

# **The Magical Practices of Rebel Organizations**

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## **Abstract:**

Magical practices, such as wearing protective amulets, engagement in other rituals, and beliefs that rebel leaders wield magical powers, play a prominent role in many civil wars. Scholars believe that these practices help shape the behaviors of militant organizations on a variety of dimensions. However, despite their relevance, there is a dearth of data and quantitative analysis on the effects of rebel groups' use of such magical practices. In response to this gap, we have gathered new data on some of the magical practices employed by 106 African rebel organizations that were active at least at some point during the period of 1989 to 2011. To demonstrate the value of these data, we use them to examine how such practices affect the recruitment of child soldiers and the killing of civilians. We find that militant organizations that employ magical practices engage more extensively in the forced recruitment of children and kill more civilians.

Beliefs in magical and spiritual powers play an important role in many modern rebel groups, particularly in Africa. These practices, typically drawn from local and regional traditions, take a variety of forms, including beliefs in protective powers derived from amulets, clothing and rituals; magical powers that enhance the fighting capabilities of soldiers; and beliefs that rebel leaders hold spiritually significant positions and powers (Włodarczyk 2009).

These practices are present across a diversity of conflicts and rebel movements. For instance, in Mozambique, traditional healers would wave goat tails dipped in magic liquid at RENAMO soldiers as they left for battle, as some believed this practice would stop bullets from hitting those who had participated in the ritual (Weigert 1995). Some officers in RENAMO claimed to have powers beyond this, including proclaiming the abilities of flight and precognition (Włodarczyk 2009). In Liberia, men and boys in the National Patriotic Front of Liberia (NPFL) would go into battle wearing women's clothing and wigs, as regional beliefs led to the perception that adopting dual identities would confuse bullets, making it less likely that they hit soldiers engaging in these practices (Scheffler 2003).

Members of the Ntsiloulous rebel movement in the Republic of the Congo wore purple because of its association with the Archangel Michael and Old Testament prophets, and they believed doing so would grant them protection on the battlefield (Ngodi 2013; Themner 2013). The leader of the group, who went by the name Pastor Ntoumi, also framed himself as a messianic figure (Coyault 2018). Similarly, Joseph Kony, the infamous leader of the Lord's Resistance Army (LRA) in Uganda, claimed to be a prophet and that the holy oil and the Christian cross protect himself and his followers in battle (Al Jazeera 2014).

These practices are theorized to serve a variety of functions for rebel organizations, including in their recruitment, indoctrination, and retention of soldiers (Włodarczyk 2009). However,

despite the significant role that these practices and beliefs play in a number of armed organizations, previous cross-rebel group quantitative scholarship, to the best of our knowledge, has not accounted for these practices. Thus, prior quantitative work might be omitting an important variable that is shaping rebel behavior.<sup>1</sup>

Prior quantitative work has extensively examined the effects of religious ideologies on the behavior and success of militant organizations (e.g., Asal and Rethemeyer 2008; Piazza 2009; Polo and Gleditsch 2016; Keels and Wiegand 2020; Basedau, Deitch, and Zellman 2022). However, these studies typically only examine the broader ideologies of groups, which results in internal practices being overlooked that are not directly tied to the ideologies of these organizations. Indeed, as we show later with new data we collected, many groups that implement spiritual or magical practices are not classified as being religious in existing datasets, suggesting that broader ideologies and internal practices of armed movements are often distinct phenomena.

To address this gap, we have gathered novel data on magical and spiritual practices of rebel organizations. Specifically, we collected information on whether these groups engage in magical practices among the rank-and-file and/or leadership. Our data cover 106 African rebel groups that were active at least at some point during the period of 1989 to 2011.

We then employ these data to examine how such practices drive rebel behavior. Specifically, building on prior literature that examines how magical beliefs and practices in rebel organizations are used for mobilization and socialization (Włodarczyk 2009), we investigate how these variables shape groups' recruitment practices and treatment of civilians. We find fairly consistent

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<sup>1</sup> Beber and Blattman (2013) examine the relationship between beliefs in magical protections and the age of recruits in the LRA. However, they do not investigate differences between groups that do, and do not, engage in magical practices.

evidence that groups are more likely to forcibly recruit children and kill more civilians when they employ magical practices. These findings suggest that such practices have meaningful consequences for the behavior of militant organizations.

We hope to make several contributions with this paper. First, to our knowledge, we provide the first cross-rebel group dataset on the magical practices of armed movements. The dearth of such data could mean that some existing studies on rebels' treatment of civilians suffer from omitted variable bias, as they do not take these prevalent practices into account. More generally, work on rebel groups often ignores these dynamics, despite their importance (Włodarczyk 2009). Second and relatedly, in addition to providing one of the first cross-group statistical analyses of the effects of rebels' magical practices, our data can also be used by scholars to study a variety of other questions, including how these dynamics shape outcomes like rebel group splintering, longevity, and success.

Third, we contribute to the existing quantitative literature on how ideology (Asal and Rethemeyer 2008; Piazza 2009; Polo and Gleditsch 2016; Basedau, Deitch, and Zellman 2022) and socialization (Cohen 2013, 2016; Hoover Green 2016, 2018) shape rebel groups' treatment of civilians. Again, much of this literature tends to focus on broader ideologies, and indoctrination processes tied to these ideologies, neglecting the importance of spiritual and magical traditions that also shape the internal dynamics and behavior of armed movements.

As a roadmap for the rest of the paper, we begin by discussing what magical practices are in context of civil wars. Next, we explore the functions of magical practices in civil wars. After this, we apply these theoretical concepts to existing literature on recruitment and civilian victimization, as they are two common outcomes associated with rebel group socialization practices. Specifically, we analyze rebel magical practices in context of existing theories about

why rebel groups forcibly recruit children and kill civilians. We then discuss the data collection process and the application of these variables to test the two central hypotheses of this paper. We conclude with a discussion of the significance of our findings.

### **African Magical and Spiritual Practices**

To theorize about, and gather data on, these important dynamics, we must first define what magical practices are. Wlodarczyk (2009, p. 15) writes that the magic-based practices of African rebel organizations, draw on traditional African religious beliefs, which:

“center around a local spirit world, mediated through specialist spiritual practitioners that can invoke their wisdom and power through the manipulation of natural objects, to resolve everyday dilemmas. Potions and remedies combine with incantations and rituals to fuse together the spiritual and the natural and exert control over both.”

Wlodarczyk (2009, p. 15) also explains that compared to other religions, which tend to view their interactions as bounded or shaped by a god or gods, practitioners of traditional African religions tend to emphasize “their own ability and skill to manipulate spirit power to the ends they choose.” These practices are often not “pure,” in the sense that they are often blended with beliefs and practices from other religions. Adherents also believe these powers can be used for good or evil. Wlodarczyk illuminates how these practices serve several functions, including helping individuals develop a conceptual framework about existence, explain misfortune, and redress problems that individuals and groups face.

Consequently, because individuals in these contexts often believe that spiritual forces shape the events in the world, and that individuals can harness these powers to help influence events, they perceive these forces to affect many activities and occurrences, including warfare. This

gives individuals, including combatants, a shared conceptual framework to operate under, which shapes both their perception of events and their behaviors. Thus, we should also expect that the magical beliefs and practices of rebel organizations affect their behavior (Włodarczyk 2009).

A couple of additional points are worth clarifying. First, Włodarczyk (2009) notes that many Western audiences have deeply held prejudices about, and understandings of, the magical and spiritual practices of other cultures. This often includes the assumption that such practices are irrational. However, as Włodarczyk explains, magical practices are just a component of the type of consequence-based decision making that is often assumed under rationalist frameworks. Given that magical and practices affect the decision-making calculi of many actors, including rebels, they are important to understand. Furthermore, like Włodarczyk, we do not analyze magical practices in terms of their veracity, but rather, how these beliefs and practices shape the behavior of actors.

Second, even though we are analyzing the relationship between magical practices and violent behaviors, no one should assume that these patterns apply to the vast majority of practitioners of these magical and spiritual beliefs. Similarly, radical Christian and Islamist militant organizations often engage in violent behaviors at the behest of their ideologies. However, these groups typically espouse beliefs that are extremely divergent from the billions of believers that fall under the same, very broad, religious umbrellas. Thus, in the same way that we should not assume that radical Christian and Islamist rebels are representative of the vast majority of Christians and Muslims in the world, we should also not assume that the rebels driven by other spiritual beliefs are representative of the much larger group of non-violent individuals who believe in related forms of spirituality and magic.

## **Functions of Magic**

Włodarczyk (2009) examines several functions that magical and spiritual beliefs serve for armed groups. First, she posits that such practices can help groups mobilize recruits and gain legitimacy. Specifically, tapping into local beliefs and garnering the support of spiritual leaders in communities facilitates recruitment for rebels. Additionally, groups often frame their struggles within spiritual understandings of the world. Thus, according to Włodarczyk, garnering the support of local spiritual leaders and framing the fighting in spiritual terms helps rebel movements justify and legitimize their efforts.

Włodarczyk also argues that promises of spiritual powers for those who join these groups is another way in which some armed organizations attempt to gain legitimacy. She notes that examples of such powers include promises of immunity from harm on the battlefield and reinforcement from spiritual forces during fighting.

A second function of magic that Włodarczyk identifies is its ability to help with organization and discipline in armed movements. While promises of immunity to bullets are often made to the rank-and-file of groups, more significant powers, such as the ability to fly or to turn invisible, are typically only claimed by higher ranking members of these organizations. These extra powers, which are often reinforced with retellings of stories in which rebel leaders used these abilities during missions, help establish and maintain hierarchies within these groups.

Włodarczyk explains that this implicitly suggests to recruits that leaders have spiritual power over them, including the ability to track them down. Relatedly, Włodarczyk finds that the notion that recruits will lose their spiritual protections for not being obedient serves to promote strict discipline among soldiers. She posits that the idea that ill-discipline will be met with punishment from spiritually powerful leaders, as well as the loss of spiritual protections, is one of the most

effective ways in which magical practices promote discipline among the rebel rank-and-file. Wlodarczyk notes that the leadership of both the Holy Spirit Movement and LRA used their proclaimed, extra connections to the spirits to establish greater control and more rigid hierarchy.

Rebel groups that employ magical practices also sometimes initiate recruits, including abductees, with spiritual rituals that involve violence to intimidate them. Wlodarczyk explains that such rituals help further cement the idea to recruits that there is spiritual order and hierarchy within the movement.

Third, Wlodarczyk argues that magical practices can help both motivate a group's combatants as well as intimidate the opposition's fighters. This intimidation is generated in a variety of ways. The perpetuation of the idea that rebels are invincible (and thus undefeatable) serves to intimidate enemy forces, who sometimes run from battle when they believe they cannot win. Relatedly, some rebel groups have also claimed that their soldiers who die on the battlefield are resurrected and seek retribution against those who killed them. Wlodarczyk points to groups such as RENAMO and Frelimo who were able to successfully intimidate the opposition by spreading such stories.

Wlodarczyk also details how ritualistic violence can be used to intimidate civilians and enemy forces. These acts of brutal violence were used sometimes to help forcibly displace civilians, and other times to intimidate them into submission. Wlodarczyk explains that ritualistic violence, as a tool of intimidation, has played an important role in multiple conflicts, including in Liberia and the Democratic Republic of the Congo.

Thus, in sum, Wlodarczyk identifies a variety of functions that magical practices serve for rebel organizations. This includes (1) facilitating mobilization and promoting legitimacy; (2)



instilling organizational structure and discipline among the rank-and-file; and (3) motivating groups' members while intimidating civilians and soldiers on the opposition's side. In the next section, we discuss some of the implications these functions have for the behavior of rebel organizations.

### **Magical Practices and Rebel Behavior**

Wlodarczyk's rich analysis of the variety of functions that magical practices in rebel movements produces many potential testable implications. In the next section, however, we focus on two rebel behaviors often associated with magical practices: the forced recruitment of child soldiers and the killing of civilians. As we will discuss, the functions of magic described above map well onto these two behaviors.

#### *Forced Recruitment of Child Soldiers*

Berber and Blattman (2013) develop a comprehensive theory to explain why rebel organizations often recruit child soldiers, despite the fact that they are typically less effective fighters than adults. They expect that militant organizations will be more likely to use child soldiers when they can be more easily intimidated, indoctrinated, and misinformed than adults. Specifically, Berber and Blattman argue that there are at least two conditions under which armed movements can derive a higher utility from recruiting children over adults.

First, Berber and Blattman explain that it is typically easier to indoctrinate and mislead children than adults. Such indoctrination can make recruits more loyal and well-disciplined. Berber and Blattman thus expect that rebel groups will be more likely to recruit children when

their indoctrination leads them to contribute to the group at lower costs than adults, as the indoctrination has made them more committed and disciplined.

Second, rebel groups, of course, want recruits who will not defect or desert. The outside options that rebel recruits believe they have (e.g., security, economic opportunity, family or community support, etc.) influence the probability they will try to escape. Recruits with few outside options will be more likely to remain in rebel groups, even if forcibly recruited, as they fear leaving might be more dangerous. Children also tend to have fewer real and perceived outside options, and thus, are more fearful of the dangers associated with trying to escape from rebel groups that abducted them. Rebel leaders, according to Berber and Blattman, can also intentionally manipulate the perceptions that recruits have about their outside options.

We expect that the magical practices of rebel groups affect both dimensions. First, as noted earlier, magical practices and rituals are often used to indoctrinate rebel recruits, ranging from convincing them of the spiritual significance of the conflict to promoting the idea that spiritual powers will protect them (Włodarczyk 2009). For instance, in their survey of former LRA members, Berber and Blattman (2013) find that older recruits in the group were less likely to believe that Joseph Kony (the LRA leader) had powers to protect them from bullets. Thus, groups that employ magical practices are better positioned to indoctrinate recruits. Again, Berber and Blattman also argue that child soldiers are easier to indoctrinate than their adult counterparts. Taking these premises together suggests that rebel organizations that employ magical practices are better positioned to recruit child soldiers.

Second, we also posit that magical practices within militant organizations affect the perceptions that recruits have of the viability of their outside options and their corresponding ability to leave. As discussed earlier, magical practices induce fears among members that they

will be spiritually punished, or least lose their spiritual powers, if they are disobedient (Wlodarczyk 2009). Thus, such beliefs can exacerbate the perception that recruits will face danger if they leave their organizations. Since children are more easily indoctrinated (Berber and Blattman 2013), we believe that this dynamic will especially hold true for children. On the whole, this suggests that magical practices also facilitate the recruitment of children by creating perceptions that there are limited outside options and that leaving the group is dangerous.

However, we expect that these dynamics are particularly applicable to the *forced* recruitment of child soldiers. When groups recruit children, they also typically employ forced recruitment (Berber and Blattman 2013). It is often difficult for rebel leaders to monitor the behavior of abducted recruits, who are often insubordinate and desert at high rates (Eck 2014). Thus, forced recruitment can be costly for groups that employ it.

However, the principal-agent problems associated with forced recruits can be mitigated through indoctrination. Specifically, such indoctrination can lead to abducted recruits being more loyal and obedient (Gates 2017). Additionally, forced recruitment will be more common when abductees have fewer outside options (Gates 2002; Berber and Blattman 2013).

Relatedly, Beber and Blattman (2013) argue that when the costs associated with monitoring and punishing disloyal and disobedient abductees are lower, the forced recruitment of children will be particularly common (Beber and Blattman 2013). Magical practices, as discussed earlier, can be used to indoctrinate recruits to make them more loyal and obedient, as well as alter their perceptions about the feasibility of defecting or deserting. Again, children are also expected to be more vulnerable to this type of indoctrination (Beber and Blattman 2013). Thus, we expect that magical practices will facilitate the forced recruitment of children by both decreasing the

associated principal-agent problems and increasing the perceived risks these individuals face when attempting to flee their abductors. This leads to our first hypothesis that:

*H1: Rebel groups that employ magical practices will be more likely to engage in the forced recruitment of children.*

### *Killing Civilians*

Killing civilians can serve several functions that complement the use of magical practices. First, violence is often used by rebels to help control civilian populations. When armed movements have difficulty controlling civilians, who could provide material and political support to governments, rebels are more likely to turn to indiscriminate violence against these populations, including to punish civilian collaborators (Kalyvas 2006). Relatedly, competition from other armed movements drives rebels to perpetrate more violence against civilians, as they fear loss of material resources and civilian support (Wood and Kathman 2015). Militant groups also engage in violence against civilians to intimidate civilian supporters of the opposition and to pressure governments into making concessions (e.g., Crenshaw 1981; Kydd and Walter 2006; Hultman 2007; Polo and Gleditsch 2016; Asal et al. 2019).

Thus, rebel groups use violence against civilians to intimidate them, which then helps such organizations achieve various goals (e.g., Thomas 2014). As discussed earlier, magical practices, particularly ritualistic and brutal violence against civilians, have been effective at intimidating the opposition, including civilian populations (Włodarczyk 2009). Consequently, we expect that rebel groups that employ magical practices are particularly well-suited to use violence for intimidation, because the forms of abuse they employ are often viewed as particularly or extraordinarily terrifying or intimidating by civilian populations (Włodarczyk 2009).

Second, violence against civilians also serves as a tool of socialization. Cohen (2013, 2016) posits that brutal acts of performative group violence, especially gang rape, can forge bonds among combatants who previously lacked strong ties to each other, as these acts foster feelings of prestige and belonging among participants. This argument has been extended to the killing and maiming of civilians as well (Davis and Jang 2018; Cantin 2021). Similarly, rebel groups that employ magical practices often do so, in part, to socialize combatants. Thus, we expect that such groups will be particularly violent towards civilians because it is an important part of their socialization processes (Włodarczyk 2009).

Third, religious and spiritual ideologies are often tied to violence against civilians. Religious ideologies that create stark divisions between in-groups and out-groups, and that are especially dogmatic, tend to promote violence against civilians who are considered by the perpetrators to either be non-believers or apostates (e.g., Asal and Rethemeyer 2008; Polo and Gleditsch 2016; Jasko et al. 2022).

As noted above, magical practices can be employed by armed movements to legitimize themselves and to create the perception among members and potential recruits that the rebel groups are fighting spiritually justified and supported wars (Włodarczyk 2009). Thus, we expect that if individuals believe their rebel organization is acting on a spiritual imperative, that they will also be more likely to view the opposition as violating the wishes or desires of the spirits. This could drive such groups to perceive these civilians as particularly illegitimate, and thus, the rebels will be more willing to use violence against these populations.

One potential counterargument is that ideological indoctrination is often used to restrain the behavior of the rebel rank-and-file. Indeed, such indoctrination can better align the preferences of the rank-and-file with the rebel leadership, making cadres less likely to disobey orders to show

restraint against civilians (Hoover Green 2016; 2018). Thus, it could be viewed as potentially contradictory for us to argue both that groups employ magical practices to increase discipline among the rank-and-file, but that these groups will also be more likely to perpetrate violence against civilians.

However, rebel leaders that can exert high levels of control over their cadres order the restraint of violence when they believe that specific abuses in specific contexts would be costly for their groups, but also explicitly order violence against civilians in other situations (Hoover Green 2016, 2018). As we argued above, rebel groups that employ magical practices are more willing and able to perpetrate violence against civilians for a variety of reasons. Thus, just because these groups might have higher than average levels of internal discipline, does not inherently mean that they will be less likely to abuse civilians. Indeed, if rebel leaders perceive violence against civilians to be beneficial (e.g., because it is part of spiritual warfare), then they could more easily act on these perceptions if they had obedient recruits who were willing to carry out violence.

Overall, we expect that rebels will kill more civilians when they also employ magical practices. First, such groups perpetrate violence that is often perceived to be particularly terrifying, allowing them to intimidate civilian populations more easily, which can aid in the achievement of a variety of goals. Second, such groups often use ritualistic violence to socialize recruits. Third, because such practices are strongly associated with the beliefs that rebels' efforts are spiritually righteous and justified, these groups will be harsher towards civilian populations that do not share their goals. This leads to our second hypothesis that:

*H2: Rebel groups that employ magical practices will kill more civilians.*

## **Data on Magical Practices**

We gathered data on the magical practices of African rebel organizations. Below, we discuss the sample, how the data were collected, key patterns in the data, and how they are unique from existing data on rebel ideologies.

### *Sample*

Our sample of rebel organizations is taken from the Non-State Actor (NSA) dataset (Cunningham, Gleditsch, and Salehyan 2009, 2013), which is derived from the Uppsala Conflict Data Program's (UCDP) Armed Conflict Dataset (ACD) (Gleditsch et al. 2002). We include groups that were active at least at some point between 1989 and 2011. Groups can enter or exit our sample before or after this period respectively, they simply must have been active at least at some point during this time to be included in the dataset. Our data cover only this period primarily due to the time and resources that had to be expended to construct this dataset.<sup>2</sup>

Our sample encompasses exclusively African rebel organizations. We gathered data on groups across the entire continent, not just those operating in countries south of the Sahara. Our decision to focus exclusively on African militant movements is primarily driven by theoretical considerations. Włodarczyk (2009, p. 27) explains that magic and related supernatural beliefs have been a mainstay of modern warfare in Africa. Włodarczyk (2009, p. 15) notes that in the African context, “magic” falls under the broader categorization of “traditional religion,” which encompasses supernatural beliefs outside of Hinduism and the Abrahamic faiths that are practiced on the continent.

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<sup>2</sup> Following the precedent of existing datasets, such as WARD (Thomas and Wood 2017) and RAID (Soules 2023), we exclude coups and military-related factions from the sample, as their prior attachment to national armed forces might make their recruitment and socialization practices somewhat unique from the rest of the sample.

Włodarczyk details how rebel movements throughout Africa draw on these traditional practices for initiating and socializing recruits and how these beliefs are essential for understanding the internal functioning of militant groups in the region. Scholars have focused on how African-specific spiritual beliefs shape warfare on the continent. Thus, we focus exclusively on African armed groups to capture the effects of these practices.

Such practices are present in rebel groups in other parts of the world as well. For instance, in Myanmar, God's Army was at least nominally led by 12-year-old twins, Johnny and Luther Htoo, whose followers allegedly believed that they were essentially deities who could perform miracles (Aglionby 2000). Members of the Lao Resistance Movement engaged in rituals they believed made them immune to bullets (Baird 2018). Relatedly, Kaplan (2022) examines how superstitious beliefs influenced the behavior of conflict-affected populations during the civil war in Colombia. However, as noted above, these practices tend to be more common in rebel groups in various parts of Africa because they are derived from local practices and beliefs that are common in many areas of the continent (Włodarczyk 2009). Thus, we focus exclusively on African groups in our analysis.

We do not claim that these results are fully generalizable, as magical practices are less common in armed groups in other regions. However, these practices are still important features of many African rebel organizations and ignoring them can lead to us missing the full pictures of the factors that shape the behaviors of armed organizations. Additionally, in analyzing the behavior of heterogenous samples of militant organizations across the world, it is important to understand any major variation in regional variables that could affect the overall results.

Our final sample includes 106 groups. Due to the limited information available on many of these organizations, we were unable to construct temporally varying data. Thus, the dataset is



only the cross-section of these 106 organizations. However, given that these practices draw on deeply ingrained cultural beliefs and practices, they may not vary substantially, within groups, over time.

### *Magic in Practice*

To measure the magical and spiritual practices of rebel organizations, it is important to first identify which of these practices are commonly employed by armed actors. Włodarczyk (2009) identifies common ways in which magical practices and beliefs are implemented in rebel groups. Through various means, including “charms, potions, rituals, and codes of conduct,” rebel recruits are offered protection from attacks by their enemies (Włodarczyk 2009, p. 27). For instance, combatants in conflicts in Liberia, Mozambique, Sierra Leone, and the DRC, among other places, would wear protective charms that were believed to make them immune to enemy fire (Włodarczyk 2009). Second and relatedly, cadres in some groups believed that they could be granted new powers that made them better fighters (Włodarczyk 2009).

Third and relatedly, rebel leaders are sometimes believed by their followers to have special powers of their own. Leaders can employ these perceptions of power to shape strategies and tactics (Włodarczyk 2009). Relatedly, rebel leaders are often believed to have significant power, even beyond the rank-and-file. These powers can come in a variety of forms. Sometimes leaders are believed to have fighting powers beyond that of the average member. For instance, commanders in RENAMO were believed to be able to fly and tell the future, allowing them to gather information on the enemy’s battleplans (Włodarczyk 2009). In other cases, militant leaders are regarded as having even more significant spiritual powers, including being messiahs, prophets, etc. For example, in the Democratic Republic of the Congo, the leader of the Bundu dia

Kongo, Na Muanda Nsemi, was seen as a prophet by some, as he claimed to receive a holy message from God that he organized the group around (Human Rights Watch 2020).

## **The Variables**

Based on the common practices discussed above, we are interested in measuring two different dynamics. First, we are interested in capturing groups who are perceived by the members to have magical or spiritually significant or powerful leaders. Second, we are also interested in measuring group behavior that involves magical beliefs and practices related to enhanced powers of protection and/or fighting for the rank-and-file. Włodarczyk (2009) notes that the magical powers associated with rebel leadership are often differentiated from, and more powerful than, those believed to be possessed by the rank-and-file, making them distinct but related phenomena. Thus, we attempt to capture both dynamics. We discuss the construction of these variables below.

### *Leadership*

The first variable is a binary indicator measuring whether a rebel group has any leader or leaders who claim to have special or unique religious or spiritual connections and/or powers that are not possessed by most members of the group. This distinguishes groups with religious figureheads from those that claim spiritual powers or abilities (e.g., immunity from bullets) for all members. We classify rebel groups as being in this category if they have a leader or leaders who claim to be prophets, messianic figures, and/or to possess divine or spiritual powers not held by most or all the other members. High ranking leaders and officers are sufficient evidence for a

group to receive this categorization; the evidence does not have to be exclusive to the top leader in the organization.

Having a leader with extensive religious knowledge and/or training is NOT sufficient for this categorization. Being labeled as a religious or spiritual leader is not a sufficient indicator of special “connections” in this context, rather, such powerful connections would include beliefs that the leaders are prophets or messiahs. Again, for magical powers to qualify groups for this category, their leaders must have powers beyond the average member. For instance, it is not a sufficient threshold if everyone in the organization, both leaders and rank-and-file, are believed to have immunity from bullets. However, if claims are made about the immunity of the rank-and-file, but also that the leaders have additional powers (e.g., precognition, flight, etc.), then this is sufficient for groups to be coded as having a spiritually powerful leader.

### *Rank-and-File*

The second variable is also a binary indicator and measures whether rebel groups engage in any sort of internal, magic-based indoctrination and/or socialization processes for members, once they have been recruited. Groups in this category engage in such religious or spiritual based versions of hazing or initiation rites; practices claimed to provide immunity from physical harm on the battlefield (e.g., wearing amulets that are intended to provide immunity from bullets); belief in other extraordinary powers (e.g., invisibility, power to fly, etc.); and various ritualistic practices.

### *Aggregate Practices*

The third variable is a dichotomous indicator of whether a group fits one or both of the above descriptions. Said differently, this variable is coded as 1 if at least one of the other variables is, and 0 if otherwise.

### *Measurement Inclusivity*

We create two versions of each of these variables, one with a stricter standard of evidence, and one that has a lower threshold for inclusion. The stricter versions of these variables are based on clear and direct evidence that these practices are widespread in groups, as opposed to anecdotal instances of members engaging in religious or spiritual behavior, separate from practices of the main group.

Additionally, for a small number of groups, reports dispute whether groups actually engage in such practices. The restrictive versions of these measures exclude such instances, while the inclusive versions do not. Furthermore, for a handful of groups, there is evidence a faction of the organization engaged in these practices, but that the evidence does *not* speak to other factions. For instance, there is substantial evidence of the SLM/A in Sudan employing internal spiritual practices, and some evidence of the SLM/A - MM doing so. However, none of the evidence addressed SLM/A - Unity. Such factions as the SLM/A - Unity would fall under the more inclusive measure, but not the stricter one. The more inclusive measures have a lower threshold, as any evidence of groups engaging in these practices is sufficient.

For the third variable, which measures whether groups have spiritually powerful leaders and/or engage in any other spiritual practices, we classify groups as meeting the more restrictive

threshold if they meet the restrictive threshold for at least one of the two variables. For instance, if there is strong evidence that a group has a spiritually powerful leader, but less direct evidence of the rank-and-file engaging in spiritual practices, the group is still considered to meet the stricter threshold for the aggregated measure because evidence of only one practice is sufficient for a group to be classified in this catchall third category.

It is also important to clarify what practices these measurements do not capture. These variables do NOT measure the broader ideologies, goals, and/or recruitment tactics of groups. For instance, a leader of a rebel organization with religious goals is not automatically coded as having a special religious status or powers. Relatedly, declarations of religious ideologies and/or goals are not criteria for groups to be considered engaging in magic-based indoctrination and/or socialization processes. Indeed, some groups with broader religious ideologies and goals do not engage in these behaviors, while some groups with secular goals and ideologies do.

We also do NOT include radical Islamist practices in these variables. Thus, radical Islamist groups are typically not coded as engaging in magical practices, as their religious-based practices tend not to stray from Islamist ideology. For an Islamist group to be coded on any of these dimensions, they would have to employ practices that draw on traditional, non-Islamist, African spiritual or magical beliefs.

There are only two examples of this in our dataset, both of which are specific to practices among the rank-and-file. First, there is evidence that some members of the Allied Democratic Forces (ADF) used traditional magic (gri gri) (Sweet 2019). The ADF is coded under the more inclusive measure of internal practices because the evidence indicates that the practice was fairly limited in the group. However, the ADF still meets the minimal threshold because it employs some religious practices that are NOT radical Islamist practices.

Second, according to one former member of Al-Shabaab, recruits in the group underwent an indoctrination process that was similar to “devil worship” and that they were “forced to drink some liquid and the same liquid is sprayed on the head and faces. Once the ritual is over, the young terrorist is then prepared for warfare and becomes frenzy” (Guleid 2013). However, because this evidence is based only the account of one recruit, it meets only the lower threshold for inclusion.

### *Data Collection Procedure*

To identify these practices among rebel groups in our sample, we began by writing detailed, qualitative narratives on the magical practices of these organizations. We followed a multi-step procedure to construct the narratives. First, we began by consulting a variety of existing narrative-based sources on militant organizations, including narratives from the Big, Allied and Dangerous (BAAD) dataset (Asal et al. 2018), the Mapping Militant Organizations Project, the NSA dataset case description notes (Gleditsch et al. 2013), and the UCDP Conflict Encyclopedia.

Second, we conducted searches in both Google Scholar and the regular Google search engine to produce academic journal articles, books, think tank reports, government reports, and news stories, among other sources, which covered the magical and spiritual practices of rebel groups in our sample. Third, we conducted queries in Nexis-Uni to find additional news stories about these organizations.<sup>3</sup>

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<sup>3</sup> The search strings we employed are available with the supplemental materials. To execute these searches, we followed the best practices recommended by Karstens et al. (2023).

Each author wrote approximately one-third of the narratives. However, to ensure that each researcher was capturing sufficient and accurate information in their narratives, each had five narratives double-checked by another member of the team. Additionally, the leader author double-checked the narratives for all rebel groups in which no sort of magical or spiritual practice was detected to try to minimize the number of false negatives in the dataset.

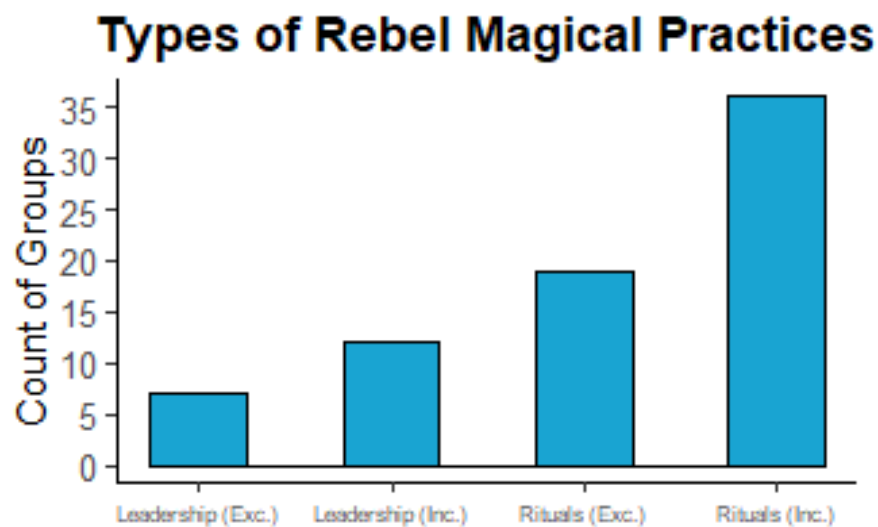
Using these narratives, all three authors coded each variable for every group. We then assessed the intercoder reliability for each variable. There was only moderate intercoder reliability across the three coders. The Cohen's Coefficient for the intercoder reliability for the different variables ranged from approximately 0.52 to about 0.87. The greatest discrepancies arose in determining the threshold of inclusivity that groups met, rather than whether they met any criteria at all.

To compensate for the issues with intercoder reliability, we identified all the coding discrepancies and then met to resolve the issues. Specifically, the three authors talked through all the disputed cases together and came to a consensus on how to code each of them.

### *Trends in the Dataset*

It is also important to consider the trends in these data. In terms of the magically powerful leadership variable, 7 groups, or approximately 6.6% of the sample, meet the more exclusive threshold for inclusion, while 12 organizations, or about 11.3% of the sample, meet the more inclusive threshold. In terms of magical rituals among the rank-and-file, 19 groups (17.9%) meet the more exclusive threshold, while 36 (33.9%) meet the more inclusive threshold.

Almost all groups that have magically significant leaders also engage in magical practices among the rank-and-file, although the reverse is not true. Said differently, groups with magically powerful leaders essentially appear to be a subset of those that engage in broader magical practices among the rank-and-file. **Figure 1** displays the frequency of the leadership and rank-and-file (denoted as “rituals” in the figure) variables for both the exclusive and inclusive thresholds.



**Figure 1: Frequency of Magical Practices**

### *Uniqueness of Dataset*

It is also important to understand how our data are distinct from existing datasets that capture the ideological beliefs of armed non-state actors. Datasets such as the ACD2GTD (Polo and Gleditsch 2016), WARD (Thomas and Wood 2017), and FORGE (Braithwaite and Cunningham



2020) contain measures of whether a group has a “religious” ideology. RAID (Soules 2023) includes an indicator of whether groups make religious-based recruitment appeals.

However, datasets such as WARD and FORGE capture the broader, publicly declared ideology of rebel organizations, rather than any actual internal practices. The data in RAID are specific to groups’ recruitment practices, not their efforts to indoctrinate, which are often distinct processes (Wood 2009). Thus, previous cross-rebel group datasets have not attempted to gather information on the magical practices of these organizations.

Furthermore, the “religious” groups identified in these datasets tend to have radical Islamist beliefs, with other types of religious and spiritual beliefs being less accounted for. This is not to say that existing datasets suffer from measurement error, as they are often just trying to account for the broader ideologies and recruitment practices of rebel organizations. However, doing so still provides an incomplete picture of the effects of rebel spiritual and magical beliefs, as many of these are internal practices that are not explicitly part of groups’ ideologies. Thus, using existing data on whether rebel organizations are classified as religious is an inadequate approach to capture the concepts we have been discussing.

**Table 1** below compares the groups captured in our dataset to the classifications of the same organizations in other datasets. The table includes groups in our data that meet either the inclusive or restrictive threshold for either magical practices among the rank-and-file or rebel leadership. Groups not coded as engaging in these practices in our dataset are *not* included in the table. As the table shows, most groups that we found evidence of engaging in magical practices are not coded as being religious in other existing datasets. Thus, our data provides information on features of rebel groups not accounted for in existing datasets.

**Table 1: Comparing Religious/Spiritual Practices Measured Across Datasets**

<b>Group</b>	<b>FORGE</b>	<b>WARD</b>	<b>ACD2GTD</b>	<b>RAID</b>
ADF <sup>+</sup>	X	X	X	X
AFDL <sup>+</sup>				
Al-Shabaab <sup>+</sup>	X	X	X	X
BDK				X
FDLR <sup>+</sup>				
FDSI-CI				
FPR				
FRCI				
Faction of SPLM <sup>+</sup>		N/A		
INPFL				
Kamajors				
LRA	X	X	X	
LURD				
MFDC				
MJP <sup>+</sup>				
MODEL				
MPCI				
MPIGO <sup>+</sup>				
NDPVF <sup>+</sup>				
Ninjas				X
NPFL				
Ntsiloulous		X		X
ONLF <sup>+</sup>				
Palipehutu <sup>+</sup>				
Palipehutu-FNL <sup>+</sup>				
RCD				
RENAMO				X
Republic of South Sudan <sup>+</sup>				
RUF				
SLM/A				
SLM/A-MM <sup>+</sup>				
SLM/A-Unity <sup>+</sup>				
SPLM <sup>+</sup>				
SPLM/A-N				
UNITA				
WSB <sup>+</sup>				

<sup>+</sup>Denotes groups that only meet the more inclusive threshold.

N/A denotes groups not included in a particular dataset.

Relatedly, the Rebel Organization Leaders (ROLE) database (Acosta et al. 2022) contains information on the religions that rebel leaders identified with. While useful, this dataset does not capture whether rebel leaders are believed to be spiritually or magically powerful. Thus, our data also provide a unique contribution on this dimension.

## **Research Design**

As discussed earlier, the data we gathered are time invariant due to the nature of the information available about these practices. Thus, the analysis covers only the cross-section of the 106 groups in the sample. While this limits causal identification, we believe it is still valuable to understand the types of rebel behaviors that are associated with magical practices, and the data we have gathered, to the best of our knowledge, is the most comprehensive of available sources.

### *Independent Variables*

The two hypotheses of this study are both concerned with how magical practices among the rank-and-file of rebel organizations affect their behavior, including their recruitment and treatment of civilians. Thus, we employ both the stricter and more inclusive binary measures of rebel organizations' use of magical or spiritual practices among the rank-and-file.

### *Dependent Variables*

The first hypothesis maintains that groups will be more likely to forcibly recruit child soldiers when they also employ magical practices. To capture this, we use data from Haer et al. (2020) who built a three-point ordinal indicator of the extent to which group engaged in the forced recruitment of children. Specifically, the measure captures whether there was no evidence

of child soldiers (0), fewer than 20% of all children in the group were forcibly recruited (1), or if more than 20% of children in the group were forcibly recruited (2). In these data, the recruitment of children is not automatically considered to be forcible. Instead, groups are coded as forcibly recruiting children when they employ methods such as abduction, press-ganging, and/or quota systems (e.g., requiring one recruit from every family), to do so.

Haer and coauthors drew on a variety of sources, in multiple languages, including independent news stories and reports from organizations such as Child Soldiers International, the U.S. Department of State, Amnesty International, and the Human Rights Watch, among others. We employ ordered logistic regression analysis because the dependent variable is ordinal.

The second hypothesis predicts that rebels that employ magical or spiritual practices will engage in greater levels of violence against civilians. To capture this, we employ data from version 23.1 of the UCDP's One-Sided Violence Dataset (Eck and Hultman 2007; Davies et al. 2023). Specifically, we take the total sum of the UCDP's best estimate of the number of civilians killed by a group, across all years the UCDP has data available for these groups. Similar to existing studies that use this data source (e.g., Salehyan et al. 2014; Walsh et al. 2018), groups are coded as killing zero civilians if they do not enter the One-Sided Violence Dataset by killing at least 25 civilians. We employ negative binomial regression to test this hypothesis because the dependent variable is a count measure with significant overdispersion.

### *Control Variables*

We hold several potentially confounding factors constant in our analysis. First, given that radical Islamist groups often employ violence against civilians (Asal and Rethemeyer 2008), but

typically (though not always) refrain from the type of magical practices captured by our independent variable, we want to ensure that our results are not driven by the differences between Islamist and non-Islamist groups. Thus, using data from WARD (Wood and Thomas 2017), we include a dichotomous indicator of whether a group has a radical Islamist ideology.

Rebel group strength also affects rebels' use of coercive recruitment practices (Eck 2014) and violence against civilians (e.g., Eck 2014; Polo and Gleditsch 2016). Additionally, militant organizations often employ magical practices to try to signal their strength (Wlodarczyk 2009). Thus, using a transformed version of the NSA dataset's measure of rebel groups' relative strength, we include a binary indicator of whether a rebel organization is much weaker than the government it is fighting (Cunningham, Gleditsch, and Salehyan 2009).<sup>4</sup>

Relatedly, rebel groups tend to survive longer when they recruit child soldiers (Haer and Böhmelt 2017) and perpetrate violence against civilians (Fortna 2015). Magical practices can also enhance the recruitment and internal discipline of rebel organizations, which could help them survive longer (Wlodarczyk 2009). Thus, we control for how long the group lived. Rebels that profit from lootable resources are also more likely to forcibly recruit child soldiers (Haer et al. 2020) and to engage in violence against civilians (e.g., Walsh et al. 2018). Natural resource wealth also influences the extent to which rebels rely on ideology to mobilize recruits (Weinstein 2005, 2007). To account for this, we include a dichotomous indicator of whether a group profited from looting natural resources at any point during its lifespan, using data from the Rebel Contraband Dataset (Walsh et al. 2018).

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<sup>4</sup> While the original measure captures whether groups are much weaker, weaker, at parity, stronger, or much stronger than the government, only approximately 16% of the sample is coded as being at parity or higher. Thus, due to this skewed distribution, we distinguish between the weakest groups and all others. Wood and Thomas (2017) take a similar approach.

We also control for country-level factors. We include a binary measure of whether a group was involved in a conflict that had at least one year of 1,000 battle-related deaths (which includes combatant deaths), as a variety of types of human rights abuses by rebel organizations are more common in these intense conflict (Walsh et al. 2018). Groups that employ magical practices are often involved in intense fighting with government forces as well (Włodarczyk 2009). Finally, we also control for the Polity2 measure of how democratic or autocratic a regime is, which is taken from the Polity V dataset (Marshall and Jaggers 2020). Furthermore, we include a measure of the logged per capita GDP of the country, with data from the World Bank. Both measures are taken for the first year a group was active in the given country.

## **Results**

The results for the tests of Hypotheses 1 and 2 are included in **Tables 2 and 3** respectively. The standard errors are clustered by the rebel group in each model. We gradually include more control variables in each model to mitigate the possibility that missing data are driving the results, particularly given the small sample size.

**Table 2: Rebel Magical Practices and Forced Recruitment of Child Soldiers**

	(1)	(2)	(3)	(4)	(5)	(6)
Magical Practices (exc.)	1.870*** (0.518)	1.405** (0.610)	0.765 (0.730)			
Magical Practices (inc.)				2.101*** (0.459)	1.785*** (0.469)	1.640*** (0.500)
Radical Islamist		-0.0739 (0.602)	-1.046 (0.849)		0.0979 (0.625)	-0.650 (0.850)
Much Weaker		-0.201 (0.531)	0.0753 (0.532)		-0.331 (0.506)	0.152 (0.502)
Rebel Age		0.0354* (0.0202)	0.0407 (0.0381)		0.0279 (0.0216)	0.0130 (0.0406)
Lootable Resources		1.179** (0.528)	1.046* (0.610)		1.047** (0.495)	0.952 (0.636)
Intense Conflict			0.629 (0.675)			0.644 (0.651)
Polity2			-0.0522 (0.0841)			-0.0659 (0.0960)
per capita GDP (Logged)			0.180 (0.264)			0.130 (0.269)
Cutpoint 1	0.146 (0.218)	0.485* (0.283)	1.769 (1.686)	0.456* (0.241)	0.698** (0.307)	1.744 (1.712)
Cutpoint 2	1.780*** (0.294)	2.248*** (0.351)	3.524** (1.757)	2.257*** (0.324)	2.610*** (0.396)	3.672** (1.735)
Observations	103	103	90	103	103	90

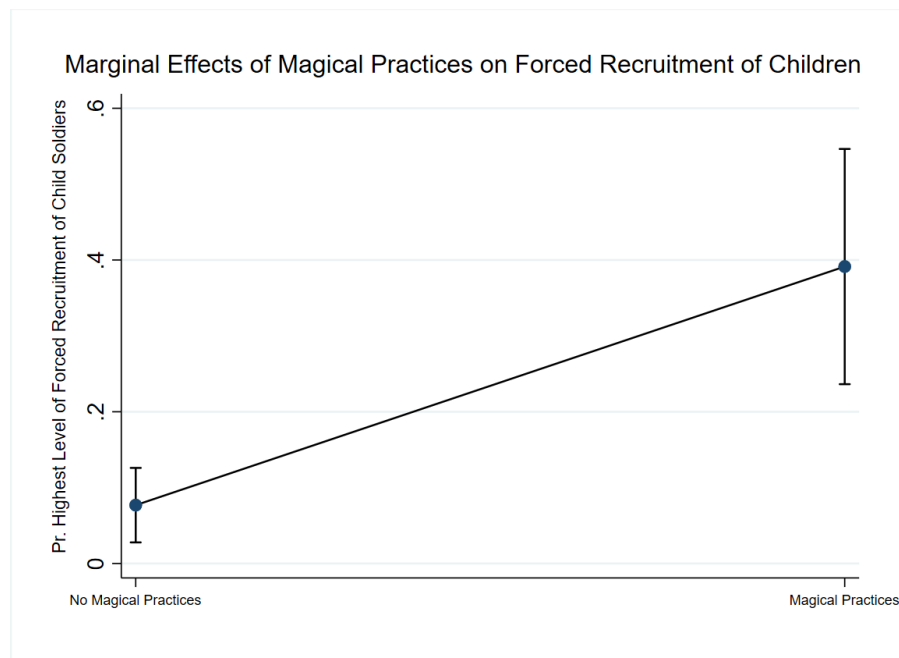
Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

As the results in **Table 2** highlight, we find fairly strong support for our hypothesis that rebel groups are more likely to forcibly recruit child soldiers when they also employ magical practices among the rank-and-file. Across five of the six models, rebels engaging in magical practices has a positive and statistically significant association with the extent of forced recruitment of child soldiers. The association between the stricter measure of magical practices and the forcible

recruitment of children drops below traditional levels of statistical significance in the model with all the control variables included. However, there are only 90 observations in this model.

The use of magical practices also has a large substantive effect on the extent to which rebel movements forcibly recruit child soldiers. The probability that a group engages in the highest level of forced recruitment of child soldiers shifts from approximately 7.7% to about 39.1% percent when it employs magical practices. Thus, groups that feature magical practices appear to be significantly more likely to forcibly recruit a large number of child soldiers. These marginal effects are plotted in **Figure 2** and are based on the more inclusive measure of magical practices, with 90% confidence intervals, and all other covariates held at their means.



**Figure 2: Marginal Effects of Magical Practices on the Probability of High Levels of Forcibly Recruiting Child Soldiers**



**Table 3: Rebel Magical Practices and One-Sided Violence**

	(1)	(2)	(3)	(4)	(5)	(6)
Magical Practices (exc.)	1.692*** (0.548)	2.071** (0.844)	1.212* (0.723)			
Magical Practices (inc.)				1.774*** (0.679)	2.123** (0.826)	2.054*** (0.700)
Radical Islamist		3.225*** (1.193)	1.277 (1.217)		4.209*** (1.290)	2.716* (1.552)
Much Weaker		-1.762* (0.903)	-0.680 (0.764)		-2.427*** (0.941)	-0.805 (0.606)
Rebel Age		0.0605* (0.0367)	0.108* (0.0616)		0.0358 (0.0416)	0.0884 (0.0577)
Lootable Resources		1.804** (0.864)	0.0343 (0.486)		0.943 (0.722)	-0.0726 (0.511)
Intense Conflict			3.671*** (0.507)			3.630*** (0.542)
Polity2			0.0955 (0.0650)			0.117* (0.0640)
per capita GDP (Logged)			-0.647 (0.428)			-1.104** (0.515)
Constant	5.946*** (0.415)	4.390*** (0.745)	6.742*** (2.490)	5.551*** (0.607)	4.393*** (0.746)	8.919*** (2.965)
Observations	106	103	90	106	103	90

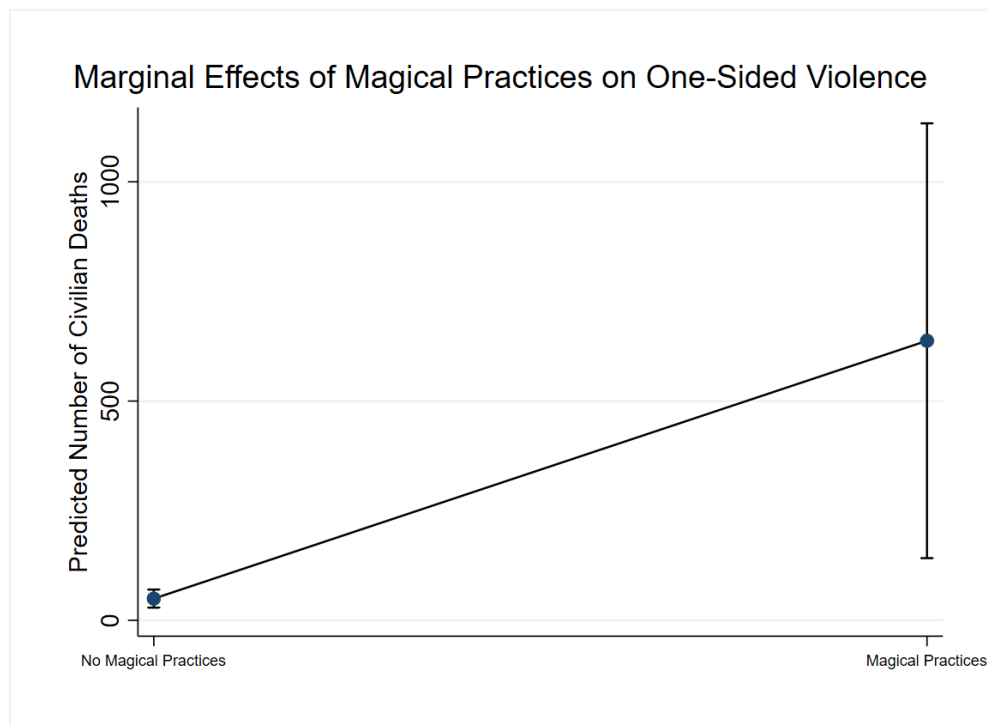
Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The results for the tests of Hypothesis 2 are presented in **Table 3**. Across all six models, we find strong support for the second hypothesis that groups will perpetrate higher levels of violence against civilians. In line with prior scholarship, these results suggest that groups that employ magical practices also attempt to intimidate civilian populations in other ways as well.

Rebel magical practices also have a significant substantive effect on the amount of violence against civilians that groups perpetrate. The marginal effects of the stricter measure of magical

practices are presented in **Figure 3**, with 90% confidence intervals and the control variables held at their means. Groups that do not engage in magical practices are predicted to kill about 49 civilians, while groups that employ such practices are predicted to kill almost 638 civilians. Thus, groups that engage in magical practices appear to be, on average, much more abusive towards civilians than those that do not.



**Figure 3: Marginal Effects of Magical Practices on Predicted Number of Civilian Killings**

### **Robustness Checks**

We also conduct a variety of alternative tests to assess the robustness of the findings. First, we consider whether having a rebel leader perceived to have magical powers has similar effects to magical practices among the rank-and-file. Thus, we reconduct the main analysis, employing

the restrictive and inclusive measures of magical rebel leaders instead of the measures of magical practices (among the rank-and-file) used in the main analysis.

Having a leader that is believed to possess extraordinary powers does not have a consistent association with the extent to which groups rely on the forced recruitment of child soldiers. This association is statistically significant in only one model and the sign of the coefficient flips across some models. The association between magical leadership and one-sided violence is more consistent, as the association is positive in all models and is statistically significant in four of them. The association only drops below traditional levels of statistical significance in both models that have the full set of control variables.

These results suggest that how magical practices are instituted within rebel organizations matters. Future quantitative research should more closely exam the differences between these types of magical practices, including how they might affect rebel group behavior in different ways.

Next, we consider alternative measures of child soldiering. First, in response to biases present in reporting on human rights abuses, such as sexual violence (Davies and True 2017), scholars have recommended employing binary measures of such abuses to account for variation in the quality of reporting (Nagel and Doctor 2020). Thus, we transform the ordinal measure of the forced recruitment of child soldiers into a binary indicator of whether groups engaged in this practice at all and conducted a series of logistic regression analyses. We continue to find support for the first hypothesis across five of the six models.

It is also possible that magical practices affect any form of recruitment of child soldiers, not just forced recruitment. Thus, using a measure taken from Haer et al. (2020), and originally

developed by Haer and Böhmelt (2016), we employ a three-point ordinal indicator of whether there is no evidence of child soldiers being recruited (0), whether less than half of the group are children (1), or whether more than half are children (2). This measure does not distinguish between recruitment that is explicitly forced from other forms of mobilization.<sup>5</sup> The more inclusive measure of magical practices has a positive and statistically significant association with the recruitment of child soldiers in all models, but the association between this dependent variable and the more restrictive measure of the explanatory variable achieves statistical significance only in the bivariate model.

One issue is that this measure does not distinguish between forcible and “voluntary” recruitment. In response, we create a binary variable of groups who are coded as employing child soldiers by Haer and Böhmelt (2016) but who are *not* identified as using force to recruit children by Haer et al. (2020). This variable has a negative but statistically significant association with rebel magical practices across all models. This suggests that magical practices facilitate the use of forced recruitment of children, but not the use of child soldiers overall, including child “volunteers.”

We also investigate whether the findings are specific to the forced recruitment of children, or whether they apply to the coercive recruitment of both adults and children. First, as an alternative measure of forced recruitment, we use the three-point ordinal measure of the extent to which rebels rely on forced recruitment, taken from the Rebel Human Rights Violations (RHRV) dataset (Walsh et al. 2023). This variable is not specific to the recruitment of children or adults. We take the highest recorded level of the variable over a group’s lifespan. We conduct a series of

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<sup>5</sup> The recruitment of any child soldiers can be considered a form of forced recruitment. However, Haer et al. (2020) distinguish between forced and “voluntary” recruitment of children theoretically, and their measure captures forced recruitment methods, such as abduction, press-ganging, and quota programs.

ordinal logistic regression analyses and do not find magical practices to be a consistent predictor of general forced recruitment.

Finally, using the data on the forced recruitment of child soldiers, along with the RHRV dataset's measure of forced recruitment, we create a binary indicator of whether a group is coded as using forced recruitment in the RHRV, but as not using forced recruitment of child soldiers by Haer et al. (2020). We do this to try to capture groups that forcibly recruit adults, but not children. While only 6 groups in the sample forcibly recruit adults but not children, none of them engage in magical practices, suggesting that such practices might have greater utility in the forcible recruitment of children than adults.

We also consider the robustness of the evidence in support of Hypothesis 2. The distribution of one-sided violence across groups is highly skewed, thus, we conduct additional tests in which the dependent variable is the natural log, plus one, of the number of civilians killed. We find support for the second hypothesis in four of the six models, as both measures of magical practices lose statistical significance when the full set of control variables is included.

Overall, we find a fair amount of support for both hypotheses, though support for Hypothesis 1 appears to be more robust. While the analysis is limited by the small sample size and lack of temporally varying data, we believe these findings still highlight the importance of accounting for magical practices within rebel organizations.

## **Discussion and Conclusion**

Rebel groups employ a variety of magical practices that affect their behavior in important ways, including their recruitment practices and treatment of civilians. However, despite their

importance, prior quantitative research on the ideology of rebel groups, while valuable, tends to overlook these practices as they often do not correspond to the broader ideological platforms of militant organizations.

Building off prior theoretical literature, we examine how these magical practices affect rebel behavior. We theorize that because of how they are employed to socialize and indoctrinate recruits, groups employing magical practices, on average, will forcibly recruit more children, and kill a larger number of civilians, than their counterparts who do not draw on magical beliefs. To evaluate these arguments, we collect novel data on magical practices among the rank-and-file and leadership of rebel organizations. This study, to the best of our knowledge, provides the first cross-group dataset and quantitative analysis of the effects of magical practices on rebel group behavior.

Our study highlights the importance of internal socialization and indoctrination mechanisms that are often overlooked by existing quantitative literature. The findings of this paper suggest that magical practices and beliefs have a significant affect on rebel behavior, and thus, need to be accounted for in other scholarship on why rebels abuse civilians. Even if these practices are less common in other regions of the world, these results still show that there is important variation within groups that are often included together in global analyses of the conduct of civil war.

In addition to using these data for a variety of future research projects suggested earlier in the paper, scholars could build off this study by collecting data on other types of internal socialization and indoctrination processes within rebel organizations. Relatedly, magical practices are also sometimes employed by members of national militaries and pro-government militias, and thus, another potential fruitful avenue of future research is to collect data on the magical practices of these actors.

Magical practices are an important part of many African rebel groups and should thus be taken more seriously by quantitative scholars of conflict. These practices are neither inconsequential nor irrational, but rather, play an important role in shaping rebel decision calculi and behavior. Understanding these practices is also an important part of predicting when civilians will be most vulnerable to violence during civil conflicts. Thus, local and traditional beliefs and practices, including the use of magic, appear to play a vital role in civil wars.

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