

Mere Puffery or Convincing Claims? The Effect of Propaganda on Civilians During Conflict*

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Abstract

How does propaganda affect civilian attitudes during conflict? While media campaigns are a common tactic during conflict for both insurgents and governments, there is very little empirical research that explores their effect on civilians. I argue these campaigns play an important role in the construction of a rebel group's reputation during conflict and the perception of their organization among non-combatants. This is because civilians suffer from an information disadvantage and struggle to accurately gauge the relative strength of actors in the conflict. More so, armed groups can increase sympathy and support by disseminating media with emotional appeals that target their audience's core identity. I exploit the plausibly random introduction of the Taliban's official radio station in Kabul during May 2018 to test these claims. NATO's Afghanistan Nationwide Quarterly Assessment Research survey happened to field a wave directly before and after this event. I use difference-in-differences to estimate the effect of exposure to the Taliban's propaganda and demonstrate that it increases perceptions the group's strength and support for negotiations between the Taliban and the government. These findings have important implications for the study of civilian attitude formation and support during conflict.

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1 Introduction

Civilians are considered a conflict's "center of gravity," as their support is essential to stay in the fight and ultimately achieve victory (Kilcullen 2011, 8). They provide vital information, material assistance, and political backing to belligerents. Recognizing this, a great deal of research considers the role of civilians in conflict and counter-insurgency. Scholars focus particularly on the factors that influence their choice to collaborate, often in the form of sharing information, with the government or its enemies. Broadly, this research concentrates on how violence directed towards civilians and the provision of services influences their decision to do so. The resulting 'information-centric' model of insurgency consequently prioritizes the local population (Berman and Matanock 2015).

However, despite the fact that rebel groups commonly manage sophisticated media apparatuses that deliver curated content to the public, there is very little research that explores the effect of propaganda on the local population. Indeed, rebel groups routinely run official websites, print newspapers, and radio stations. These outlets, which are often managed by a public relations arm of the organization, are a common feature of conflicts around the world and throughout recent history. The Shining Path, the Revolutionary Armed Forces of Colombia (FARC), Hezbollah, al-Qaeda, etc. all manage media outlets that publicize information related to the group, its aims, and their respective conflict (Khatib, Matar, and Alshaer 2014; Heeg 2017).

Despite this, relatively little extant research explores the use of media by armed actors and its effects within a conflict. Only 5.6% of academic articles about civil war or terrorism published between 2001-2019 mention 'media' or 'propaganda.'¹ Existing studies that do integrate these topics are either largely focused on transnational terror groups, not rebel organizations, or consider how media influences actors outside of the conflict such as recruiting foreigners. More so, they also typically classify or theorize about different types

¹I use the Web of Science to collect this statistic, which searches an article's abstract, author keywords, title, and more. Search query = ["civil war" OR "intrastate war" OR "civil conflict" OR "insurgency" OR "terrorism"] and ["media" OR "terrorism"].

of messaging strategies without assessing their effect on the target audience (Aly 2017; Cottee and Cunliffe 2018).

This represents a considerable gap in our understanding of conflict dynamics and the strategies employed by armed actors during conflict. Indeed, a writer for one of Hezbollah's outlets told me in a personal interview that "media is more important than firepower [during conflict]."² They explained that media outlets are vital tools to contextualize battlefield activity and justify a group's actions as pursuing important political goals. More generally, referring to the Lebanese effort spearheaded by Hezbollah to expel Israel after it occupied the country during the civil war, a Lebanese Army General stated that "the camera broke the Israeli strength more than weapons."³

In this paper, I argue that propaganda serves two key functions for rebel groups. First, it broadcasts information related to a group's *claimed* strength. Existing studies generally implicitly assume that public perceptions of a rebel group's capabilities are a function of their observed behavior and track their *actual* capabilities. However, civilians are relatively blind regarding the actual military capabilities of belligerents in conflict. Beyond propaganda, which is commonly used to boast about capabilities, they have little information beyond scarce reports of battlefield engagements. I argue rebels employ propaganda to bolster the public's perception of their ability to continue waging war against the state and to demonstrate their resolve to do so. Second, I argue that rebels employ propaganda to increase their support through emotional appeals that target their audience's core identity. Armed groups often use propaganda to validate the social and political grievances of their supporters alongside information that benefits the group itself. They also remind members of their in-group that they ostensibly share a common cause. I therefore expect propaganda to increase public support and sympathy for rebel groups.

I exploit the plausibly random introduction of the Taliban's radio station, *Voice of Sharia*, in the Kabul area during May 2018 to test these claims. Their broadcast started

²Caleb Lucas, Anonymous Interviewee in Lebanon, July 2019

³Caleb Lucas, Anonymous Interviewee in Lebanon, July 2019

after nearly two decades of silence and no specific event appeared to precipitate the reintroduction of the station and the sudden availability of its propaganda. The North Atlantic Treaty Organization (NATO) happened to field two waves of their Afghanistan Nationwide Quarterly Assessment Research (ANQAR) survey surrounding this event, one directly before and one directly after.⁴ I use difference-in-differences (DiD) to estimate the effect of the radio broadcast on civilian attitudes in Kabul and find that it increased support for negotiations with the Taliban and improved the public's perception of their strength.

This study contributes to our understanding of civilian attitude formation in civil conflict. While existing research recognizes that civilian attitudes are dynamic (Kalyvas 2006), there is little research that examines how factors beyond battlefield events and social service provision affects them. Scholars commonly assume ethnicity predicts support, yet there is substantial within-group variation in attitudes. Some of this can likely be explained by how groups employ violence and services, but many civilians are not directly targeted by violence and do not live under the control of an armed group. My theory suggests media is an important component of this process.

2 Media Effects during Conflict

Recent research suggests integrating theories of civil conflict with communication strategies and media can produce important insights. For example, Jones and Mattiacci (2019) provide evidence that rebels use Twitter as a means to conduct public diplomacy. Studying a group in Libya, they demonstrate that when the organization clarified their political ambitions and highlighted atrocities committed by the Libyan government they were more likely to receive US cooperation and assistance. Similarly, Zeitzoff (2018) finds that armed actors, Hamas and Israel specifically, respond to the social media information environment by changing their behavior on the battlefield. Reactions to their tactical choices

⁴I thank the Combating Terrorism Center at the United States Military Academy in West Point for access to the ANQAR data along with the team at NATO that manages the data.

affect future decisions about what to do. Zeitzoff consequently explores how civilian use of media (Twitter) affects rebel group behavior. More broadly, Zeitzoff (2017) contends that the internet is fundamentally changing conflict due to its ability to spread information and decrease communication costs. However, scholars have yet to construct a theory concerning how rebel media campaigns influence attitudes towards belligerents a conflict.

Separately, research from a variety of other, related contexts suggests that media can have substantively meaningful effects on attitudes and political preferences. In particular, in the context of civil conflict, Yanagizawa-Drott (2014) uses village-level data from the Rwandan Genocide to show that areas exposed to a radio program that encouraged violence suffered significantly more deaths during the conflict than areas that did not receive the signal. The station, RTLTM, broadcasted hate messages designed to stimulate violence against Tutsis and their ultimate extermination. Yanagizawa-Drott demonstrates that approximately 10% of the overall violence is attributable to the RTLTM radio station, suggesting that their hate-filled rhetoric meaningfully influenced impact the conflict. Studies that explore the effect of media on more traditional forms of politics produce similar findings. For example, Conroy-Krutz (2018), using a research design that exploits the exogenous relationship between FM radio signals and topography, finds that exposure to radio is associated with more political participation in Uganda.

3 Civilian Attitudes During Conflict

Civilians provide vital information, material assistance, and political backing to belligerents during civil conflict (Kalyvas 2006). Their support is consequently essential for rebel groups to stay in the fight and ultimately achieve victory (Kilcullen 2011; Hultman 2007). Recognizing this, a great deal of research considers the role of civilians in conflict and counter-insurgency. Scholars focus particularly on the three factors that influence civilian support during conflict - time invariant factors such as religious affiliation and ethnicity;

structural factors related to the conflict; and the use or threat of violence.

Factors such as religion and ethnicity might affect attitudes because when rebels and civilians shared these traits they also share the same goals and preferences (Denny and Walter 2014). Civilians might also harbor implicit biases that passively produce this relationship, as they fundamentally perceive activity performed by their in-group differently than by others (Lyall, Shiraito, and Imai 2015). Violence might also explain the relationship between civilian support and rebel groups (Lyall, Blair, and Imai 2013; Rueda 2017; Silverman 2019). Civilians, as rational actors, fear personal violence and consequently might support the group that threatens their own safety or is best positioned to secure it (Fabbe, Hazlett, and Sinmazdemir 2017). Similarly, structural factors such as the ability for groups to govern or effectively control territory might also explain the relationship (Kalyvas 2006; Huang and Sullivan 2020; Flynn and Stewart 2018).

These factors suggest civilian attitudes are largely a function of *what* actors in the conflict can provide them and *when* they can provide it. Scholars order these priorities differently, as some assume personal affiliations that might help achieve long-term political goals trump immediate concerns regarding personal safety. Others implicitly argue civilians prioritize survival and safety over all other issues. Regardless, the existing literature focuses on how civilians perceive *what can you give me when?* This suggests civilians are calculating, strategic actors with rational preferences.

My theory builds on this perception of civilian logic during conflict, but argues that propaganda is a key method through which rebel actors broadcast information regarding their activity and platform to the civilian population. I suggest civilians update their attitudes and beliefs about the conflict and its actors – including regarding *what can you give me when?* – partly based on this information. More generally, my theory posits that rebel propaganda moderates the relationship between the factors reviewed above and civilian support during conflict.

This an important theoretical innovation, as existing theories of civil conflict either

assume civilians have perfect information or, at least, strictly consider factors that require very little data (e.g. they update based on ethnic affiliation). For example, theories of civilian support that focus on the use of violence by rebel groups implicitly assume information related this activity is uniformly distributed across the general population. More so, they imply that responses to this activity is uniform conditional on fixed traits such as ethnicity. However, civilians in civil conflicts typically have an information disadvantage. Credible news reporting might be scarce, information regarding events in one province might not travel across the country, and concerns related to ensuring personal safety might trump thoughtful information engagement with the news. Perhaps because of these factors, civilians in conflict zones commonly believe rumors, misinformation, and misperceive key events (Greenhill and Oppenheim 2017). This makes civilians vulnerable to the sophisticated messaging strategies often employed by rebel groups. Conversely, governments have relatively more information about the rebel groups they are fighting and consequently a more accurate understanding of their capabilities (Thomas, Reed, and Wolford 2016).

I argue that rebel groups exploit the civilian information disadvantage by strategically publishing propaganda that benefits their position in the conflict. I principally expect rebel groups to do this in two ways. First, I expect rebels to misrepresent their capabilities in their propaganda. Understanding the relative distribution of power within the context of a civil war is important to civilians, as they use it to predict possible settlements and to gauge the credibility of threats to their personal safety. However, beyond reports of possibly sporadic fighting and publicly reported rebel losses, civilians are unable to accurately measure rebel capabilities and struggle to gauge how they compare to the government's strength. Claims they rebels make regarding their organization, including the number of fighters and their armaments, can consequently be effective at changing public perceptions of their strength. I argue civilians update their perceptions as they see and hear 'evidence' of rebel power.

Second, I argue rebels use propaganda to increase public support through emotional and rhetorical appeals that target their audience's core identity. In particular, I expect messaging frames that validate social and political grievances relevant to the conflict to be effective at generating sympathy or increasing support. These sorts of appeals can demonstrate a shared identity and create excitement or support for a rebel's political platform. Indeed, media provides rebel groups the ability to differentiate their political aspirations from the government's and promote the benefits of supporting their bid for political power.

Rebel groups routinely employ propaganda to make appeals regarding these two topics. For example, rebels commonly use official media to not only explain the purpose and intent of their use of violence, but also to justify it using frames that are likely to resonate among their audience. Messages regarding martyrdom that are promoted by Islamist groups exemplify this dynamic. Honoring their deceased fighters as martyrs engages the public in a practice that implicitly recognizes their fight against the government as not only spiritual, but existential. This process can play an important role in cultivating public sympathy.

It is not surprising that rebel-produced media is consumed widely by civilians during conflict. Again, civil conflicts are political environments in flux and civilians, at an information disadvantage, seek data about the groups fighting for power. I expect rebel groups to intentionally spread and promote their media and civilians to consume it in an effort to inform themselves about events vital to their country's future. More so, statements by rebel groups regarding power and capabilities become stories in and of themselves and are widely consumed, regardless of a civilian's personal ideology. Of course, countries that experience conflict commonly also have heavy restrictions on media outlets, possibly for years or decades before fighting began. Governments that are fighting rebel groups also have an incentive to limit or censor the spread of rebel media. However, during conflict, the costs of subverting these restrictions on media is typically relatively low. While governments can reasonably enforce laws preventing outlawed political speech on the radio and

in print publications during times of peace, doing so during war is much harder and rebel groups will work to facilitate the consumption of their media. For example, radio towers can transmit from areas that are under the rebel's control and print publications are easy to manufacture and spread without the government's knowledge or approval, particularly during conflict.

I derive two testable hypotheses from this theoretical logic. First, I expect that, due to civilian information disadvantage and the ability of rebel group's to misrepresent their capabilities in propaganda, exposure to rebel propaganda increases an individual's perceptions of a rebel group's strength. Second, I expect exposure to propaganda to also increase an individual's support for negotiations between the rebels and the government. This is both because of the group's ability to misrepresent their strength, but also because identity appeals embedded in propaganda are likely to increase an individual's sympathy for a rebel group and their political platform.

Hypothesis 1 *Exposure to rebel propaganda increases an individual's perceptions of a rebel group's strength.*

Hypothesis 2 *Exposure to rebel propaganda increases an individual's sympathy for a rebel group.*

4 Empirical Approach

I test my hypothesis regarding the relationship between rebel propaganda and civilian attitudes by examining the effect of exposure to the Taliban's official radio channel *Voice of Sharia*. Testing this sort of relationship is difficult because it is unclear whether correlation between support for a rebel group and consumption of its propaganda is due to pre-exposure feelings or the effect of media. In order to identify an effect in the presence of this endogenous relationship, I exploit the plausibly random introduction of the Taliban's radio station *Voice of Sharia* in the Kabul area during May 2018. This came after about

two decades of the channel being unavailable in the area. No specific event, battlefield victory, or political development appeared to precipitate the reintroduction of the station and the sudden availability of its propaganda. I therefore treat its timing as plausibly random.

The North Atlantic Treaty Organization (NATO) happened to field two waves of their Afghanistan Nationwide Quarterly Assessment Research (ANQAR) survey surrounding this event, one directly before and one directly after.⁵ They fielded wave 39 of the national quarterly survey during February-March and wave 40 during towards the end of May. The Taliban happened to start their broadcast in Kabul on May 5. I exploit these series of events, which produce survey data from two periods (pre and post radio broadcast) and among two groups (radio listeners and non-listeners), to identify the effect of the Taliban's propaganda on civilian attitudes. I specifically use difference-in-differences (DiD) to estimate an effect and examine survey respondents exclusively in the Kabul area due to the radio broadcast's sudden introduction there. I provide greater detail concerning the empirical approach in the remainder of this section.

4.1 Study Context

Afghanistan provides an excellent environment to explore the effect of rebel propaganda on civilian attitudes for two reasons. First, Afghans overwhelmingly rely on radio as a news source. Indeed, 70% of Afghans report using the radio to obtain information.⁶ During the ANQAR waves analyzed in this study, 50% of respondents in Kabul - the area I analyze - provided a radio station when asked to state their favorite station if they listen to the radio. Perhaps because of this, the Taliban employ this medium to spread their propaganda. They operate a network of radio towers that broadcast their official station throughout the country. However, after the Taliban's tower in Kabul was dismantled in the early 2000's, individuals in the area could not receive their programming. As such, because radio is

⁵I thank the Combating Terrorism Center at the United States Military Academy in West Point for access to the ANQAR data along with the team at NATO that manages the data.

⁶Asia Foundation Survey of the Afghan People Dataset, 2019

such an important medium for information and because of its long absence in Kabul, this context consequently allows testing the effect of the Taliban's renewed propaganda efforts in the area on the civilian population.

Second, there is relatively little internet penetration in the country. It ranks in the bottom 20 of internet users by population among all countries.⁷ A great deal of Afghans are illiterate and do not read print media as well. The World Bank reports that only 43% of Afghans over the age of 15 are able to read.⁸ These factors decrease the likelihood that individuals are exposed to information beyond what they hear on the radio. It simplifies measurement issues related to rebel groups delivering propaganda across multiple mediums, such as newspapers, radio, and a television station. This is a common feature of civil conflicts across the globe. Instead, possibly due to the characteristics of their local audience, the Taliban largely focus their domestic media efforts on their official radio station (Voice of Sharia). This is further compounded by the group's extremely conservative religious beliefs, which led them to ban television entirely when they controlled the country from 1996-2001.

4.2 Measuring Attitudes Towards the Taliban

I measure support for the Taliban using survey responses taken from the the North Atlantic Treaty Organization's Afghanistan Nationwide Quarterly Assessment Research (ANQAR) survey. I analyze waves 39 and 40, which were fielded by the Afghan Center for Socio-Economic and Opinion Research (ACSOR). ACSOR employs over 1,000 Afghans and conducts face-to-face interviews when fielding the ANQAR survey. The ANQAR data is widely used by units within NATO along with its members to understand public opinion, social issues, and demographics in Afghanistan, particularly as they related to security concerns. The survey includes a battery of demographic controls along with questions that deal with

⁷https://data.worldbank.org/indicator/IT.NET.USER.ZS?most_recent_value_desc=false

⁸<https://data.worldbank.org/indicator/SE.ADT.LITR.ZS?locations=AF>

social trust, political positions, media access, security issues, along with a number of other topics. It also asks a range of demographic and social questions, such as the respondent's education, language of choice, family size, etc. Two questions deal directly with an individual's opinion of the Taliban:

1. *Over the past 6 months, do you think that the Taliban have grown stronger, grown weaker, or remained the same?*
2. *Should the Government of Afghanistan negotiate with the Taliban?*

These questions directly address respondents' opinions about the group itself (are they getting stronger?) and about their position in the political fabric of the country (should the government negotiate with them?). These questions consequently capture some of the broad dynamics of support regarding civilian-nonstate relationships about which extant research theorizes. I expect exposure to propaganda to increase positivity towards the Taliban on both of these dimensions. Both questions have three possible outcomes. The first question allows individuals to respond with *grown stronger, grown weaker, or remained the same* and the second question regarding negotiations allows *definitely not negotiate, maybe negotiate, should definitely negotiate*. I analyze these outcomes as both continuous and dichotomous measures (where grown strong or should definitely negotiate = 1) and the results are consistent.

Of course, asking someone in Afghanistan about their support for the Taliban remains sensitive. Using these questions should produce a conservative and downward-biased estimate of support for the Taliban because they *directly* inquire about the group. This is beneficial for my analysis. Respondents in Kabul are likely to feel expressing support or endorsing the Taliban is undesirable. This makes it *less* likely for me to find an effect that supports the stated hypothesis.

4.3 Measuring Propaganda Exposure

The Taliban began broadcasting their radio in the Kabul area for the first time in almost two decades on May 5, 2018. The group uses the Voice of Sharia station to communicate news, religious decrees, and speeches by its leaders. It was the group's primary mouthpiece between 1996-2001 when they governed the country, as the Taliban religiously opposes forms of media like television. However, when the United States invaded in 2001, they immediately bombed the towers that broadcast the signal and temporarily halted Voice of Sharia's operations. However, through renovations and aggressively capturing other towers, the group put the program back in place. This appears particularly to be the case over the last five years or so. The radio program is currently used to frame the group's actions and share news from the Taliban's perspective. It also promotes the Taliban's radical version of Islam.

I determine possible exposure to this broadcast in Kabul using information from the ANQAR survey. While no question asks whether an individual began listening to the Taliban's station or whether they had a close friend or family member that did, a question does enable measuring whether they listen to the radio more broadly:

- *What source/Where from do you get news and information about what is going on?*

Enumerators recorded that respondents answered this question with a variety of sources, such as the television or a newspaper. If the respondent mentioned 'radio' while answering this question, I categorize the individual as being in the treatment group because they actively listen to the radio and suddenly had the opportunity to tune into *Voice of Sharia*. Of course, simply listening to the radio does not necessarily suggest the individual listened to the Taliban's signal. However, the reintroduction of the broadcast in Kabul became a major topic of conversation and it is likely many people that listen to the radio tuned into the broadcast. Since ANQAR was fielded in the weeks following the start of the signal, it

is also likely that the station’s messaging was fresh in people’s mind during the survey. Beyond that, this liberal categorization of the treatment group creates possible bias that makes it *harder* to detect an effect in the direction of the hypothesis. This is because it possibly places individuals that are actually in the control into the treatment condition. That is, individuals that listen to the radio, but exclusively to the BBC or local channels, are possibly analyzed as if they were treated when in reality they were not exposed to the broadcast.

I visualize the number of respondents across days in each wave of the ANQAR survey that listen/don’t listen to the radio in figure 1. The day the Taliban started their broadcast is marked with a dotted line. Individuals that reported using the radio to get news and information are shaded teal while those that did not are shaded red. The proportions are roughly the same between the two waves.

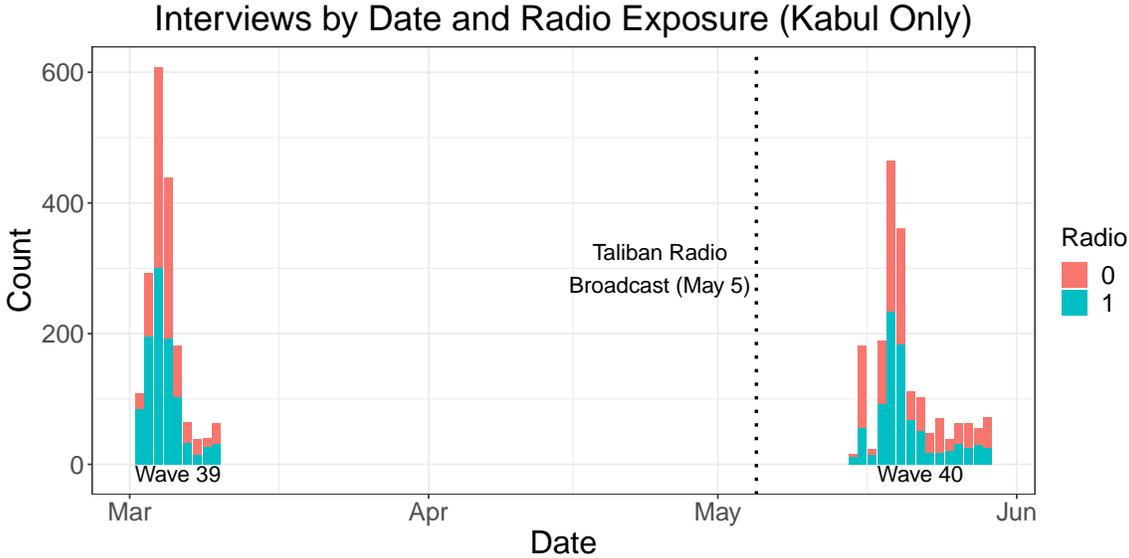


Figure 1: The figure displays the number of respondents in the waves 39 and 40 of the ANQAR survey that reported they do/do not use the radio to get news and information. The day the Taliban started their broadcast is marked with a dotted line.

Did all individuals that listen to the radio in Kabul have the *opportunity* to listen to the broadcast? While the exact location of the tower is unknown, the signal is reportedly

strong and blankets the city.⁹ I verify this by estimating the approximate extent of the tower's propagation to ensure that the signal likely covered the entire city and that all residents had the ability to receive it. To do this, I use the Terrain Analysis Package (TAP) terrestrial radio frequency propagation software.¹⁰ TAP is used by organizations such as the United States Army, United States Navy, Russian Navy, and United Nations Peacekeeping Missions across Africa to measure the extent and strength of radio and cellular broadcasts.

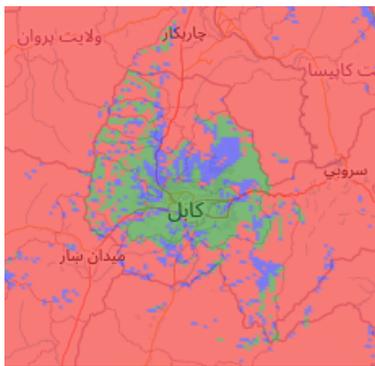
Using the TAP software, I employ the Longley-Rice model, an irregular terrain model, to estimate the propagation of the Taliban's radio broadcast in Kabul (Longley, A.G. Rice 1968). The model employs information regarding a radio tower, such as its height and power, and the surrounding geography to estimate the geographic extent of its signal. It is the standard for this type of application and commonly used in social science studies examining the extent of radio broadcasts (Conroy-Krutz 2018). I use FMList.com, a global database of radio stations maintained by experts, to collect available information regarding the tower broadcasting the signal. Other studies that analyze the effect of exposure to radio also rely on FMList, such as Conroy-Krutz (2018).

Due to the the obvious covert nature of the enterprise, most of the exact details of the tower, its height and power, that is broadcasting are unknown. However, these details have *relatively* little impact the propagation of a radio frequency in space. Instead, dramatic geographic features are the main determinant of a signal's reach when dealing with towers roughly the size of the Taliban's. Line of sight is consequently one of the best predictors of radio propagation, particularly in areas like Kabul. It lies in a valley so covering the entirety of the urban area is relatively straightforward for most radio broadcasts. Despite this, beyond the exact location, I vary the other necessary variables, power, height, etc, to roughly estimate the extent of the broadcast.

⁹Data provided to me from FMList.com, a global database of radio stations maintained by experts, notes the signal is 'quite strong.'

¹⁰I thank SoftWright for access to this software.

I find the signal very likely covers all of metropolitan Kabul. I visualize the results of one of these signal propagation analyses below in figure 2a. It assumes the tower is five meters high and uses the Longley-Rice model. The signal reaches areas shaded blue or green (which represent the ability to send/receive or just receive respectively), but areas shaded red do not. Note that the signal easily reaches the entirety of the valley that Kabul lies in, but the mountains surrounding the city prevent its reach further out. I provide an image of metropolitan Kabul and its road network in Figure 2b taken from Google Maps to enable comparing the extent of the broadcast to the areas inhabited by residents. The scale of the two figures is not the same, but demonstrates the signal likely reaches the entirety of the city's limits.



(a) The approximate extent of the Taliban's broadcast



(b) Metropolitan Kabul

Figure 2: Panel a visualizes the approximate reach of the Taliban's radio tower in Kabul given that it is five meters high using the Longley-Rice irregular terrain model. Panel b provides a road map of metropolitan Kabul to serve as a reference for the extent of the signal. Note the scale is not exactly the same.

4.4 Control Variables

I control for a number of variables to mitigate the possibility of making invalid inferences. The results are consistent with/without their inclusion into the model. I control for respondents' income with a continuous variable with six values. ANQAR asks respondents if their family's monthly income falls into one of these categories, which ranges from '5,000

Afs or less [approximately 55 USD] or less’ to ‘More than 40,000 Afs [approximately 520 USD]’. I also control for ethnicity, as that can be a predictor of attitudes towards the Taliban and the country’s conflict. I use a categorical variable with three values: Tajik, Pashtun, and Other. Beyond that, I include a variable that captures the educational attainment of a respondent. This categorical variable has three levels: ‘No formal schooling,’ ‘1st to 12th,’ and ‘University or Higher.’ I also control for age and its square along with the respondent’s gender. The survey provides ‘Male’ and ‘Female’ as the only two responses to a question regarding gender. Finally, I also control for the number of recent terror attacks by including the sum of attacks over the past 180 days. I use the Global Terrorism Database to generate this variable.

4.5 Model

Testing the relationship between attitudes and exposure to media or propaganda is difficult. Observational studies are often plagued by endogeneity and selection effects, as the choice to consume content, given its availability, is generally nonrandom. Data availability issues further compound this issue in the context of civil conflict studies. Indeed, measuring attitudes and plausibly random exposure to propaganda in the presence of political violence is a difficult task.

As discussed, I exploit the serendipitous timing of the introduction of the Taliban’s radio station in Kabul between two waves of the ANQAR survey to identify its effect on civilian attitudes. Wave 39 occurred between February 25 - March 9 while wave 40 was implemented between May 15 - May 29. The Taliban started broadcasting their station in Kabul on May 5. I visualize these events in figure 3. These events produce survey data from two periods (pre and post the Taliban’s plausibly random radio broadcast) for two different groups (radio listeners and non-listeners). This is consequently an ideal case for difference-in-differences (DiD). This quasi-experimental design compares outcomes between two groups over time, one that received some treatment and another that did

not.

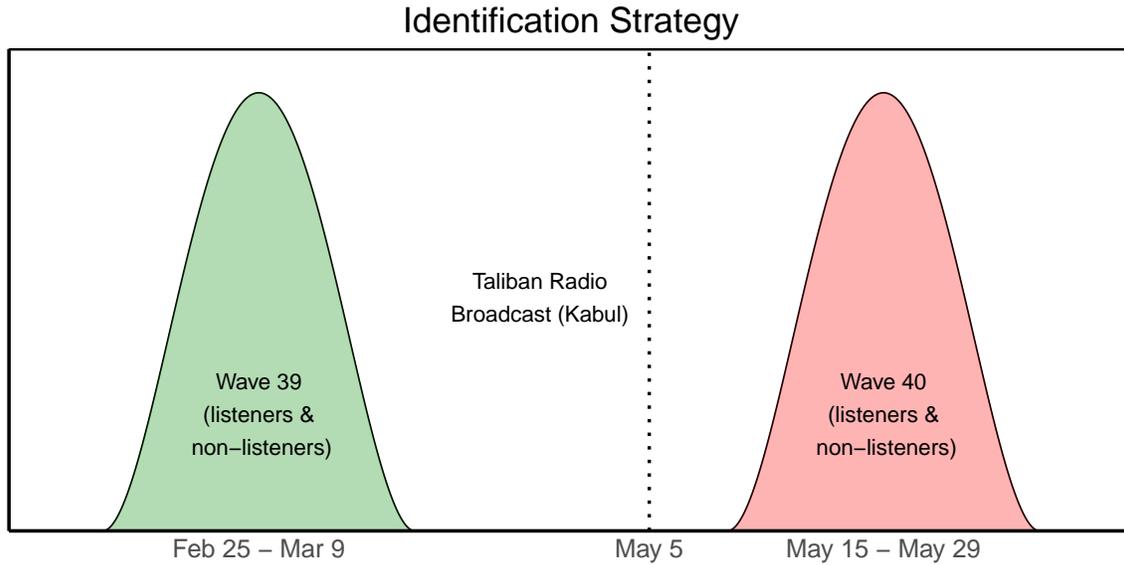


Figure 3: The figure displays the timing of the two ANQAR survey waves used in the main analysis along with the dates they were fielded and the timing of the Taliban introducing their radio broadcast in Kabul.

I provide the equation used in the main analysis below. T_g is a dichotomous variable indicating whether an observation is a part of the treated group or not. As such, $T_g = 1$ indicates an individual with survey responses that suggest they listen to the radio. P_t indicates the two periods of the study, pre and post the treatment of the Taliban's radio broadcast in Kabul. This variable consequently records whether an individual was part of either wave 39 and 40 of the ANQAR survey. $P_t = 1$ indicates that the individual was surveyed in Kabul during wave 40. β_1 is consequently the effect being in the two different groups and β_2 captures the effect of time. β_3 is coefficient on the product of these variables, or the DiD estimate of the treatment effect. ζ_4 is a vector of coefficients on the control variables in X_{gt} . As detailed above, these include income, ethnicity, education, age, age², gender, and the number of terror attacks over the past 180 days.

$$Y_{gt} = \beta_0 + \beta_1 \cdot T_g + \beta_2 \cdot P_t + \beta_3 \cdot (T_g \cdot P_t) + \zeta_4 \cdot X_{gt} + \varepsilon_{gt}$$

I adjust for the probability weights and account for the survey’s primary sampling units and stratification in the model. I also analyze the survey responses from Kabul as a sub-population of the overall waves’ responses. This calculates the standard errors appropriately given that only a part of the overall survey sample is included. However, the results are entirely consistent when no adjustment is made and all responses outside of Kabul are ignored in the analysis.

I estimate a series of models to test my hypothesis. As discussed, I analyze two outcomes. First, a survey question asking respondents whether they think the Taliban is getting stronger. Second, a question asking respondents whether they think the government should negotiate with the Taliban. Both of these questions have three possible responses: *grown stronger*, *grown weaker*, or *remained the same* and *definitely not negotiate*, *maybe negotiate*, *should definitely negotiate* respectively. I analyze these outcomes as both continuous and dichotomous variables. I dichotomize both such that the two lowest levels are in the reference category and the highest category (*grown stronger* and *should definitely negotiate* are in the other category. This makes sense, as these dichotomized variables measure whether the surveyed individual responded strictly positively towards the Taliban regarding these two topics. I analyze these dichotomous outcomes with both linear probability models and logistic regression¹¹ and their continuous counterparts with linear regression.

4.6 Results

I provide the regression results that use the survey question that asked respondents whether they think the Taliban is getting stronger in Table 1. The differences-in-difference estimator is the product of *Post-Broadcast* and *Radio*. Model 1 reports the linear model results with the dichotomous outcome (not stronger or neutral, stronger), model 2 reports the

¹¹Some complications arise when estimating nonlinear DiD models (Athey and Imbens 2006). However, I provide these results for completeness.

logit model results with the same outcome, and model 3 reports the results using a linear model with the outcome treated as a continuous variable. The coefficient on the DiD estimator is positive and significant in all models. This finding supports my first hypothesis, which predicted exposure to rebel propaganda increases perceptions of a group's capabilities. Substantively, focusing on model 1, the introduction of *Voice of Sharia* is associated with a 9.7% higher probability that someone reported the Taliban is getting stronger instead of staying the same or weaker. Given that this increase is attributed to the effect of their radio program, and not on costly battlefield activity, this is substantial and meaningful.

The second outcome I analyze is a survey question from ANQAR that asked whether the government should negotiate with the Taliban. This question also had three possibilities and models 1 and 2 dichotomize them in the same manner as the first question (should not negotiate or maybe negotiate, definitely negotiate). Again, the difference-in-differences estimator is the product of *Post-Broadcast* and *Radio*. The coefficient on the DiD estimator is again positive and significant across the models. This suggests the introduction of the Taliban's official radio station improved public opinion towards the prospect of the group negotiating with the government and supports my second hypothesis. I argue this is due to strategic appeals made by the Taliban in their radio programming. Model 4 demonstrates that respondents were almost 4% more likely to think the government should negotiate after the tower's broadcast started. This effect is significant, but has a relatively lower magnitude, in model 6 which uses a continuous outcome.

Table 1: Is the Taliban Getting Stronger?

Outcome: Model:	(1) Dichotomous OLS	(2) Dichotomous Logit	(3) Continuous OLS
Post-Broadcast	0.186*** (13.38)	0.766*** (13.04)	0.312*** (5.16)
Radio	-0.0279*** (-5.42)	-0.114*** (-5.85)	-0.0537*** (-5.25)
DiD (Post-Broadcast × Radio)	0.0972*** (80.35)	0.414*** (80.17)	0.165*** (139.92)
Age	-0.000400 (-0.21)	-0.00191 (-0.24)	-0.000227 (-0.08)
Age ²	0.00000672 (0.34)	0.0000306 (0.37)	0.00000751 (0.24)
Ethnicity - Pashtun	-0.0389* (-1.75)	-0.167* (-1.77)	-0.0657 (-1.15)
Ethnicity - Other	0.0501*** (3.53)	0.214*** (3.19)	0.0878** (2.13)
Education - 1st to 6th	0.0189 (1.55)	0.0802 (1.58)	0.00517 (0.39)
Education - 7th to 12th	0.0145 (0.48)	0.0623 (0.47)	-0.0278 (-0.51)
Education - Uni or Higher	0.0590** (2.76)	0.255** (2.61)	0.0177 (0.41)
Income	0.0115* (1.79)	0.0494* (1.75)	0.0226*** (3.15)
Gender - Female	0.107*** (124.71)	0.455*** (89.00)	0.200*** (94.02)
Terror Attacks _{sum(180 days)}	-0.0125 (-1.37)	-0.0531 (-1.37)	-0.0253 (-0.64)
Constant	0.851* (1.89)	1.504 (0.78)	3.050* (1.73)
Observations	3,487	3,487	3,487

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 2: Should the Government Negotiate with the Taliban?

Outcome: Model:	(4) Dichotomous OLS	(5) Dichotomous Logit	(6) Continuous OLS
Post-Broadcast	0.0750*** (8.71)	0.319*** (8.50)	0.137*** (4.65)
Radio	0.0418*** (15.45)	0.178*** (15.63)	0.0767*** (185.70)
DiD (Post-Broadcast × Radio)	0.0395*** (24.59)	0.155*** (23.70)	0.0132*** (6.18)
Age	-0.000377 (-0.43)	-0.00145 (-0.39)	-0.00239 (-0.96)
Age ²	0.0000138*** (3.10)	0.0000558*** (2.97)	0.0000368* (1.80)
Ethnicity - Pashtun	0.0906*** (4.65)	0.373*** (4.59)	0.124*** (5.52)
Ethnicity - Other	-0.0876*** (-4.99)	-0.377*** (-4.53)	-0.141*** (-6.65)
Education - 1st to 6th	-0.0181** (-2.14)	-0.0772** (-2.11)	0.0125 (0.88)
Education - 7th to 12th	-0.0127*** (-2.85)	-0.0545*** (-2.93)	-0.0150*** (-36.07)
Education - Uni or Higher	0.0398** (2.19)	0.164** (2.21)	0.0497 (1.51)
Income	0.00340 (1.10)	0.0146 (1.10)	0.00194 (0.30)
Gender - Female	-0.0963*** (-76.07)	-0.402*** (-49.39)	-0.201*** (-23.12)
Terror Attacks _{sum(180 days)}	-0.0261*** (-4.16)	-0.109*** (-4.05)	-0.0513** (-2.62)
Constant	1.511*** (5.35)	4.223*** (3.49)	4.441*** (5.20)
Observations	3,536	3,536	3,536

t statistics in parentheses

* p<0.10, ** p<0.05, *** p<0.01

4.7 Conclusion

Civilian attitudes are essential to understanding civil conflict. Existing theories regarding how they develop contend civilians are concerned about which actor can give them what and when. However, I argue the way in which civilians do this is underspecified. My theory suggests propaganda can be a key method for rebels to propagate information regarding their political platform and their capabilities to achieve it. This is because civilians suffer from an information disadvantage and are unable to accurately measure rebel strength and consume complete dispassionate reporting about events in the country. Because of this, rebels often misrepresent their position and convey rhetorical identity appeals. This can effectively increase positivity towards rebel groups and bolster their position relative to the government.

I test these claims by exploiting the sudden introduction of the Taliban's official radio station in Afghanistan during May 2018. Using survey waves fielded by the Afghanistan Nationwide Quarterly Assessment Research (NATO) program, I estimate a difference-in-differences model to assess the broadcast's effect on civilian attitudes. The results demonstrate possible exposure to rebel propaganda can increase sympathy for a group and change perceptions of their capabilities. The probability that civilians with radios thought the Taliban was getting stronger and that the government should negotiate with the group both increased after the introduction of the *Voice of Sharia* station in Kabul.

These findings suggest future research should further explore the way in which civilians collect and process information during conflict. It is possible that assuming civilians are capable of accurately gauging a rebel group's 'actual' capabilities and are aware of their past actions is overly simplistic. Again, existing research regarding civilian attitudes during conflict ignores the role of propaganda and conflicting information. Specific areas of future study might include testing the effect of counter-propaganda. Can displays of strength that misrepresent a group's strength or emotional rhetorical appeals during conflict be discounted with counter-messaging? Further, micro-level studies are neces-

sary to understand the media consumption of individuals in conflict and how they balance that information with local rumors or gossip. Finally, disaggregating different types of messaging is also an important avenue of future research. Understanding what types of misinformation are effective with in the context of civil conflict will aid our understanding of civilian attitude formation and assist practitioners in fighting the negative effects on the ground.

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