

Up for Debate?

Using Radio to Reduce Polarization and Increase Democratic Engagement in Niger

Pre-Analysis Plan

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Abstract

Discussion programs are increasingly common features on radio schedules, and are often produced by actors working to encourage multi-perspective dialogue and improve political engagement in fragile settings. In theory, such programming could capture audience attention through its conflictual, yet inclusive, framing, thereby stimulating engagement. Further, discussion programs might combat polarization, by fostering understanding of alternate viewpoints and demonstrating that political conflicts can be addressed through dialogue. Despite the growing popularity of such programs, evidence about their impact is lacking; evaluations are typically limited to measures of audience size and the public's recognition of programming. This project will seek to identify the impact of two discussion-based programs in Niger—one centered on call-ins and the other on in-studio discussions by experts—through a field experiment utilizing a modified symmetric encouragement design, in which a subset of subjects is regularly incentivized to listen to a call-in program, another subset to an in-studio discussion program broadcast at the same time, and a third group is assigned to a control condition. Subjects' political knowledge, engagement, perceptions of internal efficacy, support for institutions that foster accountability, attitudes towards out-groups, and attitudinal moderation will be measured at a pre-treatment baseline, and again after a six-week encouragement phase. The theorized benefits of discussion programs are especially needed in Niger, which is marked by very low levels of human development; limited public engagement in politics; high levels of ethnic, partisan, and religious polarization; and the territorial presence of violent extremist groups, such as *Boko Haram* and *Jama'at Nusrat al-Islam wal-Muslimin*.

1 Introduction

In recent years, governments, civil society organizations, and commercial media houses have devoted the equivalent of millions of dollars to media programming intended to address myriad problems related to economic, social, and political development. Such programs have targeted everything from vote-purchasing schemes (Green and Srinivasan 2016) and corruption (Chong et al. 2015; Ferraz and Finan 2008; Reinikka and Svensson 2005) to improving citizen knowledge (Aker et al. 2017) and reducing deference to authority in overly hierarchical settings (Paluck and Green 2009). Among these goals, promoting pro-democratic attitudes, fostering political engagement, and combating extremism have been at the forefront in recent years, with the US Government particularly active in such efforts. For example, in Africa, radio programs promoting “peace and tolerance” have received extensive support under the interagency Trans-Sahara Counterterrorism Partnership (TSCTP) (Finkel et al. 2015).

Discussions have featured prominently in some of this programming. In some cases, these discussions bring together party agents, activists, NGO representatives, journalists, and academics, and they often include person-on-the-street (i.e., “*vox pop*”) and audience-participation (e.g., call-ins, social media posts, text messages) components. Their ubiquity—and their frequent airing during prime-time (i.e., morning and evening commute hours)—is a testament to their popularity with audiences. While private, commercial stations are frequent producers of radio discussions, such programming also often receives support from international actors. BBC Media Action, for example, has organized radio discussion programs in Kenya (*Sema Kenya*, or *Kenya Speaks*), Nigeria (*Talk Your Own—Make Naija Better*), Sierra Leone (*Tok Bot Salone*, or *Talk About Sierra Leone*), and Zambia (*Ishiwu*, or *My Voice*). The Catholic Church’s Radio Sapientia has aired regular “open discussion” segments in Uganda, where invited guests debate and callers from the audience share their own perspectives.

According to many organizations' theories of change, such discussions have potential to have myriad positive effects, particularly because of their supposed ability to pique audience interest through formats centered on conflict, educate listeners, enhance perceptions of internal efficacy, increase interest and catalyze participation, moderate attitudes by facilitating exposure to multiple viewpoints, and limit the appeal of extremist ideologies. However, efforts to evaluate the effects of discussion-based programming on these and other outcomes of interest have been quite limited, which leaves significant gaps in our understanding of the efficacy of a particularly common form of media-based intervention. Many efforts, especially those organized by non-governmental organizations, have limited funds for monitoring and evaluation (M&E). Further, even well-funded observational studies relying on focus groups or surveys struggle with identifying causal effects of programming messages on outcomes of interest, and are instead focused on easier-to-measure outcomes, such as audience reach and public awareness of the program. Such studies might discern anecdotal or statistical correlations between listening to certain programs and holding particular attitudes, but it is usually impossible to determine whether the programs themselves actually change attitudes, or whether certain types of individuals (i.e., those with attitudes that were already in line with certain programming goals) are more likely than others to choose to listen. In short, the possibility of self-selection significantly limits our ability to measure such media effects. Finally, rigorous evaluation of such programming is essential because, not only is it possible that such interventions have null effects and are ineffective uses of scarce resources, it is also theoretically possible that they are having unintended consequences, such as exacerbating polarization, increasing cynicism, and depressing participation.

This project will develop an M&E strategy—a field experiment using a modified symmetric encouragement design—that can potentially be used to study media effects broadly. Specifically, the project will evaluate two different kinds of discussion-based programs in Maradi, a *région* in southern Niger, near the border with Nigeria. The first, a recently launched radio

discussion program (*Le Forum*) organized by the Swiss NGO Fondation Hironnelle, as part of its Studio Kalangou project, focuses on in-studio discussions between experts on select issues. The second program of focus is a call-in program, broadcast at the same time as *Le Forum*, in which listeners are invited to weigh in on important issues of the day. The design allows for testing the effects of each program in relation to a non-incentivized control group, as well as examining the differential effects of listening to call-in versus in-studio discussion programs. The study will generate policy-relevant findings of interest to Studio Kalangou staff, Nigerien and other African media practitioners, and international actors that fund radio discussion programs elsewhere.

2 Motivation

There is a broad and expanding literature on media effects in advanced and developing democracies. Media availability and targeted campaigns have been found to have effects on outcomes including participation, vote choice, expectations with regard to accountability, government performance, and levels of political extremism. The attention paid to media effects also demonstrates a need for and interest in developing new M&E strategies for organizations and researchers working in this field.

Most broadly, mass media have often been found to increase participation, which is an essential underpinning of democracy. Strömberg (2004) finds that access to radio increased voter turnout in the US in the 1920s and 1930s; Conroy-Krutz (2018) comes to similar conclusions about participation more broadly, using Irregular Terrain Models (ITM) (Longley and Rice 1968) to map radio signal availability in early 2000s Uganda. Banerjee et al. (2011), Aker et al. (2017), and Gerber et al. (2009) find newspaper distributional campaigns increase turnout in India, Mozambique, and the US, respectively; DellaVigna and Kaplan (2007) find that the introduction of Fox News in the US had similar effects. Outside of mass media,

candidate debates have been associated with increased knowledge about candidates, and improvements in “correct voting” in Sierra Leone (Bidwell et al. 2015). Information provision is often accompanied by increased demands for accountability. Aker et al. (2017) find that newspaper exposure increases citizens’ contact with the Mozambican president-elect, while Gottlieb (2016) finds that, when citizens are more aware of government capacity and responsibility, they are more likely to hold politicians accountable, including by questioning them publicly and voting against them for poor performance. Various studies have demonstrated that voters consider information on corruption, when it is available, in their electoral decision-making (Ferraz and Finan 2008; Conroy-Krutz 2013; Larreguy et al. 2015), and that media availability can reduce collusion (Gottlieb 2015), increase cross-ethnic voting (Bidwell et al. 2015; Casey 2015), improve government responses to natural disasters (Besley and Burgess 2001) and economic crisis (Strömberg 2004), and reduce corruption (Reinikka and Svensson 2005) and electoral malpractice (Aker et al. 2017).

Exposure to particular types of messages might also result in moderation of citizens’ attitudes, and a reduction in support for extremist viewpoints and groups. In an experiment randomizing station assignment across public transportation in Ghana, Conroy-Krutz and Moehler (2015) find that exposure to alternate viewpoints on talk radio decreases polarization. The authors posit that these effects are particularly likely in developing democracies, where individuals’ exposure to diverse messages is often limited, and their willingness to shift their opinions in response to new information is greater than in other settings, where higher levels of political sophistication make citizens more likely to argue against discordant messages. Brierley et al. (2017) replicate these findings somewhat in a field experiment in Ghana; they find that subjects exposed to candidate debates had more-favorable attitudes about non-copartisans, although these effects decayed relatively quickly.

Findings with regard to the effects of information provision and preference changes do not always point in consistent directions, however. Gentzkow (2006) and Olken (2009) find that

television access lowers turnout, in the US and Indonesia, respectively, perhaps by crowding out alternate sources of information. Moehler and Conroy-Krutz (2016) find that, although exposure to Ghanaian talk radio increased political interest, it decreased participation in a subsequent SMS petition. And Chong et al. (2015) and Humphreys and Weinstein (2012) find no effects of performance information on incumbent vote shares in Mexico and Uganda, respectively. As various reviews (La Ferrara 2016; La Ferrara 2016) highlight, accounting for these contrasting findings should be a priority for studies of democratic development.

3 Research Questions & Context

Certainly, it is difficult to formulate generalized findings about “media effects” because the messages presented, and means by which these messages are conveyed, can vary tremendously. In terms of programming, types include straight news, editorials, interviews, documentary and other informational features, call-ins and other interactive formats, persuasive campaigns and advertisements, and edutainment.

One strategy that many media practitioners have advocated is the airing of regular discussions in which actors (or their representatives) responsible for decision-making or program implementation engage in discussions with individuals from opposing parties, watchdog bodies, or advocacy groups, who often bring up viewpoints, facts, or experiences that challenge the formers’ storyline (i.e., *in-studio discussions*). Others have prioritized call-in or other exchanges, in which a moderator presents a topic and invites listeners to weigh in with their own opinions, via voice call or SMS (i.e., *interactive discussions*).

3.1 Hypotheses

The effects of such regular discussions, which are frequently aired on radio in Africa, remain under-studied.¹ Organizers of such interventions often argue that discussions can produce a number of important democracy-enhancing functions, which can be clustered into two categories: providing information and affecting preferences. On the first count, contentious actors in discussions often provide evidence and arguments to bolster their positions. Thus, discussions might increase listeners' knowledge about formal institutions (H_1).

In addition, discussions might alter citizen preferences in ways that ultimately enhance democracy. Because of their potentially conflictual nature, discussions seem particularly effective at generating listener engagement; thus, exposure might increase political interest and planned participation (H_2). Exposure might also increase citizens' sense of internal efficacy (H_3) and extent to which they believe institutions and citizens should be able to hold government accountable (H_4). Certain media programming can provide listeners with examples on which to model their own engagement (Bandura 1976, 1997) and others' calls for or actions to improve accountability. Such effects might be particularly important in raising internal efficacy and calls for accountability if less-educated and poorer individuals hear examples of participation by peers. Discussants might share such examples, in attempts to mobilize listeners.

Finally, hearing varied viewpoints, with which listeners might have limited experience due to personal network homogeneity, might moderate attitudes and thus foster a greater willingness to cooperate with others (H_5). This might be especially important in settings with deep divisions between groups, threats of rising extremism, and media outlets that encourage

¹Some have, however, examined the effects of candidate debates during campaigns (Bidwell et al. 2015; Brierley et al. 2017).

such schisms and attitudes. Although reforms in the early 1990s have meant that media in places like Africa are not as dominated as they once were by state-run monopolies (Bourgault 1995; Hydén et al. 2003; Nyamnjoh 2005), media in the developing world are often prone to capture by politically affiliated elites (Conroy-Krutz and Moehler 2015; La Ferrera 2016; Lawson 2002). These actors use their ownership of or other means of leverage over outlets to propagate particular viewpoints. This means that, while there is greater diversity in African media landscapes than there once was, individual outlets themselves often offer little more than propaganda favoring a certain group, and sometimes even hate speech against other groups. As such, media are often accused of exacerbating inter-group tensions, by broadening and deepening divides between partisan, ethnic, and religious groups (Snyder and Ballentine 1996). In the extreme, such broadcasts have been blamed for contributing to inter-ethnic violence in places like Rwanda (Yanagizawa-Drott 2014) and Kenya (Abdi and Deane 2008), while even in more-democratic settings, such as Ghana, media have been polarized (Hasty 2005), which may exacerbate inter-partisan tensions.

Empirical evidence suggests that discussion programs could moderate attitudes, thus reducing inter-group tensions and lowering attractions to extremist positions, by providing listeners with exposure to alternate viewpoints (Brierley et al. 2017; Conroy-Krutz and Moehler 2015). However, the limited empirical research that has been conducted on this topic has focused on one type of polarization (partisan) in one country (Ghana), and there are broad opportunities—and needs—to study these effects in a range of contexts,² including those in which inter-group schisms and extremist messages are centered on ethnic and religious

²Using Irregular Terrain Modeling (ITM) to estimate signal availability across geographic space in early 2000s Uganda, Conroy-Krutz (2018) finds that radio presence moderates Ugandans' attitudes. However, he does not consider stations' biases, and his design does not allow for exploration of the effects of certain types of programs.

divides.

However, there are reasons to be more skeptical about discussions' potentially democracy-enhancing effects. There is no guarantee that the points discussants raise will be based in evidence, or that this evidence will accurately reflect institutional design. Thus, listener knowledge might not increase, and might even decline, countering H_1 . In addition, listeners themselves might dismiss dissonant information, and thus not engage in any learning. Contra H_2 , some discussants might have goals to de-mobilize, rather than encourage citizen involvement, particularly if their goals would not be enhanced by broadened participation. Exposure to verbal conflict might lead some to find politics, at least as conveyed in the programming, to be distasteful, or even confusing. Such effects would counter goals of increasing interest, internal efficacy, and support for accountability mechanisms ($H_2 - H_4$). In fact, an early-stage evaluation of Studio Kalangou for Fondation Hironnelle found apparently demobilizing effects of *Le Forum* among less-educated focus group participants; such individuals described the back-and-forth content as too challenging and the argumentation as off-putting. Finally, listeners might engage in motivated reasoning and engage in counterargument with dissonant messages. Thus, while H_5 predicts moderation, exposure to discussions could strengthen preexisting attitudes and foster increased polarization. For these reasons, analyses will use two-tailed tests and consider heterogeneous effects (regarding sex and education, as described below).

Finally, there is significant variation in terms of discussion-based programming, with some involving in-studio conversations between experts on a particular topic (i.e., *in-studio discussions*) and others relying mainly on a moderator or moderators presenting a topic, and inviting listeners to provide opinions, via voice calls or SMS (i.e., *interactive discussions*). While the main purpose of this inquiry is to test the effects of radio-based discussions, generally, on outcomes of interest, we can also test whether one type of programming has stronger effects than another. Specifically, we might expect that in-studio conversations are more

likely to increase knowledge (H_{1A}), since experts involved are more likely to present facts in their argumentation than average citizens are. However, listeners might find back-and-forths between what might seem to be, essentially, elite experts less exciting than exchanges with peers; if this is the case, interactive programs should increase engagement more than in-studio discussions will (H_{2A}). In a similar vein, the opportunity to hear peers voice their opinions—which became common features in many media outlets in Africa in the wake of liberalization (Bratton and van de Walle 1997, p.109)—might prove to be an especially powerful signal to listeners that they, too, can and should share their political attitudes, thus increasing internal efficacy (H_{3A}) and support for institutional checks (H_{4A}). Finally, in-studio discussions might be more likely than call-ins to foster moderation (H_{5A}), for two reasons. First, in-studio discussions are conducted in contexts in which decorum is typically expected; even vehemently opposed debaters might be less vitriolic when engaging in face-to-face discussions. On the other hand, those calling or texting into programs do not see their interlocutors, and thus might feel less constrained by social conventions and use more-heated language. Second, in-studio discussions typically involve conversants of relatively high socioeconomic or political standing. As such, listeners might find these discussants’ arguments to be more resonant than everyday citizens’, and move their attitudes accordingly.

3.2 The Context: Niger and Radio Discussions

Niger’s media environment is relatively underdeveloped, but freedoms of speech and the press have improved considerably, particularly since the ouster of President Mamadou Tandja in 2010. Freedom House rates the country’s media environment as “partly free,” although it cites limited instances of print and electronic journalists being sanctioned for reporting on sensitive issues, such as the 2015 arrest of opposition leader Hama Amadou and the fight

against *Boko Haram*.³

Most Nigeriens use FM radio as their primary source of information. According to the 2015 Afrobarometer conducted in the country, two-thirds (67%) of respondents reported accessing news from radio at least several times a week; only 19% reported similar rates for television, 3% for Internet, and 2% for newspapers.⁴ A 2008 BBC study found that four out of ten Nigeriens reported listening to radio news for at least thirty minutes per day, and that local news (rather than African or other international news) was prioritized.⁵ Most populated areas of the country can receive broadcasts from at least one FM station; the state-run Radio Voix du Sahel is the most-extensive network, with over thirty registered broadcasters. However, since the launch of Radio et Musique FM in 1994, the number of private, commercial outlets has increased significantly, with approximately two dozen throughout the country. No network is as extensive as the state-run broadcaster's, but Alternative FM, Canal 3, Dounia FM, Horizon FM, Radio Sarraounia, and Radio Tenere operate out of multiple towns. Less-populated areas are more frequently served by community radio stations, the first of which was launched in 1999. Many of these stations have limited broadcast reach—some operate out of mud huts—and only air programming several hours per day, but they are important sources of local information for particularly under-served communities. Finally, a number of foreign broadcasters run their own stations (e.g., Radio France International and the BBC World Service) or have agreements with local broadcasters to carry their programming on a regular basis.⁶ Broadcasts are produced in French, the official language, and also

³<https://freedomhouse.org/report/freedom-press/2016/niger>

⁴<http://www.afrobarometer.org/countries/niger-01>

⁵<https://www.internews.org/resource/niger-media-and-telecoms-landscape-guide>

⁶For example, the Voice of America and DeutscheWelle broadcast on Anfani FM, the Tenere

in Hausa, Djerma (Zarma), Peul (Fulfulde, Fulani), Tamasheq, Toubou, and Arabic.

A number of CSOs either have their own stations (e.g., Alternative Espaces Citoyens) or have agreements with public, commercial, and community outlets to broadcast their programming. Some of these interventions focus on attempts to improve journalists' capacity, and thus citizens' access to information, while others attempt to educate populations on social and health issues, often through the production of dramas, which are reportedly quite popular. Fondation Hirondelle's activities are focused on the former, and its Studio Kalangou program, which operates in partnership with the *Réseau des Radios Communautaires* (RACOM) and *l'Association des Promoteurs de Radios et Télévisions Privées du Niger* (APRTPN), was launched in January 2016. Kalangou broadcasts for two hours each day, and brings news and discussion in five languages, including French, Hausa, Djerma (Zarma), Peul, and Tamasheq. Its centerpiece program is the debate and discussion program, *Le Forum*.

With the completion of the rollout to thirty stations in mid-2017, *Le Forum* is now available to a majority of Nigeriens; at least three partner stations in each region run the program, with the exception of Niamey, where partner station Anfani FM reaches the entire radio-listening population.

Programs to promote good governance, increase citizen involvement in and knowledge about politics, and combat extremist views are particularly needed in Niger. The country is ranked second from last (187th) on the United Nations Development Programme's Human Development Index (2016), which considers factors such as life expectancy, educational attainment, and per capita income.⁷ The Fund for Peace's Fragile States Index rates the

network, and others, while the BBC Hausa Service can be accessed on Anfani, the Sarraouinia network, and Radio et Musique.

⁷<http://hdr.undp.org/en/countries/profiles/NER>

country 19th in the world in 2016, indicating serious problems with regard to the central government's ability to control its territory, provide services, combat criminality, address involuntary population movements (e.g., refugees), and foster economic growth.⁸ The Mo Ibrahim Foundation's Index of African Governance recently rated Niger somewhat better, with a score (50.2) just above the continent-wide average (50.0);⁹ that Index considers the enforcement of the rule of law, protection of human rights, economic opportunity, and human development.

In terms of democratic development, Niger faces a number of significant challenges. Although the country has had two democratic elections since a 2010 military coup ousted Tandja, who was threatening to consolidate his power at the expense of other institutions and in violation of the constitution, the most-recent presidential election (2016) was boycotted by the opposition. The coalition's candidate, Amadou, had earlier been imprisoned due to baby-trafficking charges, and representatives claimed that first-round polling was marred by irregularities. Given the boycott, incumbent Mahamadou Issoufou was reelected easily, and his coalition dominates the *Assemblée Nationale*. Still, the country has made major strides in protections of civil, political, and media liberties in the last decade, and is currently rated as "partly free" by Freedom House.¹⁰

Nigeriens face significant barriers in terms of their own democratic participation. An index of participation (0-18) was created using Afrobarometer (2015) data on reported likelihood of contacting a range of actors, including local government officials, Members of Parliament, other government officials, party officials, traditional leaders, and religious leaders. Nigeriens' average was only a 2.0, which is significantly lower than the all-Africa average

⁸A lower number on the ranking indicates a weaker state. <http://fsi.fundforpeace.org/>

⁹Higher scores indicate better governance. <http://mo.ibrahim.foundation/iiag/>

¹⁰<https://freedomhouse.org/report/freedom-world/freedom-world-2017>

(2.5).¹¹ Forty percent said they were “not at all” interested in politics, which is in line with the all-Africa figure (43%) from that Afrobarometer wave, but still represents significant room for improvement. However, only 15% said they “never” discuss politics—compared to 32% of all Africans surveyed—suggesting that most Nigeriens at least see politics as salient in their lives, even if they rarely reach out to figures in leadership positions.

Nigeriens are significantly more divided, along ethnic and religious lines, than their African peers as a whole, suggesting that interventions to foster moderation and tolerance are needed. Fifteen percent said that they would “dislike” living next to someone of another ethnic group (compared to 9% of all Africans), and a whopping 50% said the same about living next to someone from another religious group (compared to 12% of all Africans). Nigeriens were also less likely to say that they would find women acceptable as leaders (45%, versus 66% of all Africans).

Finally, Niger is particularly notable for being at the forefront of exposure to violence related to Islamic fundamentalist movements, on several fronts. According to the Armed Conflict Location & Event Data project,¹² groups affiliated with the Nigerian-born *Boko Haram* movement have been associated with some ninety-three violent incidents, totaling 1090 fatalities, within Niger since 2013, with the worst attack, on an island in Lake Chad, claiming some 230 civilian, Nigerien military, and insurgent lives in April 2015. All but one of these attacks has occurred in the southeastern Diffa Region. In the meantime, Al Qaeda in the Islamic Maghreb (AQIM) also has been active in Niger, and has gained particular notoriety for kidnappings of foreigners from remote regions. AQIM has been associated with nine violent incidents since 2008, with twenty-six fatalities; twenty-two of these occurred in a single attack on Nigerien troops in October 2016. In March 2017, AQIM and several other

¹¹Thirty-six countries were included in the sample.

¹²<http://www.acleddata.com/data/>. Data as of 1 April 2017.

organizations announced the formation of the *Jama'at Nusrat al-Islam wal-Muslimin*.

Despite these problems, there does not appear to be widespread support for organizations such as *Boko Haram* in the country: only 13% of Afrobarometer respondents indicated that “some Muslims” in the country supported the group, and 11% said the same about “some regions.” However, given the levels of poverty and previously noted levels of religious intolerance, the region remains a potentially fertile recruiting ground for extremist groups of various types.

For these reasons, Niger has been a focal country for US Government efforts to promote democracy, encourage economic and social development, and combat extremism. The US Agency for International Development’s (USAID) Peace Through Development II project has involved, among many other initiatives, broadcasts on some thirty-three partner stations across Niger, which aim to counter extremist narratives. More broadly, Niger is a target country for the TSCTP, which has, as part of its broad program, employed “peace and tolerance radio” programming to facilitate better governance, bring together ethnic and religious communities, and discredit extremist ideologies. An evaluation commissioned by the USAID’s Bureau for Africa using a “quasi-experimental” design, with surveys, focus groups, and interviews with key informants, found positive, yet modest, effects of this programming on target outcomes. However, results of these analyses “cannot be considered definitive proof of impact” (USAID 2011, p. 2). Not only is it difficult to ascertain causal effects from such evaluations, the study also could not identify populations that could not access any USAID-sponsored programming, meaning that there was no proper “control” group. The evaluation strategy outlined below has distinct advantages, in that it can estimate causal effects and is feasible, even in settings where the entire sample population can access radio broadcasts being studied.

4 Research Strategy

4.1 Challenges in Measuring Media Effects

As discussed previously, media effects are notoriously difficult to measure through observational strategies. Individuals in focus groups and surveys who listen to particular radio programs of interest might exhibit meaningful differences in behavior and attitudes from those who do not, but since individuals self-select the media they consume, researchers cannot be confident that their programming is responsible for those differences, even after using statistical methods to control for other individual-level attributes.

Experimental designs constitute improvements over standard observational strategies, but they are hardly a panacea, and they often pose their own challenges. While it is possible for researchers to randomize the stations that air their programming (Murray et al. 2015; Paluck 2010), such a strategy is often infeasible (i.e., practitioners are often constrained by the partner broadcasters with which they have agreements), undesirable (i.e., practitioners are often loath to limit their potential audiences), or both.¹³ Laboratory experiments, in which subjects are invited into a controlled environment, exposed to some kind of message, and subsequently interviewed, are common in studies of media effects (e.g., Ansolabehere and Iyengar (1995) and Levendusky (2013)). However, such designs might raise subjects' sensitivity due to the environment's artificiality (Jerit et al. 2013). Others have used field experiments to administer media treatments in naturalistic settings, without subjects' pre-existing knowledge of being included in a study on media effects. For example, in 2012, the PI co-conducted a study in which Ghanaian passengers in *tro-tros* (vans that constitute

¹³A number of researchers have randomized advertisements across stations (Green and Srinivasan 2016), or stations and times (Gerber et al. 2011).

the backbone of the country’s public transport system) were randomly exposed to different stations over the vehicles’ sound systems (Conroy-Krutz and Moehler 2015; Moehler and Conroy-Krutz 2016); however, post-trip interviews could only measure effects in the very short term.

4.2 Modified Symmetric Encouragement Design with Control

The primary component of the proposed evaluation of radio discussion programs in Niger will involve a field experiment, with a unique modified symmetric encouragement strategy. Assuming full compliance, such a design would create three groups of subjects for the duration of the study period: one that is regularly exposed to *Le Forum* (i.e., the in-studio discussion program); one that is regularly exposed to an interactive program; and one that exhibits heterogeneity in its radio-listening habits. The randomization of assignment theoretically produces groups that are equivalent, save for exposure to the intervention, thereby mitigating the problems with identifying causality that plague observational studies. Subjects who comply (i.e., listen) do so in the same environment in which they normally consume radio, which enhances ability to generalize to the real world (i.e., ecological validity), and studies can be conducted over longer periods of time. Further, such studies are more feasible than other kinds of field experiments, and while they involve discouraging some from the target population from listening to the intervention, listenership is actively encouraged among others by an equal amount. In short, such a strategy avoids many of the pitfalls of other experimental designs, while facilitating measurement of actual causal effects; thus, it is a method that can, and perhaps should, be applied by media practitioners widely.

Encouragement designs involve subjects’ being invited to participate in some kind of intervention, such as listening to a particular broadcast program (i.e., a treatment).¹⁴ Two

¹⁴While one possibility would be to hold community-level events where individuals listen to

strategies can reduce two-sided non-compliance (i.e., those in the treatment not exposing themselves to it, and those in the control being exposed). First, non-compliance among those assigned to the treatment can be mitigated by offering rewards for demonstration of listening to a broadcast program. For example, Berg and Zia (2017) quizzed those assigned to view a television soap opera in South Africa every three to four weeks, for three months, and paid them 60 Rand (7 USD) every time they could answer at least three of four factual questions about it; Bjorvatn et al. (2015) employed a similar strategy with regard to an edutainment program in Tanzania.

Second, researchers can employ symmetric encouragement strategies to minimize non-compliance among subjects not assigned to the treatment (Mullainathan et al. 2010). Those not assigned to the treatment can similarly be incentivized to engage in an activity that, if they comply, eliminates the possibility that they will be exposed to the treatment directly, since both are offered simultaneously. Bjorvatn et al. (2015) invited students to watch a film (i.e., a placebo), which aired at the same time as an edutainment program (i.e., the researchers' focus). Berg and Zia (2017) invited those in the control to watch an alternate soap opera, which aired in the same time slot as their program of focus. Given the symmetric nature, one can rule out that the encouragement itself or the incentives offered are responsible for observed differences between groups. Generally, symmetric encouragement designs increase power, by artificially reducing one group's exposure to the treatment to (theoretically) zero.

Le Forum, in strategies akin to those used in Bidwell et al. (2015) and Paluck (2009), the encouragement design more closely approximates real-world conditions. Although individuals in single-owner, multi-user (SOMU) communities like Niger often consume media in small groups (i.e., by gathering around radios, televisions, and newspapers) (Nyamnjoh 2005), they would rarely do so at community-wide events.

However, there are at least three significant limitations of symmetric encouragement designs, with regard to inference. First, the symmetric encouragement design, by nature, artificially increases *both* the treatment and the placebo groups' exposures to radio. Given that other studies have found potentially negative consequences of allocating greater amounts of time to media consumption (Olken 2009; Zavodny 2006), it is possible that the intervention could have unintended consequences that go unrecognized (Barsoum et al. 2017). Second, any estimated effects of the treatment are only relative to the placebo. A placebo that generates some effect in the same direction as the intervention raises the probability of Type II errors (i.e., the treatment will incorrectly be determined to have no effect, when in reality it is effective), while a placebo that generates some effect in the opposite direction of that intended by those implementing the intervention raises the probability of Type I errors (i.e., the treatment will appear to have an effect, when the placebo is actually doing all of the “work,” but in the “wrong” direction). Finally, the encouragements might displace individuals from listening to other programming or engaging in other activities that affect the outcomes of interest, thus again increasing the probability of Type I or Type II errors.

Given these concerns, the strategy will uniquely borrow from elements of both symmetric and non-symmetric designs, to create three distinct groups: 1) *Le Forum*, the in-studio discussion program; 2) an interactive discussion program; and a control.¹⁵ All subjects,

¹⁵Initially, this design involved three groups—*Le Forum*; a placebo program airing at the same time, which was to be apolitical yet conducive to quizzes that would allow subjects to demonstrate compliance; and a control. However, the station not broadcasting *Le Forum* unexpectedly changed its programming schedule immediately before launch of the study, from one focusing on an interview with a local artist to a call-in discussion-based program. (Nigerien stations do not post their schedules online, and they frequently change schedules, without notice, to accommodate new funding streams.) Thus, while the design is still a

regardless of the group to which they are assigned, must be able to access both programs in their area.

All subjects in the radio treatments will be reminded with weekly phone calls to listen to their assigned program, and be told to expect a call each two to three weeks for an opportunity for a chance at remuneration (1,000 CFA francs, to be paid via mobile money) if they answer at least two (of four) questions correctly about the program. These questions will be selected by research staff upon review of recent program contents. Questions should be broad enough to be answerable if the subject has minimal levels of formal education, but specific enough that the subject would not likely be able to answer without some listening. Importantly, the goal of these questions is to encourage participation and measure compliance, not gauge political knowledge or interest (i.e., test H_1-H_2). Subjects will be informed of these protocols, and of the project duration (six weeks), upon recruitment and in each phone call.¹⁶

To reduce the possibility that any observed differences between those assigned to a radio group and the control are caused by the payments themselves, subjects in the control will receive messages and mobile money transfers at roughly the same time as those in the other groups. The amount of these payments to control subjects in each round will be equal to the

symmetric encouragement, it no longer is an evaluation of the effects of *Le Forum* versus an apolitical program and a control. However, this unexpectedly provides a new opportunity, to test the effects of exposure to an in-studio discussion program versus an interactive one. Conclusions here must be bracketed, though, by the fact that the two programs differ not just in style, but also in themes.

¹⁶Remuneration amounts were selected upon discussion with local partners. Given daily GDP per capita (~ 700 CFA francs, World Bank (2013)), these amounts are significant enough to encourage participation, but not so large as to be coercive.

average paid to subjects pooled across both radio treatments in that same round, rounded to the nearest 100 CFA (~ 0.20 USD). Subjects will be informed that the payments are being made to encourage participation in the endline.

4.3 Sampling

4.3.1 Sampling Frame

The study will be conducted in the *Région* of Maradi, which was selected according to the following process. First, the *régions* of Agadez and Diffa, and the *départements* of Filingue, Ouallam, Tera, or Tillabéri in the *région* of Tillabéri were excluded.¹⁷ Eligible *régions* thus included Dosso, Maradi, Niamey, Tahoa, and Zinder, and the *départements* of Kollo and Say in Tillabéri; these areas are home to over 70% of Nigeriens. Second, the focus area had to be within the broadcast zone of a station that broadcasts *Le Forum*. Third, an appropriate alternate program had to be available on a different station covering the same locality. This program had to be in the same language as *Le Forum* (i.e., Hausa on Saturdays, Zarma on Sundays). Fourth, one of the goals of the modified symmetric encouragement design was to minimize some subjects' listening to *Le Forum* during the study period. Since *Le Forum* broadcasts every weeknight, this could prove challenging.

¹⁷Agadez was excluded because of cost: it is the largest subnational administrative unit in Africa and is very sparsely populated, comprising 52% of the area of Niger, but only about 3% of the population. Diffa was excluded because of the ongoing threat of violence related to the *Boko Haram* insurgency, while selected *départements* of Tillabéri were excluded due to recent reports of insecurity from actors crossing over the border with Mali. Logic behind this decision-making, as well as protocols for the protection of project staff and participants, are discussed in the project security plan, which was prepared for the US State Department.

However, not all broadcast languages are equally spoken in Niger. *Le Forum* broadcasts on weekdays in French, but the population of Nigeriens who regularly listens to the radio in French is relatively small, and artificially decreasing listening among that population, which skews more-educated, -urban, and -wealthy than the general population, to near zero during the study period would be difficult, because subjects would have to follow protocols of listening to another French-language program every weekday. Asking people to listen to the Sunday-evening Zarma program would mitigate some of these concerns, because the program is only broadcast once per week; however, Zarma-speakers are also likely to at least understand Hausa, which is a *lingua franca* in Niger. Thus, those assigned to the alternate call-in program might not listen to the Zarma-language edition of *Le Forum* on Sunday, but many could listen to the Hausa-language edition on Saturday. Thus, the study will encourage people to listen to the Hausa-language *Le Forum* on Saturdays, with the knowledge that many people in Niger speak Hausa, but do not speak Zarma or French. Thus, these individuals assigned to *Le Forum* would be unlikely to listen to another version of *Le Forum* on another evening. We therefore chose to focus on an area where there were likely few French- or Zarma-speakers; this eliminated areas in and around Niamey. Finally, we considered possible alternate discussion-based programs, in Hausa, broadcasting between 17.00 and 18.00 Saturdays (the time of *Le Forum*), on stations in areas where *Le Forum* was also accessible. This proved to be a significant constraint, and one of the only areas we could identify that fit all of these characteristics was therefore in the *Région* of Maradi. There, *Le Forum* broadcasts on Saturdays in Hausa on Studio Kalangou partner Radio Garkuwa (107 FM), while Radio Sarraounia (102.1 FM) broadcasts a call-in program, also in Hausa, at the same time; both stations' antennae are located in Maradi *Ville*.

In terms of subject recruitment, the first sampling stage will involve the selection of *quartiers* and *villages*. There are 950 such localities in the *Région* of Maradi. Irregular Terrain Modeling (ITM) predicted that, given stations' characteristics and local geography,

both stations' signals were likely only dependably accessible within 15 km of Maradi *Ville*.¹⁸ Thus, localities outside of this radius were excluded, as were those with fewer than thirty-six households, to minimize the probability that subjects would converse about their inclusion in the study. From this list, 141 localities were selected; these are in the *Départements* of Guidan-Roundji, Madarounfa, and Maradi Ville, which covers urban, peri-urban, and rural zones.

Eligible subjects must: 1) have regular access to a working radio, 2) understand Hausa,¹⁹ 3) have access to a mobile phone, 4) have access to mobile money, and 5) be at least eighteen years of age. To ensure balance across conditions, even subjects assigned to the control must fit these criteria. The eligibility criteria limit generalizability to the entire Nigerien population, but should allow for generalizability to the potential listening population of these programs.

Households will be selected via a random-walk pattern, with individuals in households selected at random. Upon entering a domicile, enumerators will work with the head of household or another responsible adult to construct a list of all male or female—each interaction will be randomly assigned to include males or females, to ensure gender parity in the sample—adults. Members of the household will then be ordered randomly, and the enumerator will seek an interview with the person in the first-ranked position. If this individual is not available, the enumerator will make arrangements to revisit the household to speak with that individual. This individual will then be asked the five screening questions. If this

¹⁸In preparation for the study, survey staff visited all selected localities to verify that both Radio Garkuwa and Radio Sarraounia were clearly available.

¹⁹In addition to being asked about this directly, enumerators could assess subjects' Hausa-language ability, because all recruitment and consent procedures will be conducted in Hausa.

individual is not eligible for any reason, the enumerator will ask to speak with the second-ranked person in the household. This process will continue until an eligible respondent is selected, or the enumerator determines that there are no eligible individuals in the household. Following the identification of an eligible individual, the enumerator will explain the study protocols and read the informed consent statement. If the individual declines to participate, the enumerator will depart the household and begin the household-selection process again.

4.3.2 Assignment to Treatment

At the next stage, eligible individuals will be randomly assigned to the in-studio discussion treatment (i.e., *Le Forum* on Radio Garkuwa), interactive discussion treatment (i.e., on Radio Sarraounia), or control. Subjects will be blocked by locality, to further reduce the probability that individuals assigned to the same treatment will converse about the content of their programs (which could allow them to coordinate on how to answer quiz questions).

4.3.3 Statistical Power

Power analyses were conducted to determine the targeted number of subjects in each treatment group. The goal was to determine the minimal sample sizes necessary to detect treatment effects of moderate size, when also factoring in clustering at the geographic locality, on key outcomes of interest. In order to determine *a priori* reasonable possible distributions of key dependent variables, results were drawn from the 2015 Afrobarometer in Niger, on questions examining political knowledge, interest, and participation. All tests (described below) will be two-tailed, with significance rates of 95% used, and a target of at least 80% power. Examining across these key outcomes of interest, power analyses suggested that a target sample size of 870 subjects, divided evenly between conditions, should be adequate.

4.3.4 Attrition from the Sample

An incentives structure has been designed to minimize attrition over the period of the study; this structure will be communicated clearly to subjects at the recruitment phase, and at all other points of interaction. First, subjects receive payments (1,000 CFA each time) for completing both the baseline and endline. Next, subjects will receive regular opportunities to earn money, through their participation in short phone quizzes (for those assigned to the radio treatments) and their continued contact with study staff, via phone (for those assigned to all categories, including the control).

On the basis of advice from a survey firm that has done multi-wave research in Niger, an attrition rate of approximately 25-30% between the baseline and endline surveys will be considered.²⁰ Thus, a final target of 1400 subjects is estimated, which should provide significant power, even with a particularly large attrition.²¹

Balance checks will be conducted after the endline, to check for differences in levels of at-

²⁰This attrition rate seems potentially overly conservative, given experiences with panel surveys elsewhere in Africa. This rate may be updated upon collection of data from others who have conducted similar research. In any event, efforts will be made to reduce attrition as much as possible, to improve power.

²¹An additional 200 individuals will be interviewed in the baseline for a separate study. These individuals will be recruited in the same fashion as the 1400 individuals for the primary study. However, of the full cohort of 1600, 12.5% will be assigned to a “short” survey, while the remainder will be assigned to the full questionnaire. Those assigned to the “short” questionnaire will not be recontacted for participation in the full study. These individuals will only be asked questions about demographics and then skip to a set of questions about their political engagement and sense of efficacy (see the tests of H_2 and H_3 below). Questions about demographics will be asked at the beginning of both versions of the

trition across key covariates, including treatment assignment, sex, education level, ethnicity, age, and pre-study radio exposure. In addition, to adjust for sample attrition, models will be re-estimated using inverse probability weights (Fitzgerald et al. 1988; Wooldridge 2002). This strategy involves first estimating the probability of attrition by regressing an indicator for attrition (i.e., 1=did not complete both waves, 0=completed both waves) on covariates included in the main model, measured at baseline. Finally, the inverse of the predicted probability of retention will be taken, and models re-estimated using these weights.

4.4 Fieldwork

4.4.1 Data Collection

The most-extensive outcome measurements will be taken at two points: a pre-treatment baseline and a post-treatment endline. The endline will measure the effects of *Le Forum*

questionnaire, and questions about engagement and internal efficacy will occur at the end of both. I hypothesize that the act of completing a questionnaire about political attitudes will increase engagement and internal efficacy (i.e., the experience of completing a survey will be empowering). This hypothesis will be tested by conducting difference-of-means tests between those assigned to the “short” and full surveys, at baseline. Analyses will also be conducted to test whether the effects of questioning are conditional on sex or education (operationalized as above- and below-average formal schooling). Although individuals must agree to participate in the full study to complete even the short questionnaire, the project will not involve deception of these individuals, because the recruitment language will only state that some individuals may be selected to participate in certain aspects of the study. Further, the randomization in terms of assignment to the “short” or full questionnaire will not occur until after demographic questions have been asked, although assignment will not be affected by responses to these questions.

relative to the Sarraounia interactive program and control on outcomes of interest in the aftermath of the encouragements. Individuals will be asked about their knowledge about various aspects of Nigerien politics (to test H_1); interest in politics, and actual engagement in and plans for future political action (H_2); confidence in one's own ability to affect political outcomes (H_3); support for institutions that promote accountability (H_4); and attitudes about in- and out-groups (partisan, religious, ethnic, policy communities), and attitudes about extremist positions and groups (H_5).

4.4.2 Data Processing

Data processing will be conducted after each survey, with estimated duration of two weeks per period. To facilitate recontact, subjects' names, mobile phone numbers, and household GPS coordinates will be collected. This information will be stored in a separate dataset, with subjects' responses to questions in pre- and post-treatment surveys maintained separately. Matching will be made possible with serial numbers that are unique to each subject. Raw and processed data will be stored by the contracted research firm for a period determined by the PI. Following completion of the last survey, data on subjects' names and mobile phone numbers will be destroyed. Processed data will be made publicly available after an embargo period, to allow for production of publications.

5 Empirical Analysis

5.1 Variables

As discussed previously, the primary outcomes of interest for the study include political knowledge, engagement, perceptions of internal efficacy, attitudes towards out-groups, and support for extremism. These variables will be collected in both the pre- and post-treatment

surveys. In addition, data on previous self-reported exposure to radio, sex, education level, ethnicity, wealth, and age will be collected in the pre-treatment survey.

This section describes the specific variables that we will use for testing each hypothesis. Indices will only be created in cases in which there is adequate internal consistency, which will be indicated by a Cronbach's alpha of at least 0.7. In cases in which such levels of internal consistency are not present, separate analyses will be run for each indicator.

H_1 : Political knowledge

The surveys will include five questions intended to measure political knowledge. Each outcome will be post-coded dichotomously, with 1 indicating a correct answer and 0 indicating an incorrect or "don't know" response. These dichotomous variables will then be summed to create a Knowledge index, which will range from 0 to 5. The questions will include:

[1] "According to the Constitution of Niger, what is the duration of the president's term?"

1=Five years, 0=Other answers/don't know

[2] "What percentage of the vote does a candidate need to win in order to be declared the winner of a presidential election in Niger?"

1=A majority, 0=Other answers/don't know

[3] "If you can, tell me the names of the following individuals: the prime minister"

1=Brigi Ranfini, 0=Other answers/don't know

[4] "If you can, tell me the names of the following individuals: the minister of agriculture and development"

1=Albade Aboouba, 0=Other answers/don't know

[5] "According to his own public declarations, is President Mahamadou Issoufou going to seek another term in the next elections?"

1=No, 0=Yes/don't know

H₂: Political engagement

First, subjects' level of interest in politics will be measured through a series of questions. Most directly, the survey will ask:

[1] "Some people think politics isn't important to them, while others find it touches their daily lives a lot. How interested would you say you are in politics? Would you say that you're not at all interested, not very interested, somewhat interested, or very interested?"

0=Not at all interested; 1=Not very interested; 2=Somewhat interested; 3=Very interested (don't know=missing)

Subjects will also be asked to assess the extent to which they discuss politics:

[1] "When you get together with friends or family, how much would you say you discuss political matters? Do you discuss them frequently, occasionally, or never?"

0=Never; 1=Occasionally; 2=Frequently (don't know=missing)

Subjects will also be asked ten questions, to gauge the extent to which they expect to participate in politics in the future. An index will be created from these individual variables, ranging from 0 to 30.

- [1] “Attend a community meeting”
- [2] “Get together with others to raise a public affairs issue”
- [3] “Call a radio station to discuss a public affairs issue”
- [4] “Write a comment on a website or social media about public affairs”
- [5] “Contact your Member of Parliament to give your views ”
- [6] “Contact an agent from a political party to give your views”
- [7] “Contact your commune representative or mayor to give your views”
- [8] “Contact a traditional leader to give your views”
- [9] “Contact someone from a government agency to give your views”
- [10] “ Participate in a protest”

0=Not likely at all; 1=A little likely; 2=Somewhat likely; 3=Very likely (don't know=missing)

Finally, a similar question will be asked, on likelihood of voting in the next elections:

- [1] “How likely do you think it is that you will vote in the next elections? Would you say you're very likely, somewhat likely, not very likely, or not likely at all?”

0=Not likely at all; 1=A little likely; 2=Somewhat likely; 3=Very likely (don't know=missing)

***H*₃: Internal efficacy**

The survey will ask a series of questions to gauge the extent to which the subject feels they can affect political change. First, subjects will be asked a general question:

- [1] “How much of an effect do you think someone like you can have on politics in our society?”

Do you think you can have a great deal of impact, a moderate amount of impact, only a little impact, or no impact at all?”

0=No impact at all; 1=Only a little impact; 2=Moderate amount of impact; 3=Great deal of impact (don't know=missing)

Next, subjects will rate the extent to which they believe others listen to them in political discussions:

[1] “How much do you think other people listen to what people like you have to say about politics? Do you think they listen a great deal, a moderate amount, only a little, or not at all?”

0=Not at all; 1=Only a little; 2=Moderate amount; 3=Great deal (don't know=missing)

Following this, subjects will rate, on a series of three issues, the extent to which they are confident that they could address the issue. An index will be created, which will range from 0 to 9.

[1] “Teacher misbehavior, such as absenteeism or mistreatment of students.”

[2] “Government officers, police, or school or clinic staff requesting bribes.”

[3] “Public health clinics that are understaffed or do not have enough medicines.”

0=Not confident at all; 1=Only a little confident; 2=Somewhat confident; 3=Very confident (don't know=missing)

All questions will be preceded by: “I’m going to read you a list of problems people often have with government. For each, please tell me how confident you are that, if you had that problem, you would know how to address it, or could easily find out. Would you feel very

confident, somewhat confident, only a little confident, or not confident at all?”

Subjects will also be asked to assess external efficacy, or the extent to which officials would do something to address the issues raised. Again, this index will range from 0 to 9.

[1] “Teacher misbehavior, such as absenteeism or mistreatment of students.”

[2] “Government officers, police, or school or clinic staff requesting bribes.”

[3] “Public health clinics that are understaffed or do not have enough medicines.”

0=Not confident at all; 1=Only a little confident; 2=Somewhat confident; 3=Very confident (don't know=missing)

All questions will be preceded by: “I’m going to read you the same list of problems again. For each, please tell me how confident you are that, if you actually raised the problem with officials, they would actually do something to address it. Would you feel very confident, somewhat confident, only a little confident, or not confident at all?”

Individuals will also be asked to assess the extent to which they feel they understand politics:

[1] “Please tell me whether you agree or disagree with the following statement: Sometimes politics and government seem so complicated that a person like me cannot really understand what is going on.” *If agree or disagree: “Do you strongly agree/disagree or only somewhat agree/disagree?”*

0=Agree, strongly; 1=Agree, somewhat; 2=Neither agree nor disagree; 3=Disagree, somewhat; 4=Disagree, strongly (don't know=missing)

Finally, subjects will be asked a general statement about citizens’ ability to affect positive

change via elections:

[1] “Which of the following statements is closest to your view? Choose Statement A or B.
Statement A: No matter whom we vote for, things will not get any better in the future.
Statement B: We can use the power as voters to choose leaders who will help us improve our lives. *If A or B: “Do you believe this strongly, or only somewhat?”*

0=A, strongly; 1=A, somewhat; 2=Neither A nor B; 3=B, somewhat; 4=B, strongly

Next, four questions will be used to indicate the extent to which the subject follows the opinion of a group or authority, or seeks to forge their own path. Responses will be summed to create a single Individual Agency index, ranging from 0 to 16.

[1] “When in a group, I usually go along with what the majority wants.”

*0=Agree strongly; 1=Agree somewhat; 2=Neither; 3=Disagree somewhat; 4=Disagree strongly
(don't know=missing)*

[2] “Life is confusing. The idea of letting other people tell me the right thing to do is appealing.”

*0=Agree strongly; 1=Agree somewhat; 2=Neither; 3=Disagree somewhat; 4=Disagree strongly
(don't know=missing)*

[3] “Sometimes people have to put aside their own opinions and just listen to the group.”

*0=Agree strongly; 1=Agree somewhat; 2=Neither; 3=Disagree somewhat; 4=Disagree strongly
(don't know=missing)*

[4] “It’s important that everyone know their place in society and not try to step outside of

that place.”

*0=Agree strongly; 1=Agree somewhat; 2=Neither; 3=Disagree somewhat; 4=Disagree strongly
(don't know=missing)*

These questions will all be preceded with “I am going to read you a number of statements. For each, tell me whether you agree strongly, agree somewhat, neither agree nor disagree, disagree somewhat, or disagree strongly.”

In a similar vein, three questions will be used to indicate the extent to which the subject believes it is important to share their opinion. Responses will be summed to create a single index, ranging from 0 to 9.

[1] “Keep quiet when talking with someone who disagrees with me just to avoid conflict.”

0=Frequently; 1=Occasionally; 2=Never” (don't know=missing)

[2] “Go along with what the group wants, even when I think it's wrong.”

0=Frequently; 1=Occasionally; 2=Never” (don't know=missing)

[3] “Disagree openly with people I know about controversial issues.”

0=Never; 1=Occasionally; 2=Frequently” (don't know=missing)

These questions will all be preceded with “I am going to read you a list of things people sometimes do. For each, please tell me how often you do each. Do you do it frequently, occasionally, or never?”

H₄: Support for accountability

The study will also examine the effects of the treatments on attitudes about limits on elites' power in Niger. Five questions will be used to generate an index, which will range from 0 to 20.

[1] "Statement A: Since the President of the Republic has been elected to lead the country, he should not be constrained by laws or judicial decisions he considers to be erroneous. Statement B: The President of the Republic must always obey laws and court decisions, even if he thinks they are wrong."

0=A, strongly; 1=A, somewhat; 2=Neither A nor B; 3=B, somewhat; 4=B, strongly (don't know=missing)

[2] "Statement A: The National Assembly should ensure that the President explains to it on a regular basis how his government spends taxpayers' money. Statement B: The President should be able to devote his full attention to developing the country rather than wasting time justifying his actions."

0=B, strongly; 1=B, somewhat; 2=Neither A nor B; 3=A, somewhat; 4=A, strongly (don't know=missing)

[3] "Statement A: After losing an election, opposition parties should monitor and criticize the government in order to hold it accountable. Statement B: Once an election is over, opposition parties and politicians should accept defeat and cooperate with the government to help it develop the country."

0=B, strongly; 1=B, somewhat; 2=Neither A nor B; 3=A, somewhat; 4=A, strongly (don't know=missing)

[4] “Statement A: The news media should constantly investigate and report on government mistakes and corruption. Statement B: Too much reporting on negative events, like government mistakes and corruption, only harms the country.”

0=B, strongly; 1=B, somewhat; 2=Neither A nor B; 3=A, somewhat; 4=A, strongly (don't know=missing)

[5] “Statement A: It is important to obey the government in power, no matter whom you voted for. Statement B: It is not necessary to obey the laws of a government that you did not vote for.”

0=A, strongly; 1=A, somewhat; 2=Neither A nor B; 3=B, somewhat; 4=B, strongly (don't know=missing)

These questions will all be preceded with “Which of the following statements is closest to your view? Choose Statement A or B. ” and followed by *If A or B*: “Do you believe this strongly, or only somewhat?”

Greater support for accountable institutions might also manifest in greater support for liberal democracy. We measure this through two questions, which will be used to generate an index, which will range from 0 to 8.

[1] “Statement A: Government should be able to ban any organization that goes against its policies. Statement B: We should be able to join any government, whether or not the government approves of it.”

0=A, strongly; 1=A, somewhat; 2=Neither A nor B; 3=B, somewhat; 4=B, strongly (don't know=missing)

[2] “Statement A: The media should have the right to publish any views and ideas without government control. Statement B: The government should have the right to prevent the media from publishing things that it considers harmful to society.

0=B, strongly; 1=B, somewhat; 2=Neither A nor B; 3=A, somewhat; 4=A, strongly (don't know=missing)

In a similar vein, individuals will be asked questions to measure the extent to which they support democracy and alternatives. These four questions will be used to generate an index, which will range from 0 to 16.

[1] “Statement A: Democracy is preferable to any other kind of government. Statement B: In some circumstances, a non-democratic government can be preferable.”

0=B, strongly; 1=B, somewhat; 2=Neither A nor B; 3=A, somewhat; 4=A, strongly (don't know=missing)

[2] “Allowing only one political party to stand for election and hold office.”

0=Approve strongly; 1=Approve somewhat; 2=Neither approve nor disapprove; 3=Disapprove somewhat; 4=Disapprove strongly (don't know=missing)

[3] “The army coming in to govern.”

0=Approve strongly; 1=Approve somewhat; 2=Neither approve nor disapprove; 3=Disapprove somewhat; 4=Disapprove strongly (don't know=missing)

[4] “Abolishing elections and the National Assembly so the president can decide everything.”

0=Approve strongly; 1=Approve somewhat; 2=Neither approve nor disapprove; 3=Disapprove somewhat; 4=Disapprove strongly (don't know=missing)

The first question will be preceded with “Which of the following statements is closest to your view? Choose Statement A or B. ” and followed by *If A or B*: “Do you believe this strongly, or only somewhat?” The second, third, and fourth questions will be preceded with: “There are many ways to govern a country. I’m going to read you a list of alternatives. For each, please tell me whether you strongly approve, somewhat approve, somewhat disapprove, or strongly disapprove.”

In a similar vein, the treatments might affect individuals’ sense that representatives should take their constituents’ opinions into consideration when formulating policy. This will be measured with two questions, which will be evaluated separately.

[1] “There are different ways of thinking about how our elected officials should act. Some people say that we elect officials to do whatever we as constituents want, and they should not take their own beliefs or experiences into account. Other people say that, when we elect officials, we should let them govern by making decisions on our behalf, and it is best that they not just follow whatever the public wants, because often the public doesn’t know what’s best for itself. Tell me which of the following statements is closest to your view. [A] Elected officials should only do what the public wants them to do, and they should leave their personal opinions out of their decisions. [B] Elected officials should mostly make decisions based on what the public wants, but it is acceptable for them to draw on their own opinions sometimes. [C] Elected officials should mostly rely on their own opinions and experiences when making decisions, but they should also take into account what the public wants. [D] Elected officials should rely only on their own opinions and experiences when making decisions, and they should not have to constantly follow what the public wants.”

0=D; 1=C; 2=B; 3=A (don't know=missing)

[2] “Which of the following statements is closest to your view? Choose Statement A or B. Statement A: It is more important to have a government that can get things done, even if we have no influence over what it does. Statement B: It is more important for citizens to be able to hold government accountable, even if it means it makes decisions more slowly.” *If A or B: “Do you believe this strongly, or only somewhat?”*

0=A, strongly; 1=A, somewhat; 2=Neither A nor B; 3=B, somewhat; 4=B, strongly (don't know=missing)

Finally, to the extent that the treatments affect attitudes about accountability, institutions, and regimes, they might affect support for theocratic government, or the influence of Islam in politics. We generate an index from the following five questions; the index will range from 0 to 20.

[1] “Democracy contradicts the teachings of Islam.”

0=Disagree strongly; 1=Disagree somewhat; 2=Neither agree nor disagree; 3=Agree somewhat; 4=Agree strongly (don't know=missing)

[2] “Religious leaders like imams should not try to influence politics.”

0=Agree strongly; 1=Agree somewhat; 2=Neither agree nor disagree; 3=Disagree somewhat; 4=Disagree strongly (don't know=missing)

[3] “Niger is better off when religious people are in government.”

0=Disagree strongly; 1=Disagree somewhat; 2=Neither agree nor disagree; 3=Agree somewhat; 4=Agree strongly (don't know=missing)

[4] “Niger is a predominantly Muslim country. Therefore, it is okay if non-Muslims have fewer rights than Muslims.”

0=Disagree strongly; 1=Disagree somewhat; 2=Neither agree nor disagree; 3=Agree somewhat; 4=Agree strongly (don't know=missing)

All questions are preceded by: “The opinions of Islamic jurists and religious scholars differ with regard to their interpretations of certain issues in Islam. I’m going to read you a series of statements. For each, please tell me whether you agree strongly, agree somewhat, disagree somewhat, or disagree strongly with the statement.”

***H*₅: Political moderation and attitudes towards out-groups**

As one indicator of moderation, we will measure the extent to which individuals have extremely strong feelings regarding confidence in leaders and institutions. Here, extremely high or extremely low levels of confidence will be considered indicative of less-moderate attitudes. Twelve questions will be used to construct this index, which will range from 0 to 24.

[1] “President Mahamadou Issoufou”

[2] “The National Assembly”

[3] “The Independent National Electoral Commission”

[4] “Your communal council”

[5] “The ruling party (*Parti Nigérien pour la Démocratie et le Socialisme*)”

[6] “Opposition parties”

[7] “Hama Amadou”

[8] “The police”

[9] “The national army”

[10] “The Constitutional Court”

[11] “Traditional leaders”

[12] “Religious leaders”

For all questions: *0=A little confidence; 0=Some confidence; 1=No confidence; 1=A lot of confidence (don't know=missing)*

In an alternate coding, “don’t know” responses will be set to 0.

Each question will be preceded by the following: “I’m going to read you a list of political actors. For each, please tell me how much you trust them. Do you trust them a lot, somewhat, just a little, or not at all?”

In a similar vein, we will measure the strength of individuals’ assessments of the government’s performance on a range of issues. Again, extremely positive or extremely negative assessments will be considered indicative of less-moderate attitudes. Fourteen questions will be used to construct this index, which will range from 0 to 28.

[1] “Managing the economy”

[2] “Improving living standards”

[3] “Creating jobs”

[4] “Making basic needs affordable”

[5] “Narrowing gaps between rich and poor”

[6] “Reducing crime”

[7] “Improving basic health services”

[8] “Addressing educational needs”

[9] “Providing water and sanitation services”

- [10] “Ensuring everyone has enough to eat”
- [11] “Fighting corruption in government”
- [12] “Building and maintaining roads and bridges”
- [13] “Providing reliable access to electricity”
- [14] “Improving the security situation in the country”

For all questions: *0=Fairly well; 0=Fairly badly; 1=Very well; 1=Very badly (don't know=missing)*

In an alternate coding, “don’t know” responses will be set to 0.

Each question will be preceded by the following: “Now let’s speak about the performance of the present government of Niger. I am going to read you a list of matters. Would you say that the government is going very well, fairly well, fairly badly, or very badly?”

Attitudinal strength will also be gauged with the following question, which is intended to measure the extent to which individuals think the incumbent president and party are considering the interests of the general public:

[1] “How much do you agree with the following statement: The president and ruling party look after the interests of all the people of Niger and not just after the interests of just their supporters? Do you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?”

0=Somewhat agree; 0=Somewhat disagree; 1=Strongly agree; 1=Strongly disagree (don't know=missing)

In an alternate coding, “don’t know” responses will be set to 0.

An additional question will be used to measure the extent to which subjects see major differences between the parties.

[1] “Would you say there are major policy differences between our country’s political parties, minor differences, or no differences at all?”

0=No differences at all; 1=Minor differences; 2=Major differences (don’t know=missing)

Next, the survey will measure the extent to which the subject supports inter-party cooperation. Those opposing cooperation between parties will be considered to have less-moderate attitudes.

[1] “Which do you think should be a higher priority for your party—cooperating and negotiating with other parties in the National Assembly, or sticking up only for your party’s own policies?” *If “cooperating” or “sticking up only for your party”*: “Do you believe this strongly, or only somewhat?”

0=Cooperating, strongly; 1=Cooperating, somewhat; 2=Sticking up for only party, somewhat; 3=Sticking up for only party, strongly (don’t know=missing)

Subjects will also be asked whether there are any parties for which they would never vote. Although this question will allow for multiple responses, since the number of parties a subject names is perhaps a stronger indicator of their political knowledge than their strength of feeling, this variable will be dichotomized.

[1] “Among the political parties in this country, are there any which you would never vote for, under any circumstances?”

0=No parties named, 1=One or more parties named (don’t know=missing)

The survey will also ask respondents to rate the characteristics of two leaders: the president and a major opposition figure. Again, stronger characterizations—whether positive or negative—will connote greater attitudinal extremism. Two indices will be created—one for the president, and one for the opposition figure. Each will range from 0 to 6.

For President Issoufou:

- [1] “Honest”
- [2] “Strong leader”
- [3] “Capable of bringing development to Niger”

All questions preceded by: “Please tell me how well you think these words or phrases describe President Mahamadou Issoufou. Do you think they describe him extremely well, somewhat well, a little, or not at all?”

0=Somewhat well; 0=A little; 1=Very well; 1=Not at all (don't know=missing)

In an alternate coding, “don’t know” responses will be set to 0.

The same set of questions will be asked for Hama Amadou (the opposition leader), with the same coding strategies.

The survey will also measure the strength of individuals’ attitudes, regarding how to address jihadist groups. Nine questions will be asked, with stronger attitudes—for or against the proposed strategy—indicating less moderation. The index will range from 0 to 18.

- [1] “The government should name imams by administrative decree.”
- [2] “Prohibit the wearing of the full veil.”

- [3] “Regulate and limit the number of places of worship by district or commune.”
- [4] “Monitor what goes on inside places of worship.”
- [5] “Review what preachers say and ban certain messages.”
- [6] “Monitor what people are saying on social media and in phone conversations.”
- [7] “Allow foreign governments to station troops in Niger.”
- [8] “Allow foreign troops to engage in combat missions on the ground in Niger.”
- [9] “Allow foreign governments to use drones and other aircraft to carry out strikes against targets in Niger.”

For all questions: *0=Somewhat support; 0=Somewhat oppose; 1=Strongly oppose; 1=Strongly support (don't know=missing)*

In an alternate coding, “don’t know” responses will be set to 0.

All questions will be preceded by: “I am going to read you a list of things that some people have argued the government of Niger should do to address perceived threats of jihadist and terrorist groups. For each, please tell me whether you would strongly support, somewhat support, somewhat oppose, or strongly oppose such a step.”

While the previous questions were aimed at measuring attitudinal strength on partisan or policy lines, another set of questions will measure attitudinal strength, or moderation, on ascriptive identity lines. First, two questions will be used to create an index measuring one’s support for inter-ethnic exchange. This index will range from 0 to 6.

- [1] “It’s better for young people to marry people only from the same ethnic group as their own.”

0=Strongly disagree; 1=Somewhat disagree; 2=Somewhat agree; 3=Strongly agree (don't

know=missing)

[2] “Communities usually function better when they are made up of only one ethnic group.”

0=Strongly disagree; 1=Somewhat disagree; 2=Somewhat agree; 3=Strongly agree (don't know=missing)

Both questions will be preceded by: “I’d now like to ask you some questions about how you feel about life here generally. I will read you a series of statements. Please tell me whether you agree strongly, agree somewhat, disagree somewhat, or disagree strongly with the statement.”

A separate question will be asked to measure the extent to which individuals support dialogue to solve inter-group problems.

[1] “Let’s imagine that there is a disagreement in a village over where to locate a new borehole. Which of the following do you think is the best way for to address the problem? A: Hold meetings in which everyone’s opinion can be heard, because sometimes a solution can come from an unexpected source, and it’s important to let everyone’s voice be heard. B: Trying to hear from too many people usually just leads to endless discussions that are a waste of time. The best solution would be to just let a small handful of leaders make a decision.” *If A or B: “How confident are you that this is the best solution? Are you very confident or only somewhat confident?”*

0=A, Very confident; 1=A, somewhat confident; 2=B, somewhat confident; 3=B, somewhat confident (don't know=missing)

The survey will also measure individuals’ willingness to consider alternate viewpoints. Here,

three questions will be used to create an index, which will range from 0 to 6.

[1] “Talk to people or listen to radio stations that I know I disagree with about controversial issues.”

0=Never; 1=Occasionally; 2=Frequently (don't know=missing)

[2] “Seek out information from sources, like people or radio stations, that I already know share my perspectives.”

0=Frequently; 1=Occasionally; 2=Never (don't know=missing)

[3] “Stop listening when people who have difference backgrounds than me are trying to tell me their stories, because they are probably just trying to manipulate me.”

0=Frequently; 1=Occasionally; 2=Never (don't know=missing)

All questions will be preceded by: “I am going to read you a list of things people sometimes do. For each, please tell me how often you do each. Do you do it frequently, occasionally, or never?”

Another set of questions will measure the extent to which an individual supports electoral malpractice, if such behavior would help their favored candidate win. The first question used here will ask generally about support for election fairness over a favorable outcome.

[1] “Thinking about elections in Niger, which of the following is closest to your own view. Choose Statement A or B. Statement A: I prefer that my candidate wins, even if the election is not completely free or fair. Statement B: I prefer an election that is completely free and fair even if my candidate does not win.” *If A or B: “Do you believe this strongly, or only*

somewhat?”

0=B, strongly; 1=B, somewhat; 2=Neither A nor B; 3=A, somewhat; 4=A, strongly (don't know=missing)

An index of support for specific kinds of electoral malpractice will then be created, from the following six items. The index will range from 0 to 18.²²

[1] “Spreading lies about opponents”

[2] “Using hateful language about opponents in the media”

[3] “Buying votes”

²²Subjects in the baseline will also participate in a survey experiment designed to test the extent to which participation in an electoral boycott harms a candidate’s subsequent popular support. Subjects will be assigned, at random, to one of three statements. The first will reference how an opposition coalition—the Coalition for an Alternative (COPA)—did not win the 2016 election. The second will reference that COPA did not win because it boycotted the final vote in that election, and the third will reference COPA’s stated reasoning (i.e., that it had concerns about the constitutional court’s independence and proper following of procedures when announcing vote totals). Following these, all subjects will be asked how much they would be willing to consider a candidate from COPA seeking the presidency in the next election, in 2021. We theorize that the reference to boycotting will reduce support for the candidate, but that this reduction in support will be lessened by presenting reasons for the boycott. Additionally, the treatment indicator will be interacted with an indicator for support for the opposition, following the expectation that opposition-supporting subjects will not punish candidates for boycotting, while incumbent-supporting subjects will.

[4] “Stuffing ballot boxes”

[5] “Trying to intimidate people from turning out to vote”

[6] “Using violence”

0=Strongly oppose; 1=Somewhat oppose; 2=Somewhat support; 3=Strongly support (don't know=missing)

Each question will be preceded by: “I am now going to read you a list of things that parties often do during elections. If it were necessary to win the election, would you strongly support a party or candidate you favor engaging in such an activity, somewhat support it, somewhat oppose it, or strongly oppose it engaging in such an activity.”

In a similar vein, a series of questions will ask whether the subject would, under certain circumstances, support violence. Since there are four items, and each is dichotomous, this index will range from 0 to 4.

[1] “To protect your community from physical harm from others”

[2] “To protect your land or other property from theft by others”

[3] “To solve disagreements over access to land”

[4] “To exact retribution on another community for harm they have caused to members of your community”

0=No, 1=Yes (don't know=missing)

5.2 Balance Checks

Checks will be conducted on balance across conditions in the baseline, with attention to individual-level variables including previous self-reported exposure to radio, sex, education

level, wealth, ethnicity, and age. T-tests will be conducted for continuous variables, chi-square tests for categorical and dummy variables, and Wilcoxon-Mann-Whitney tests for ordinal variables.

In testing the difference in effects on outcomes of interest between the two radio treatments, it is important to recognize that the subject matter across programs was not identical. Thus, differences in effects on outcomes might stem from differences in subject matter. In order to check the extent to which the programming content, rather than style, might be responsible for any observed differences, subjects will be asked the extent to which they find the subjects discussed on each program across all weeks to be interesting. Then, checks will be conducted among those in the control group, to determine the extent to which there are significant differences in the popular levels of interest in the two stations' programming during the study period.

5.3 Treatment Effects

5.3.1 Intent to Treat

Subjects will be differentiated according to their treatment assignment; for these analyses, neither self-reported exposure to the study programs nor ability to correctly answer questions about the program of assignment during phone quizzes will be considered.

Hypotheses will be tested by calculating differences-in-differences estimators and supplemented by regressions that adjust for individual-level covariates. Individual-level covariates will include previous self-reported exposure to radio, sex, education level, wealth, ethnicity, and age.

5.3.2 Treatment on the Treated

It is likely that some subjects will not follow protocols (e.g., those assigned to *Le Forum* will not listen to that program, while those assigned to the call-in program will listen to *Le Forum*). Even those who make efforts to listen to their assigned program—and thus eschew the alternative—might receive particularly low doses, by listening far less frequently than every week. The regular phone quizzes will not only serve to minimize non-compliance, but also as a manipulation check. In the endline, subjects will also be asked directly the extent to which they listen to these programs, and similar programs, during the previous six weeks.

The treatment’s effects on those who actually report exposure to the assigned programs will be estimated using instrumental variables regression (Angrist and Krueger 2001). For each analysis, the assigned treatment will be used to estimate the unbiased relationship between self-reported actual exposure to the assignment treatment and the outcome of interest.²³

5.4 Heterogeneous Effects

Regression analyses will also be conducted to check for heterogeneous treatment effects, through use of interactions. Specifically, it is particularly likely that individuals’ responses to assigned programs might vary according to sex and education. First, in an environment in which women’s political engagement and knowledge are severely restricted by social norms and limited levels of human, social, and financial capital (Kang 2015), we might expect that exposure to the radio treatments will have larger-than-average effects for female subjects, given such messages’ novelty. On the other hand, it is possible that, because of these barriers,

²³For an example of such a strategy using an experimental media intervention, see Paluck (2010).

women will not be adequately equipped to interpret the messages they hear, or feel so many internal and external pressures against political engagement that exposure simply cannot improve their performance in these areas. In that case, women might be less likely to experience change as a result of exposure than men.

Next, the effects of education will also be explored. Again, we might expect that individuals with lower levels of education might see larger gains as a result of exposure to *Le Forum*, because of the novelty of such programming for them. On the other hand, individuals with lower levels of formal education might see smaller gains, because they lack the knowledge base and cognitive skills necessary to interpret the messages they hear.

These analyses will be run using the specifications described above, for those offered the treatment (ITT) and those identified as treated (TOT).

5.5 Standard Error Adjustments

Analyses will be conducted with and without clustering on localities.

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References

- Abdi, Jamal, and James Deane. 2008. *The Kenyan 2007 Elections and Their Aftermath: The Role of Media and Communication*. BBC World Service Trust.
- Aker, Jenny C., Paul Collier, and Pedro C. Vicente. 2017. “Is Information Power? Using Mobile Phones and Free Newspapers During an Election in Mozambique.” *Review of Economics and Statistics* 99 (2): 185–200.
- Angrist, Joshua D., and Alan B. Krueger. 2001. “Instrumental Variables and the Search for Identification: From Supply and Demand to Natural Experiments.” *Journal of Economic Perspectives* 15 (4): 69–85.
- Ansolabehere, Stephen, and Shanto Iyengar. 1995. *Going Negative: How Attack Ads Shrink and Polarize the Electorate*. New York: Free Press.
- Bandura, Albert. 1976. *Social Learning Theory*. Englewood Cliffs, NJ: Prentice Hall.
- . 1997. *Self-Efficacy*. New York: Freeman.
- Banerjee, Abhijit, Selvan Kumar, Rohini Pande, and Felix Su. 2011. “Do Informed Voters Make Better Choices? Experimental Evidence from Urban India.” Working Paper.
- Barsoum, Ghada, Bruno Crépon, Drew Gardiner, Bastien Michel, Marwa Moaz, and William Parienté. 2017. “Evaluating the Effects of Entrepreneurship Edutainment in Egypt.” Working Paper.
- Berg, Gunhild, and Bilal Zia. 2017. “Harnessing Emotional Connections to Improve Financial Decisions: Evaluating the Impact of Financial Education in Mainstream Media.” *Journal of the European Economic Association* 15 (5): 1025–55.

- Besley, Timothy, and Robin Burgess. 2001. "Political Agency, Government Responsiveness and the Role of the Media." *European Economic Review* 45 (4): 629–640.
- Bidwell, Kelly, Rachel Glennerster, and Katie Parry. 2015. "The Impact of Voter Knowledge Initiatives in Sierra Leone." Working Paper.
- Bjorvatn, Kjetil, Alexander W Cappelen, Linda Helgesson Sekei, Erik Sorensen, and Bertil Tungodden. 2015. "Teaching Through Television: Experimental Evidence on Entrepreneurship Education in Tanzania." Working Paper.
- Bourgault, Louise. 1995. *Mass Media in Sub-Saharan Africa*. Bloomington: Indiana University Press.
- Bratton, Michael, and Nicolas van de Walle. 1997. *Democratic Experiments in Africa: Regime Transitions in Comparative Perspective*. Cambridge: Cambridge University Press.
- Brierley, Sarah, Eric Kramon, and George Oforu. 2017. "The Short-Term Moderating Effect of Debate on Political Attitudes: Evidence from a Field Experiment in Ghana." Working Paper.
- Casey, Katherine. 2015. "Crossing Party Lines: The Effects of Information on Redistributive Politics." *American Economic Review* 105 (8): 2410–48.
- Chong, Alberto, Ana L. De La O, Dean Karlan, and Leonard Wantchekon. 2015. "Does Corruption Information Inspire the Fight or Quash the Hope? A Field Experiment in Mexico on Voter Turnout, Choice, and Party Identification." *Journal of Politics* 77 (1): 55–71.
- Conroy-Krutz, Jeffrey. 2013. "Information and Ethnic Politics in Africa." *British Journal of Political Science* 43 (2): 345–73.

- Conroy-Krutz, Jeffrey. 2018. "Media Exposure and Political Participation in a Transitional African Context."
- Conroy-Krutz, Jeffrey, and Devra Moehler. 2015. "Moderation from Bias: A Field Experiment on Partisan Media in a New Democracy." *Journal of Politics* 77 (2): 575–87.
- DellaVigna, Stefano, and Ethan Kaplan. 2007. "The Fox News Effect: Media Bias and Voting." *Quarterly Journal of Economics* 122 (3): 1187–234.
- Ferraz, Claudio, and Frederico Finan. 2008. "Exposing Corrupt Politicians: The Effects of Brazil's Publicly Released Audits on Electoral Outcomes." *Quarterly Journal of Economics* 123 (2): 703–745.
- Finkel, Steven E., Reynaldo T. Rojo-Medozza, Casside L. Schwartz, Chris A. Belasco, and Anne-Kathrin Kreft. 2015. "Impact Evaluation of Peace Through Development II (PDEV-II) Radio Programming in Chad and Niger." USAID Contract Number GS-10F-004N/AID-624-M-13-00001. The Mitchell Group, Washington, D.C.
- Fitzgerald, John, Peter Gottschalk, and Robert Moffitt. 1988. "An Analysis of Sample Attrition in Panel Data: The Michigan Panel Study of Income Dynamics." *Journal of Human Resources* 33 (2): 261–99.
- Gentzkow, Matthew. 2006. "Television and Voter Turnout." *Quarterly Journal of Economics* 121 (3): 931–972.
- Gerber, Alan, James G. Gimpel, Donald P. Green, and Daron R. Shaw. 2011. "How Large and Long-Lasting are the Persuasive Effects of Televised Campaign Ads? Results from a Randomized Field Experiment." *American Political Science Review* 105 (1): 135–150.

- Gerber, Alan, Dean Karlan, and Daniel Bergan. 2009. "Does the Media Matter? A Field Experiment Measuring the Effect of Newspapers on Voting Behavior and Political Opinions." *American Economic Journal: Applied Economics* 1 (2): 35–52.
- Gottlieb, Jessica. 2015. "The Logic of Party Collusion in a Democracy: Evidence from Mali." *World Politics* 67 (1): 1–36.
- . 2016. "Greater Expectations: A Field Experiment to Improve Accountability in Mali." *American Journal of Political Science* 60 (1): 143–157.
- Green, Donald P., and Vasudevan Srinivasan. 2016. "Diminishing the Effectiveness of Vote Buying: Experimental Evidence from a Persuasive Radio Campaign in India." Working Paper.
- Hasty, Jennifer. 2005. *The Press and Political Culture in Ghana*. Bloomington: Indiana University Press.
- Humphreys, Macartan, and Jeremy Weinstein. 2012. "Politicizing Politicians: Citizen Empowerment and Political Accountability in Uganda." Working Paper.
- Hydén, Göran, Folu Ogundimu, and Michael Leslie. 2003. *Media and Democracy in Africa*. New Brunswick, NJ: Transaction Publishers.
- Jerit, Jennifer, Jason Barabas, and Scott Clifford. 2013. "Comparing Contemporaneous Laboratory and Field Experiments on Media Effects." *Public Opinion Quarterly* 77 (1): 256–282.
- Kang, Alice J. 2015. *Bargaining for Women's Rights: Activism in an Aspiring Muslim Democracy*. Minneapolis: University of Minnesota Press.
- La Ferrara, Eliana. 2016. "Mass Media and Social Change: Can We Use Television to Fight Poverty?" *Journal of the European Economic Association* 14 (4): 791–827.

- La Ferrera, Eliana. 2016. *Media as a Tool for Institution Change in Development*. EDI Working Paper Series (WP16.10.III.4).
- Larreguy, Horacio A., John Marshall, and James M. Snyder Jr. 2015. "Publicizing Malfeasance: When Media Facilitates Electoral accountability in Mexico." Working Paper.
- Lawson, Chappell. 2002. *Building the Fourth Estate: Democratization and the Rise of a Free Press in Mexico*. Berkeley: University of California Press.
- Levendusky, Matthew. 2013. *How Partisan Media Polarize America*. Chicago: University of Chicago Press.
- Longley, Anita, and Patricia Rice. 1968. "Prediction of Tropospheric Radio Transmission Loss Over Irregular Terrain. A Computer Method-1968." Environmental Science Services Administration (Technical Report ERL 79-ITS 6).
- Moehler, Devra, and Jeffrey Conroy-Krutz. 2016. "Partisan Media and Engagement: A Field Experiment in a Newly Liberalized System." *Political Communication* 33 (3): 414–32.
- Mullainathan, Sendhil, Ebonya Washington, and Julia R. Azari. 2010. "The Impact of Electoral Debate on Public Opinions: An Experimental Investigation of the 2005 New York City Mayoral Election." In *Political Representation*, edited by Ian Shapiro, Elizabeth Wood, and Alexander S. Kirshner. New York: Cambridge University Press.
- Murray, Joanna, Pieter Remes, Rita Ilboudo, Mireille Belem, Souleymane Salouka, Will Snell, Cathryn Wood, Matthew Lavoie, Laurent Deboise, and Roy Head. 2015. "The Saturation+ Approach to Behavior Change: Case Study of a Child Survival Radio Campaign in Burkina Faso." *Global Health: Science and Practice* 3 (4): 544–556.
- Nyamnjoh, Francis B. 2005. *Africa's Media: Democracy and the Politics of Belonging*. London: Zed Books.

- Olken, Benjamin A. 2009. "Do Television and Radio Destroy Social Capital? Evidence from Indonesian Villages." *American Economic Journal: Applied Economics* 1 (4): 1–33.
- Paluck, Elizabeth Levy. 2009. "Reducing Intergroup Prejudice and Conflict Using the Media: A Field Experiment in Rwanda." *Journal of Personality and Social Psychology* 96 (3): 574.
- . 2010. "Is it Better Not to Talk? Group Polarization, Extended Contact, and Perspective Taking in Eastern Democratic Republic of Congo." *Personality and Social Psychology Bulletin* 36 (9): 1170–1185.
- Paluck, Elizabeth Levy, and Donald P. Green. 2009. "Deference, Dissent, and Dispute Resolution: An Experimental Intervention Using Mass Media to Change Norms and Behavior in Rwanda." *American Political Science Review* 103 (4): 622–644.
- Reinikka, Ritva, and Jakob Svensson. 2005. "Fighting Corruption to Improve Schooling: Evidence from a Newspaper Campaign in Uganda." *Journal of the European Economic Association* 3 (2-3): 259–267.
- Snyder, Jack, and Karen Ballentine. 1996. "Nationalism and the Marketplace of Ideas." *International Security* 21 (2): 5–40.
- Strömberg, David. 2004. "Radio's Impact on Public Spending." *Quarterly Journal of Economics*: 189–221.
- USAID. 2011. *Midterm Evaluation of USAID's Counter-Extremism Programming in Africa*. Technical report.
- Wooldridge, Jeffrey M. 2002. "Inverse Probability Weighted M-estimators for Sample Selection, Attrition, and Stratification." *Portuguese Economic Journal* 1 (2): 117–139.

Yanagizawa-Drott, David. 2014. "Propaganda and Conflict: Evidence from the Rwandan Genocide." *The Quarterly Journal of Economics* 129 (4): 1947–1994.

Zavodny, Madeline. 2006. "Does Watching Television Rot Your Mind? Estimates of the Effect on Test Scores." *Economics of Education Review* 25 (5): 565–573.