Can Appeals for Peace Promote Tolerance and Mitigate Support for Extremism? Evidence from an Experiment with Adolescents in Burkina Faso

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Abstract
Recent efforts to improve attitudes toward outgroups and reduce support for extremists in violent settings report mixed results. Donors and aid organizations have spent millions of dollars to amplify the voices of moderate religious figures to counter violent extremism in West Africa, the Middle East, and South Asia. Despite this investment, we know little about whether such messaging persuades the primary recruits of violent extremist organizations: at-risk youth in fragile settings. In this paper, we consider whether pro-peace religious messaging can promote social cohesion among school-age respondents in Burkina Faso. Using a survey experiment, we find little evidence that such messages affect reported attitudes or behaviors toward religious extremism and find instead that it can have the unintended effect of increasing intolerance toward ethnic others. Our findings carry lessons about the inadvertent priming of ethnic identities that can result in a backlash effect among certain societal segments.

Keywords: violent extremism; religion; Burkina Faso; Islam; experiments

Introduction
Can pro-peace messaging and appeals for tolerance improve attitudes and behaviors toward religious and ethnic outgroups and reduce support for violent extremism? We consider this question in the context of increasing Islamist influence among disaffected youth in conflict zones and fragile settings. To attract new adherents, many Islamist armed groups present their violent tactics as the solution to...
longstanding injustice and social exclusion. Such groups exploit pre-existing divisions, deepening antagonism among social groups. Increasing tolerance and rebuilding social cohesion are seen as necessary correctives in order to facilitate long-term peace and stability. To this end, domestic governments and foreign donors have funded projects to rebuild trust and tolerance toward out-groups in countries as diverse as Iraq, Nigeria, Afghanistan, and Liberia (Scacco and Warren 2018; Mousa 2020; Hartman, Blair, and Blattman 2021). However, evidence that these programs achieve their desired results is mixed, particularly for populations most vulnerable to radicalization (Findley 2018).

Drawing upon recent studies emphasizing the importance of religious messaging, this article tests whether religious appeals for peace shift at-risk youths’ attitudes and behavior toward out-groups and violent extremism in a setting with a growing Islamist extremist insurgency (McClendon and Riedl 2015; Masoud, Jamal, and Nugent 2016; Condra, Isaqzadeh, and Linardi 2019). International collaboration with local, moderate religious leaders has become an increasingly popular strategy to disseminate appeals for tolerance and counteract extremist narratives (Blair et al. 2021). We report the results of a pre-registered survey experiment, fielded in twelve schools located in rural and periurban Burkina Faso, in which we randomly assigned respondents to listen to audio excerpts of a sermon delivered by a nationally recognized imam that invokes Islamic teachings and appeals to a shared Burkinabé identity.

We find that participants’ self-reported ethnic identity conditions their responses to pro-peace messages. Although we anticipated that the treatment would have a uniformly positive effect on pro-social attitudes and behaviors, our results run contrary to our theoretical expectations. The treatments did not meaningfully shift most respondents’ support for religious extremism, attitudes toward religious out-groups, or civic participation. However, we find that appeals intended to promote peaceful coexistence reduced tolerance and trust of other ethnic groups. Further analysis shows that this result was driven by respondents who identify as Mossi, the country’s dominant ethnic group and one more likely to be at the receiving end of Islamist violence. Drawing upon our field research in Burkina Faso, we attribute the negative treatment effects to a backlash among this ethnic community.

Our findings suggest that pro-peace messaging may unintentionally prime ethnic identity in settings where religious extremism is associated with particular ethnic groups. This study thus contributes to a growing literature which raises questions about the effectiveness of commonly used policy measures aimed at increasing social cohesion and reducing violence, particularly when international interventions fail to tailor programs to local contexts (Autesserre 2015; Barma 2016; Swedlund 2017; Campbell 2018).

**Theoretical motivation**

Where armed groups invoke religious doctrine to justify violence and recruit supporters, policymakers increasingly amplify the voices of moderate religious leaders as credible sources of pro-peace messaging. Many of these interventions draw on
research that finds that religious leaders can encourage pro-social attitudes and behaviors by the nature of their divinely ordained authority, by promising divine rewards, or by drawing on scripture to persuade the faithful (Masoud, Jamal, and Nugent 2016; Condra, Isaqzadeh, and Linardi 2019). Spreading the messages shared by these leaders is part of a broader strategy to counter violent extremism by winning the hearts and minds of potential recruits (Berman, Felter, and Shapiro 2020). These, and other, international interventions seek to increase tolerance of out-groups and promote social cohesion to counter the hardening of cleavages and prejudice that result from sustained inter-group violence (Scacco and Warren 2018).

In conflict settings that increase the salience of specific social identities, priming cross-cutting cleavages may also provide another mechanism to bring together in-group and out-group members. Emphasizing superordinate identities, such as a shared religion or national identity to which both the in-group and out-group belong, has been shown to positively alter attitudes (Charnysh, Lucas, and Singh 2015; Siegel and Badaan 2020; Kalin and Siddiqui 2020).

However, there are many reasons to be cautious about the generalizability of these findings. While moderate religious leaders may theoretically be seen as impartial, in practice many such actors are politically engaged and may be perceived as such, undermining their credibility (Nomikos 2022). Alternatively, religious leaders may be persuasive because they are part of dense, local networks; their messages may lose efficacy when removed from their context. Similarly, religious sermons facilitate behavioral change due, in part, to the collective social setting in which they are delivered (McClendon and Riedl 2015). Even where studies have demonstrated that religious messages shift attitudes, recipients were persuaded only in some domains (Masoud, Jamal, and Nugent 2016). Moreover, extremist rhetoric may be convincing primarily because it is seen as challenging the status quo or because it is often accompanied by material inducements (Mitts, Phillips, and Walter forthcoming).

Finally, it is unclear whether these findings apply to adolescents, a primary target for recruitment by Islamist groups (Bizina and Gray 2014). Evidence across Africa suggests that armed groups recruit youth who feel left behind by society and locked out of alternative opportunities (Blattman 2009; Debos 2011; Trisko Darden 2019), relying on family or social networks as well as extensive propaganda and indoctrination campaigns to do so (Beber and Blattman 2013). For these youth, supporting a militant cause can provide a sense of purpose and belonging, offer economic stability, or strengthen group-based identity. Separate from joining militant groups, both direct exposure to violence and indirect exposure – growing up in violent environs, having family members and friends threatened by violence – affect young people’s attitudes and behavior, such as their willingness to engage in risk-taking behavior (Pat-Horenczyk et al. 2007; Blattman 2009).

Which types of development programs are most effective among adolescents in such settings remains an open question. An initiative focused on providing secondary education and civic engagement opportunities to Somali youth in Somaliland, for example, found mixed results on youth support for extremism (Trisko Darden 2019). Whether pro-peace messaging, and specifically religious authoritative appeals, affect adolescents is even more unclear. Some studies have found that community members perceived as credible can prevent youth radicalization (Norman and Mikhael
Another study of youth in Ghana, however, found that religious organizations and churches, particularly in their role as messengers of theology, are not “significant socialization agents” in “informing notions of citizenship” and influencing political engagement (Kuperus and Asante 2021). Whether such findings travel to settings with a growing Islamist insurgency is a question we take up here.

Research context
To test whether pro-peace appeals from religious leaders can counter support for violent extremism and promote intergroup tolerance, we fielded a survey experiment in Burkina Faso, a landlocked West African country of about 21 million people and the site of ongoing violence perpetrated by multiple Islamist extremist groups. Attacks by religious extremist groups have killed almost 2,500 individuals and displaced 500,000 others since January 2016 (see Figure 1). These groups have proliferated in the context of a broader regional Islamic revival that has resulted in a “democratization of religious interpretation” centered on modern communication methods (Madore 2013; Idrissa 2017). Religious shows are regularly broadcast on the radio and audio recordings of sermons circulate widely. While this provides extremist preachers a podium through which to spread their messages, it also presents opportunities for moderate leaders’ counter-programming.

Islamist extremist groups have capitalized on longstanding grievances to recruit members of marginalized ethnic communities, primarily the Fulani, to mobilize against a central government dominated by the Mossi ethnic group. As Human Rights Watch notes, this situation has led to “a dramatic and dangerous increase in ethnic tension” (2019). The Mossi suffer disproportionately from armed Islamist violence, and state security forces target Fulani civilians for their perceived support of militants. Many militants operate in Fulani-inhabited areas, entrenching the perception that this group is to blame for shattering decades of perceived harmony and peaceful coexistence. Assumptions that all Burkinabé citizens share this idealized view of the past have influenced local and international policy response.

Research design
We administered an in-person survey experiment with 1,457 students in 12 schools in February–March 2020. Given the age of our sample and the instability of the context, we strove to minimize any potential harm to participants. Following recently developed best practices for experiments in Africa (Davis 2020), we collaborated with local stakeholders to develop and implement the study. This collaboration allowed us to secure approvals from school principals and teachers and consent from parents before students were approached to participate. In an initial visit to Ouagadougou in March 2019, we also conducted interviews with academics, religious leaders, security

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1Fatalities data from the Armed Conflict Location & Event Data Project (Raleigh et al. 2010) and displacement data from the Internal Displacement Monitoring Centre.
2The data along with the replication code are available on the Journal of Experimental Political Science dataverse (Nomikos, Grossman and Siddiqui 2021).
3See Appendix B.2 for expanded discussion of ethics.
analysts, and NGOs to assess the ethics and feasibility of studying radicalization and violent extremism in a quickly changing context. These interviews helped us ensure that our study design was both locally relevant and culturally appropriate.

The survey was administered in partnership with a local nongovernmental organization whose enumerators conducted face-to-face interviews with each respondent. We piloted the survey in January 2020 to further test the appropriateness and validity of the question language and approaches to measurement. All participants consented to be a part of the study, and only one participant refused to complete all parts of the questionnaire. We attribute the high response rate to the support of the local communities, principals, teachers, and parents.4

We sampled schools from two regions, Ouagadougou and Kenedougou. Ouagadougou, the country’s capital, presents a peri-urban environment where youth participate in broad social networks that can be used for recruitment, while Kenedougou offers a rural context where extremists can leverage pre-existing grievances to recruit based on social identity. All students in the sample were enrolled in either sixth or seventh grade, with ages ranging from 12 to 18 and a median age of 14.

Respondents were randomly assigned to a control condition or one of four treatment conditions in which enumerators played an audio recording of Alidou Ilboudo, a prominent Burkinabé imam and radio host, speaking in 2019 to

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4For nonresponse, see Appendix C.3.
encourage intergroup tolerance. Enumerators asked respondents to listen closely to the speech prior to playing the recording; respondents could then ask to listen again or pose clarifying questions. As such, we consider this a stronger treatment than if the excerpt had simply been read aloud by the enumerator or if the respondents read it themselves in an online survey; prior studies have detected statistically significant effects using both of these approaches.

We divide our outcomes into three categories. First, we measured respondents’ attitudes toward out-groups along two dimensions: their willingness to have other ethnic or religious groups as neighbors and their level of trust in others. Second, we asked respondents direct questions about their support for religious extremism, including whether they thought the use of violence was ever justified, though we acknowledge the possibility that these questions are too extreme to capture the nuances of lower levels of sympathy for extremist groups. Third, a behavioral measure of civic participation at the end of our survey asked respondents to record a brief voice memo to express “support for peace and tolerance in your community” and send it to one of a number of local organizations or authorities.

We estimate the average treatment effect for each outcome with an OLS estimator given by \( Y_i = \beta_0 + \beta_1 Z_i + \epsilon_i \) where \( Y_i \) is binary indicator of whether a given respondent agreed or strongly agreed with a statement about an outgroup, violent extremism, or sent a recorded message. \( Z_i \) is the binary indicator for whether a respondent received the treatment or control. Given the large number of outcomes in which we are interested, we implement a parametric multiple comparison correction of our estimates for robustness (reported in full in Appendix E). We also specify the primary outcome variables in our pre-analysis plan as a design-based corrective for the multiple comparisons problem (Olken 2015; Ofosu and Posner 2021).

**Results**

We summarize the main results of our study in Figure 2. We find no evidence that the pro-peace message had any effect on attitudes about extremism (panel (b)) or the behavioral measure of civic participation (panel (c)). We also find that treatment effects on respondents’ attitudes toward members of religious out-groups were modest in magnitude and statistically indistinguishable from zero. However, we find

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5We randomly varied the speech excerpts provided in the message and whether the respondent was told the identity of the speaker. Respondents were balanced across all treatments (see Appendix C.2), and few differences were found between individual treatment groups (see Appendix D.3). The results discussed in this paper are the pooled treatment effects.

6We were careful not to fabricate a new speech, but rather adopted an existing message intended in its original form to promote peace and tolerance and made at a public gathering.

7We chose these measures primarily to ensure comparability with Afrobarometer and Pew surveys, where these questions are frequently used. See Appendix C.4.

8We also asked respondents about their national identities and attitudes toward foreigners for which we found no treatment effects. We omit these for space considerations but report the results in Appendix D.

9Although answers to each question ranged on a five-point Likert scale we re-coded each outcome as binary for ease of interpretation. See Appendix D.2 for robustness check with other coding.

10We include the preanalysis plan with a discussion of deviations in Appendix F.
that religious appeals toward peace *reduce* tolerance of ethnic others (panel (a)). Compared to the control, the audio of the imam’s speech reduced respondents’ tolerance of members of other ethnic groups as neighbors by 0.037 (95% CI = [−0.080, −0.004]) and respondents’ trust of members of other ethnic groups by 0.065 [−0.128, −0.001]. That respondents exhibited a reduction in tolerance along two different measures of attitudes towards ethnic out-groups suggests that the treatment *did* move respondents – just not in the manner expected.¹¹

We find evidence that the salience of ethnic cleavages in response to religious extremism in Burkina Faso explains these results. We analyze heterogeneous effects by whether our respondents belonged to the dominant Mossi ethnic group or not.¹² Figure 3 reports the treatment effect of the pro-peace message on attitudes toward out-groups, attitudes about extremism, and civic participation by ethnicity.¹³

The results confirm that the Mossi ethnic group, which makes up 34 percent of our sample, largely drives our overall findings. First, as panel (a) of the figure shows, the pro-peace message had a *negative* treatment effect on attitudes toward out-groups among Mossi but not others. Among the Mossi, the treatment reduced tolerance of members of other ethnic groups as neighbors by 0.061 [−0.126, 0.003] and decreased trust of other ethnic groups by 0.169 [−0.277, −0.062].¹⁴ Moreover, whereas the treatment also *reduced* trust of other religious groups among Mossi

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¹¹This result is not robust to multiple comparison corrections (Appendix E.1).

¹²Our preanalysis plan specified analysis of heterogeneous effects by ethnic group (see Appendix F).

¹³Given the religious nature of the treatment, we expected it to have a greater effect among Muslim respondents, which our supplementary analyses, presented in Appendix D.4, confirm. Mossi Muslims in particular appear to drive the effect, but we are unable to draw definitive conclusions because there were few non-Muslim Mossi in our sample ($n = 2$).

¹⁴This estimate is robust to multiple comparison corrections (see Appendix E.2).
by 0.083 \([-0.190, 0.023]\), it increased trust of other religious groups among non-Mossi by 0.054 \([-0.023, 0.132]\).\(^{15}\)

Our analysis is less clear about the effect of pro-peace messaging on attitudes toward extremism and civic activity. As panel (b) shows, we find no evidence that the effect of the treatment on attitudes about extremism vary by ethnicity. However, this may be due to floor and ceiling effects; 90% of the respondents expressed concern about extremism and only 3% said violence could be justified. It is possible that at least some of these responses were driven by social desirability bias. However, given the randomized nature of the treatment, we should not expect this to influence the internal validity of the experiment itself.

Finally, we find some preliminary evidence that Mossi respondents in the treatment group were less likely to engage in pro-peace civic activity than those in the control group. As panel (c) shows, the treatment decreased the willingness of Mossi respondents to record and send a message to governing authorities in support of peace by 0.083 \([-0.174, 0.008]\). By contrast, we find that the treatment increased the willingness of non-Mossi to send a message, although this was not statistically significant at conventional levels. While we caution against drawing too much from these suggestive findings, this heterogeneity is noteworthy given that only a minority of Mossi respondents in any treatment condition were willing to send a message.

**Discussion**

In this section, we explore possible explanations for the null treatment effects observed in attitudes toward extremism or the behavioral measure of civic participation, as well as the negative treatment effects for tolerance and trust of ethnic others, observed particularly among Mossi respondents.

\(^{15}\)We report this result because in some of the model specifications we pre-registered, this result is statistically significant at conventional levels (see Appendix D).
First, although the speech used in the treatments was originally delivered in a communal setting, the audio treatment was delivered individually, which may have blunted its impact. Since people often receive religious messages during collective services, they are most effective when connected to grassroots networks and enhanced by group dynamics. Nonetheless, studies using weaker treatments – enumerators reading a quote aloud to individual respondents – have found meaningful and statistically significant effects on similar outcome measures. We designed the experiment to maximize its external validity by choosing short excerpts to which we asked respondents to listen closely. While our experiment cannot evaluate the effectiveness of sustained interventions, it can shed some light on the potential (in)effectiveness of radio as a medium and of speeches as a format for narratives promoting tolerance among this demographic. Inconsistent reception, poor audio quality, and the myriad distractions of real life make it even less likely that young people listen attentively outside of the research context.

Second, it is possible that the treatments were simply not strong enough to elicit an effect on some outcome measures, or that students did not understand the message. To probe students’ understanding of the speech’s content, we administered a short phone survey to a different sample of 252 students who attend four of the schools in Kenedougou from which our original sample was drawn. Students received the same audio treatments as those in the original sample and then responded to questions that assessed their understanding of the content of the speech. About 85% of the respondents understood that the speech was calling for peace and arguing against the use of violence, and a similar percentage correctly identified terrorism as the overall theme of the speech. These results suggest that the majority of students grasped the primary message of the speech. An open-ended question which asked about their understanding of the intention or purpose of the speech further supports these findings.

Another potential explanation for our null results is that participants simply were not paying attention. However, this is unlikely to account for the results we present here. Given that a vast majority of the respondents in the follow-up, phone survey comprehended the overall content of the treatment, we expect that an even higher percentage in the original, face-to-face survey would have paid attention to the treatment, even if they did not entirely understand its nuances. We instructed our enumerators to repeat any questions should the respondents need them to do so, including cases where respondents were not paying close attention, and to replay the treatment if need be. To document this protocol, we asked enumerators to note if they had any difficulties with any of the respondents. They recorded only 9 out of 1457 respondents as not paying attention during the survey. We drop these respondents in the results presented in the article but include them in supplementary analyses presented in Appendix D.5. We also rerun our analysis without the youngest respondents in our sample since these students might be the least likely to pay attention (see Appendix D.6). Our findings remain robust to either check.

Finally, and most importantly, the robust negative treatment effects we observe among Mossi respondents suggest that pro-peace messaging intended to counter Islamist extremism may have unintended consequences for other salient social

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16The students were similar to our initial Kenedougou sample along most covariates, differing primarily in expressing greater religiosity (see Appendix C.1). We conducted the survey over the phone because of the outbreak of the COVID-19 pandemic.
cleavages. Although the current conflict in Burkina Faso is often framed as a consequence of growing religious extremism in the broader Sahel region, it has explicit ethnic overtones in the local context. To extend influence and gain adherents, extremist groups exploit existing tensions, such as those over access to land, which often follow ethnic lines. Consequently, ethnic groups who are perceived to be closely allied with militant groups, such as Fulani herders, face social stigma and distrust (International Crisis Group 2020). In interviews we conducted in Ouagadougou, interlocutors said that due to the increasing number of terrorist attacks, people treat non-coethnics with suspicion where they would have previously welcomed them.

The speech excerpts that the treatment groups received emphasized the importance of condemning terrorist violence and invoked a shared past wherein ethnic communities lived peacefully together – albeit, in an unequal manner. In so doing, the speech may have inadvertently primed Mossi respondents to recall negative ideas about groups that they blame for terrorist violence. Highlighting how violence has fractured existing social ties or is religiously unacceptable may result in a backlash against those groups perceived as sympathetic toward extremist groups. When majority group members develop stereotypes about the ethnic composition of terrorist groups, these stereotypes facilitate the logical fallacy that if all terrorists are members of a certain minority, all members of that minority support terrorism (Glaeser 2005). These findings resonate with McCauley’s argument that religious and ethnic identity are mobilized in different ways and priming these identities may inspire different priorities (2014).

Conclusion
In this article, we show that pro-peace messaging from religious leaders can have little effect on support for extremism and civic participation among youth in Burkina Faso and in fact may lead to a reduction in tolerance of ethnic out-groups. These findings are more likely to generalize to other ranked ethnic societies, where marginalized ethnic groups may be more susceptible to appeals by extremist groups to counter the status quo. In these contexts, members of marginalized groups may disproportionately align with extremists to seek protection or greater power. In response, dominant groups interpret this alignment as a threat to the existing social and political order and blame marginalized communities for violence. In the Sahel, members of certain ethnic groups are assumed to be terrorists and blamed for violence. For example, across Mali, Burkina Faso, and Niger, extremist groups target Fulani youth for recruitment. This has deepened social divisions and led members of dominant ethnic groups to regard all Fulani individuals with suspicion. These findings are consistent with a growing body of literature that documents how social identity conditions recipient views and behaviors toward foreign aid in fragile settings (Lyall, Shiraito, and Imai 2015; Arriola and Grossman 2021).

Given the increase in violent ethnic reprisals in Burkina Faso in recent years, our findings imply that pro-peace messages should be tailored to the audience they seek to persuade. For the Mossi, who are the least likely to support religious extremism, but who may hold intolerant views toward groups they see as more susceptible to extremism, messages that seek to discourage extremism may instead make peaceful
coexistence more difficult. As such, our results caution against broad, pro-peace messaging campaigns that do not account for variations in social relationships that condition recipients’ interpretation of pro-tolerance messages.

**Supplementary Material.** For supplementary material accompanying this paper visit https://doi.org/10.1017/XPS.2022.1

**Data Availability.** Our pre-analysis plan is available via Evidence in Governance and Politics at https://osf.io/gp78n. The data, code, and any additional materials required to replicate all analyses in this article are available at the Journal of Experimental Political Science Dataverse within the Harvard Dataverse Network, at: https://doi.org/10.7910/DVN/TOBMYV (Nomikos, Grossman, and Siddiqui 2021).

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**Ethics Statement.** The survey received approval from the Institutional Review Board of Washington University in St. Louis (Protocol no. 202001048). Our research adheres to APSA’s Principles and Guidance for Human Subjects Research. More information about ethics is provided in the supplementary appendix B.2.

**Conflicts of Interest.** We report no conflicts of interest. All errors and omissions are our own.

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