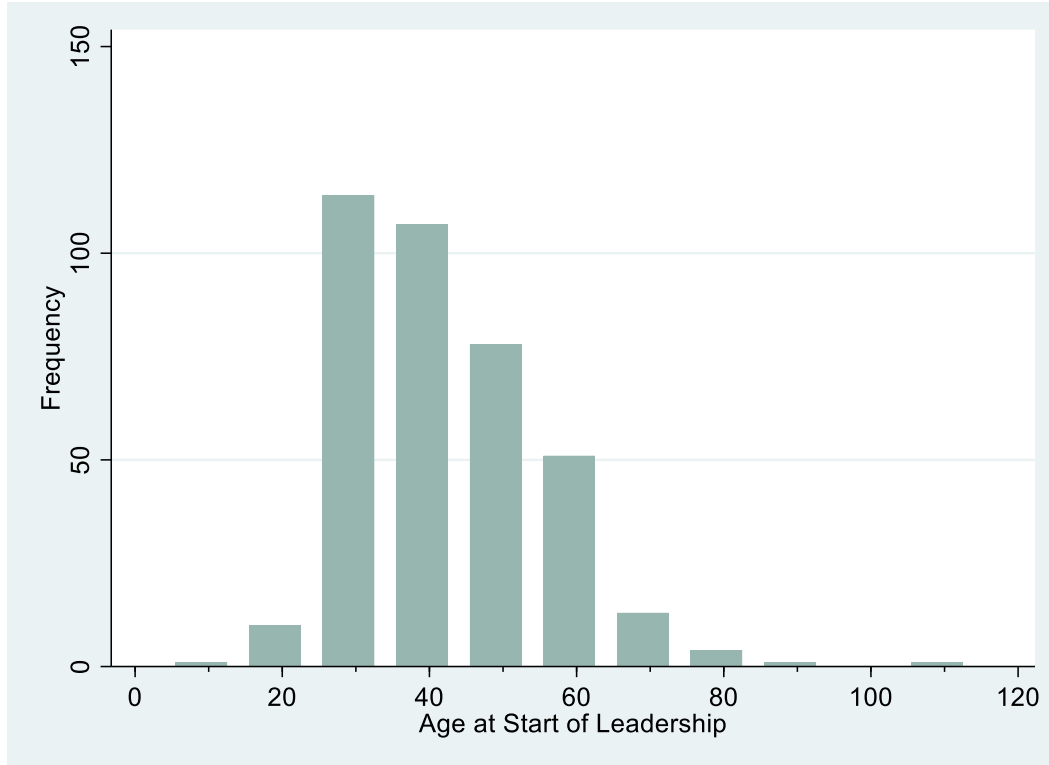
Sri Lanka's LTTE, nor Gerry Adams, head of Northern Ireland's PIRA, earned university degrees, but rather ended their formal education with secondary school.

A second striking finding is that Alice Auma (aka Lakwena), who led the Holy Spirit Movement in Uganda in the 1980s, is the *only* female to have held the reins of a rebel organization among the 490 included in ROLE. Thus, while women participate widely in many rebel movements, often take up combat roles (O'Rourke 2009, Cohen 2013, Viterna 2013, Wood and Thomas 2017, Thomas and Wood 2018), and reach varying levels of command roles (e.g. women in Ejército Zapatista de Liberación Nacional), they almost never *lead* such organizations. Morris et al. (2004) suggest that the relative absence of women in top leadership positions of social movements may reflect broader gender inequalities in society—an argument that our data show may also pertain to violent resistance organizations.

Third, in contrast to popular images of the youth leading revolutionary movements in contexts such as the Iranian Revolution of 1979, the Velvet Revolution of 1989, Tiananmen Square in 1989, and Tahrir Square in 2011, we find that the helms of violent rebel organizations tend to be occupied by men in their thirties and forties, with a mean age of 41 at the start of rebel leadership.⁴ As Figure 2 shows, 59 percent of rebel leaders took the helm of their groups in their thirties and forties; only 15 percent did so before the age of 30 and 26 percent after turning 50.

⁴ Strikingly, the leadership age variable ranges from 9 to 113. In the case of the 9-year-old twins from Myanmar – the Htoo brothers who jointly led the God's Army organization – a local pastor reportedly named them leaders after God spoke to him. In the case of Pu Kyaung Long, the head of Myanmar's Lahu National United Party (LNUP) reportedly lived until he was 120 years old and founded the LNUP seven years prior to his death. Excluding these two (potentially legend-infused) cases, the variable range is 14 to 88 and the mean remains at 41.

Figure 2: Age at the Start of Rebel Leadership



The finding that rebel leaders are overwhelmingly in their thirties, forties, and fifties when they assume leadership suggests that these individuals have life experiences beyond the rebel organization when they take power. Consistent with this notion, most rebel leaders are married (83 percent) and have children (76 percent) by the time they become leaders. Further, many worked as activists (24 percent), academics, professors, or teachers (14 percent), career politicians (10 percent), or pursued a military career (14 percent) prior to rebel leadership.

Overall, then, ROLE depicts a “typical” rebel leader as a middle-aged male who is married with children, has prior work experience, holds at least a bachelor’s degree, and has lived abroad. This average profile suggests that the leaders of rebel organizations do not look so different from the leaders of other types of social movements (or, indeed, other types of organizations in general), and that rising to the ranks of rebel leadership requires skills, experience, and

credibility that may be derived from some combination of education, age, familial ties, and/or pre-rebel professional and travel experience. Yet, this brief exploration of the database also makes it apparent that rebel leaders are not interchangeable “knights” on a battlefield – rather, they vary widely along these personal and professional dimensions, allowing scholars to examine how such variation shapes their wartime choices and strategies.

Rebel Leader Attributes and Violent Conflict

Researchers can use ROLE to test a wide variety of hypotheses about how rebel leader attributes affect conflict strategies, dynamics, and outcomes. As a way to begin to demonstrate the database’s utility, in this section we add to a growing literature on female combatants in civil wars. One of the most prominent and systematic studies to date on why some rebel groups deploy female combatants and others do not identifies rebel group ideology as a key determinant (Wood and Thomas 2017). Specifically, this study argues that rebel groups’ political ideologies shape *rebel leaders’* interests in recruiting female fighters.⁵ Ideologies espousing “an egalitarian ethos and advocating radical revisions to traditional social orders,” such as leftist or Marxist ideologies, encourage rebel leaders to include women in combat roles, while “conservative and reactionary political ideologies,” such as those based on religion, discourage group leaders from employing women in combat (34). The study’s focus on rebel political ideologies notwithstanding, its theoretical explanation thus fundamentally centers on the interests and values of *rebel leaders*. Indeed, the authors critique existing explanations for ignoring leaders’ role, arguing that “in reality, women are present [in rebel organizations] only when an organization’s leadership makes the explicit decision to openly recruit women” (33).

⁵ They also highlight the impact of ideology on female interest in fighting, although the top-down pathway appears to play the dominant role in their theoretical framework.

While their analysis is convincing, examining rebel *group* ideologies is not only a fairly indirect way to understand rebel *leader* interests, it also involves a mismatch in the unit of analysis. We argue that examining who rebel leaders are – their personal attributes – is a more direct way to arrive at conclusions about their interests. Specifically, we hypothesize that rebel leaders’ *level of education* and *experience in combat roles* affect their decision to employ female fighters.

Starting with education, there is a general scholarly consensus that more educated people are more likely to participate in politics. Indeed, education provides both political awareness and the skills needed to effectively engage in political activity (Dahlum and Wig 2017). Applied to leaders’ decisions about using women in combat roles, these logics suggest that more educated rebel leaders are better able to see the *strategic benefits* of female participation in combat, which include a greater supply of fighters, better concealment, effectiveness, and lethality (especially as suicide bombers), and a greater “shock factor” or publicity effect (Bloom 2012, O’Rourke 2009, Wood and Thomas 2017, Speckhard 2008). Further, because more educated individuals are more accustomed to thinking critically about the status quo (Dahlum and Wig 2017), they should be more willing to disregard any extant social, cultural, or normative biases against female fighters. In addition to this strategic mechanism, some studies find that education socializes people into more *egalitarian preferences* such as greater support for civil liberties and citizen empowerment (Welzel 2005), an effect that may extend to gender equality. Indeed, recent studies show that highly educated national leaders are more likely to democratize their societies – in part due to their socialization into more liberal value systems (Gift and Krcmaric 2017). Thus, there are both strategic and ideational reasons to think that education will increase rebel leaders’ willingness to deploy women in combat roles. We can also see anecdotal evidence consistent with these ideas. For example, Parkinson (2013) shows that organizations that fought in Lebanon’s 3rd Civil War

(1975-1990) such as the Popular Front for the Liberation of Palestine (PFLP) often used females in unconventional ways. It may be no coincidence that George Habash – a doctor trained at the American University of Beirut – founded the PFLP and directed its strategic use of female supporters and members (O’Ballance 1998).

A related set of logics holds for rebel leaders with combat experience. Experience is as effective a teacher as formal education; rebel leaders with combat experience should be better able to grasp the strategic advantages of an expanded recruitment pool that includes women and a fighting force that enjoys the particular benefits of female deployment. Indeed, such leaders are likely to better understand the exigencies of modern resistance campaigns, which often involve skills such as careful intelligence gathering, effective within-unit coordination, stealth and surprise, rapid learning and adapting, and technical expertise more than physical strength or prowess (e.g., MacKenzie 2015). Moreover, if the rebel leader has actual experience fighting alongside women or observed them in combat, the informational effect of the benefits of female deployment should be much more direct. In addition, there is an ideational mechanism at work as well: while participation in combat can harden attitudes toward the “enemy” (Grossman, Manekin, and Miodownik 2015), studies have shown that it also generates a sense of social cohesion and solidarity among fellow members of the in-group (e.g., Bellows and Miguel 2009, Gilligan, Pasquale, and Samii 2014). The experience of violence and conflict often transcends prior social cleavages and makes people view others who have felt the costs of war as more like themselves, even if they come from different backgrounds (Hartman and Morse 2018). Given these realities, there is reason to think that leaders who have themselves fought on the front lines may not only better understand the fact that women often bear the costs of war, but also be more empathetic to their cause and look more favorably on arguments from women that they “are in the same strug-

gle” and have a shared status and purpose in the conflict as attempting to resist out-group oppression.

Research Design

We assess these arguments by replicating and extending the aforementioned analysis of Wood and Thomas (2017). In order to do so, we use the Women in Armed Rebellion Dataset (WARD) created by Wood and Thomas (2017). The dataset, which combines original variables on female combat participation with those from the NSA dataset, covers over 200 rebel groups operative sometime between 1979 and 2009. Using these data, we first replicate the key findings of Wood and Thomas (2017). Then, we add to the analysis two of ROLE’s individual leadership variables, putting them up against rebel organization and states adversary variables in WARD. The new models demonstrate ROLE’s added value from an explanatory perspective (in addition to the descriptive value already shown above).

Dependent Variables: Female Combatant Presence and Prevalence

For the dependent variables, we rely on Wood and Thomas’ (2017) binary variable for the PRESENCE of female combatants and their four-point scale for the PREVALENCE of female combatants in armed groups. The four-point scale measures prevalence as “none,” “low,” “moderate,” or high.” We refer readers to Wood and Thomas (2017) for a full breakdown of their variables.

Individual-Level Explanatory Variables

As noted above, we theorize that at least two individual-level explanatory factors pertaining to rebel leaders affect the likelihood of their organizations deploying female combatants. We use variables from ROLE to test our expectations. The first of such variables is the binary measure COMBAT, which signifies whether a given militant leader had combat experience. The second variable indicates whether a given militant leader holds a postgraduate degree (i.e. a master's or doctorate degree) (MA/PHD).⁶

Empirical Results

Table 3 presents a series of logistic regression analyses.⁷ The models rotate between assessing the presence and prevalence of female combatants in militant organizations. Models 1 and 2 replicate the most efficient models presented in Wood and Thomas (2017). Models 3 and 4 introduce the two ROLE variables. In Model 3, Wood and Thomas's (2017) core variables of LEFTIST ORGANIZATION and ISLAMIST ORGANIZATION lose statistical significance in predicting the presence of female combatants, while the two ROLE variables have statistically significant and positive associations with female combatant presence. Model 4 shows that the two ROLE variables similarly have statistically significant and positive associations with the prevalence of female combatants in militant organizations. The leftist ideology variable regains significance in this model, while the Islamist variable, also central to Wood and Thomas' (2017) theoretical argument, does not. Models 3b and 4b show standardized coefficients, illustrating the relative substantive impact of the variables. In Models 5 and 6, we apply a common logit technique of modeling only the independent variables that have statistical significance in previous models (Hilbe

⁶ Our results continue to hold when we operationalize higher education as a bachelor's degree or higher.

⁷ To assuage concerns of some kinds of model misspecification, we report robust standard errors.

2009). The results hold in these minimalist models. Further, Model 5's correct classification of 79.41% suggests it is a more efficient model than Model 1.

Table 3: Logit Regression Results

y=Female Combatants	Model 1: <i>Logit</i>	Model 2: <i>Ordered Logit</i>	Model 3: <i>Logit</i>	Model 3b: <i>Standardized Coefficients</i>	Model 4: <i>Ordered Logit</i>	Model 4b: <i>Standardized Coefficients</i>	Model 5: <i>Logit</i>	Model 6: <i>Ordered Logit</i>
Leader Combat Experience			1.193** (0.441)	0.206	0.798* (0.325)	0.145	1.006* (0.405)	0.875** (0.321)
Leader Higher Education			0.768* (0.383)	0.110	0.710* (0.287)	0.045	0.879* (0.413)	0.628* (0.299)
Leftist Organization	1.607** (0.465)	2.297*** (0.560)	1.610 (0.857)	0.232	2.425** (0.845)	0.399	1.266 (0.839)	2.643*** (0.753)
Nationalist Organization	0.400 (0.423)	0.203 (0.431)	-2.329 (1.316)	0.138	0.152 (0.475)	0.039		
Islamist Organization	-2.732* (1.220)	-1.439** (0.506)	0.791 (0.460)	-0.348	-0.689 (0.774)	-0.149	-2.653* (1.169)	-1.116 (0.659)
Female Secondary Education Ratio	1.419 (1.100)	1.905* (0.895)	1.582 (1.264)	0.151	1.753 (1.113)	0.135		3.023*** (0.853)
GDP Per Capita (logged)	-0.142 (0.257)	-0.351 (0.208)	-0.379 (0.294)	-0.145	-0.529* (0.231)	-0.181		-0.591** (0.218)
Active 2000s	0.237 (0.457)	0.448 (0.409)	-0.722 (0.524)	-0.126	-0.478 (0.501)	-0.101		
Duration	0.035 (0.020)	0.027 (0.015)	0.058* (0.026)	0.255	0.063** (0.022)	0.286	0.057* (0.029)	0.053* (0.022)
Percent Muslims	-0.342 (0.613)	0.131 (0.754)	-1.774** (0.657)	-0.249	-1.125 (0.700)	-0.143	-2.048** (0.676)	
Weak Rebels	-0.432 (0.335)	-0.524 (0.335)	-0.029 (0.469)	-0.005	-0.367 (0.433)	-0.059		
Suicide Bombers	3.409* (1.590)	1.352* (0.656)	3.847** (1.471)	0.539	1.198 (0.737)	0.228	3.421** (1.290)	1.042 (0.732)
Forced Recruitment	0.794* (0.371)	0.578 (0.355)	0.506 (0.468)	0.086	0.335 (0.411)	0.099	0.556 (0.488)	
Constant	-1.462 (1.445)		0.244 (1.526)				-1.081 (0.633)	
Cut 1		0.194 (1.323)			-1.646 (1.307)			-0.900 (1.299)
Cut 2		1.697 (1.404)			0.225 (1.363)			0.900 (1.423)
Cut 3		3.053 (1.418)			1.708 (1.344)			2.462 (1.374)
<i>n</i>	191	191	204		204	204	204	214
Pseudo R ²	0.26	0.18	0.36		0.23		0.32	0.22
Wald χ^2	58.71***	48.55***	43.26***		68.63***		28.94***	38.97***
Log pseudolikelihood	-94.85	-165.65	-91.00		-189.17		-95.55	-203.76
Correctly Classified	78.01%		81.37%				79.41%	

Coefficients with robust standard errors in parentheses; ***p<0.001, **p<0.01, *p<0.05

Overall, our analysis reveals that ROLE can substantially modify and add to the results of leading group-level studies of conflict such as Wood and Thomas (2017). The findings presented above show that while leftist ideology still boosts female combat participation, Islamist ideology no longer diminishes it once we control for first-image factors such as the level of education and

prior combat experience of rebel leaders. Moreover, these factors have substantively important independent effects on female combat participation, shaping the willingness of leaders to deploy women in war. The new models also show that macro-level variables, such as a country's percentage of female secondary education, matter less in assessing the likelihood of a militant organization to deploy female combatants than the education of a single individual – the organization's top leader. These results offer preliminary evidence that leaders' personal backgrounds and experiences – as captured in the ROLE database – shape their preferences and choices in ways that meaningfully affect outcomes of interest to conflict scholars, and should be incorporated into the fast-growing empirical literature on violent conflict.

Conclusion

The ROLE database should be of interest to any scholar of political conflict and violence, revolutions and social movements, political psychology and behavior, comparative biographies, and first-image analysis in IR. The last decade has seen the emergence of a wealth of new data on rebel organizations, opening up a new research agenda on how the organizational attributes of violent rebel groups affect conflict. Despite these advancements, we still have little understanding of the individuals who lead rebel organizations and how their biographies affect war dynamics. ROLE thus promises to open entirely new avenues of research on the leadership of rebel organizations. Systematic studies of state leaders, as well as an abundance of historical and anecdotal accounts of well-known heads of state and rebel leaders, provide strong reasons to believe leadership matters for understanding political outcomes. With its compatibility with existing conflict datasets and extensive and transparent documentation of sources used in its construction, ROLE allows researchers to ask new questions while building squarely on existing knowledge.

Given its focus on individual rebel leaders, the database should also serve as a connecting point between the structural, organizational, and micro-level approaches to studying conflict dynamics and outcomes.

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