

Personal Narratives Reduce Negative Attitudes toward Refugees and Immigrant Outgroups: Evidence from Kenya*

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Abstract

The global refugee crisis and public backlash against immigration is at an all time high – especially toward Muslims in Christian-majority countries due to the perceived association with global terrorism. Building on theories from the communications field, we propose that listening to personal narratives may be an effective strategy for mitigating negative views of immigrant outgroups. We record two personal narratives developed in collaboration with Somalis in Kenya: one highlighting the hardships refugees face, and a second highlighting shared opposition to terrorism among Muslims and Christians. Experimental data from a representative survey in Nairobi shows that both treatments have positive effects on intergroup and policy attitudes. Strikingly, the effects are generally *as large or larger* among those who hold more negative baseline views. In contrast to many informational interventions, personal narratives offer an effective strategy for attenuating both negative intergroup and policy attitudes that are typically considered resistant to change.

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“I will put it bluntly, it’s tough being a Somali in Kenya. Being viewed as “the other” in society, being viewed with suspicion everywhere you go, is an arduous task. For instance, I cannot go anywhere, to the shops or the mosque, without carrying my ID card. I carry it when I go jogging. I was once stopped by police while jogging in Kileleshwa, but I had my ID, otherwise I would have been arrested. My passport is full now, and I am dreading the process, and scrutiny, of applying for one.” – Abdi Latif Dahir¹

Propelled by violence, instability, and persecution, the number of refugees and immigrants is globally at an all-time high (UNHCR 2018). Public backlash toward refugee and immigrant communities is also on the rise (Dancygier & Laitin 2014; Whitaker 2017). Opposition among host-country nationals is especially acute for Muslims in Christian-majority countries due to a perceived association with Islamic terrorism (Creighton & Jamal 2015; Merolla & Zechmeister 2009). However, while a vast scholarship examines the sources of anti-immigrant sentiments (Hainmueller & Hopkins 2014), we know less about the types of interventions, especially low-cost scalable interventions, that can counter such attitudes (Paluck & Green 2009).

This study investigates one potentially powerful way to reduce negative views of *immigrant outgroups* – refugees, immigrants, and longtime citizens sharing their ethnicity – that together comprise marginalized communities (Dancygier & Laitin 2014; Whitaker 2017). We examine whether negative intergroup and policy attitudes towards an immigrant outgroup can be combatted through exposure to *personal narratives* that convey experiences or perspectives from members of the community in their own voices. Changing attitudes may be a tall order: many have noted the stickiness of political attitudes on salient issues like immigration, as well as individuals’ propensity to engage in motivated reasoning – rejecting or dismissing information that conflicts with prior views (Taber & Lodge 2006). However, according to transport theory in the communications literature (e.g., Green & Brock (2000)), personal narratives may circumvent such cognitive processes by immersing the audience in the narrative, thereby reducing the tendency to counter-argue or dismiss new information or perspectives. A related body of scholarship

¹Journalist, Founder of Sahan Journal in “Take 5: Abdi Latif Dahir” *The Daily Nation* (online), March 3, 2017

builds on transport theory to show that “edutainment” interventions that embed educational messages in mass media programming offer an effective strategy for changing attitudes and behaviors, particularly in the public health field (Grady *et al.* 2019).

We investigate the power of personal narratives to reduce backlash toward immigrant outgroups by examining attitudes toward Somalis in Kenya, a marginalized community comprised of both refugees and longtime citizens. Kenya hosts one of the largest refugee populations in the world, with Somalis constituting the largest group. Advocacy organizations note that public opinion towards the Somali community, and policies aimed to benefit it, is increasingly negative due to the rise in terrorism perpetrated in Kenya by Al-Shabaab, an insurgent group based in southern Somalia (IRC 2018). Such organizations note that negative media portrayals contribute to the public association of Somalis with security threats. We confirm this supposition by analyzing media coverage in Kenya’s leading newspaper: over 75% of articles regarding Somalis mention violence and security threat. The widespread association of the Somali community with violent extremism has led to public calls, including by the president and other top officials, to close the refugee camps and repatriate hundreds of thousands of refugees despite on-going violence in Somalia.

We collaborate with members of the Somali community in Nairobi to develop two personal narratives. The first, recorded by a Somali refugee, emphasizes the challenges refugees encounter in leaving their home country, along with expressions of gratitude to the Kenyan public. The second, recorded by a Somali Kenyan (i.e., a Kenyan citizen of Somali ethnicity), conveys shared opposition to Islamic terrorism in Kenya between Muslim Somalis and Christian Kenyans. To examine their effects, we implement a survey experiment as part of a large in-person survey (n=1,112) in Nairobi in which non-Somali Kenyans are exposed to an audio recording of one of the treatments or a control condition.

We find that personal narratives affect a range of xenophobic intergroup and policy attitudes. The data show six and nine percentage point increases on composite indices of

outcome measures for the refugee hardship and anti-terror narratives, respectively, and large and substantively meaningful changes on several component items. For example, the refugee hardship narrative increased the share of refugees deemed eligible for citizenship by 7 percentage points and support for keeping Dadaab, the main camp where Somali refugees reside, open (rather than forcibly repatriating all residents) by 17 percentage points. The anti-terror narrative increased perceptions of Somalis as peaceful by 10 percentage points and led to a 14 percentage point increase in the view that Kenyan Somalis ought to remain citizens of Kenya rather than repatriated to Somalia.

We examine whether these effects are merely the result of “preaching to the choir” – that is, bolstering views among those already positively predisposed – or whether effects are also found among those who hold more negative baseline views of Somalis. We explore heterogeneous effects across a range of factors associated in the literature with opposition to immigrant outgroups based on perceived cultural, economic, and security threats, as well as low inter-group contact (e.g., Dancygier & Laitin (2014); Hainmueller & Hopkins (2014)). Strikingly, treatment effects are generally *as large or larger* among respondents who (1) implicitly associate Somalis with violence; (2) view Somali refugees as a labor market threat; (3) perceive greater cultural dissimilarities between Muslims and Christians; and (4) have less contact with Somalis.

These positive findings contribute to a recent scholarship on low-cost, scaleable informational interventions designed to reduce backlash toward immigrant outgroups, as well as a larger literature on drivers of attitudinal change. Prior informational interventions, which convey facts, statistics, or examples, have often found limited success, especially regarding policy attitudes, and often do not explore whether effects obtain only among the positively predisposed.² Further, our results relate to recent work on interpersonal

²Correcting misperceptions on immigrant flows have had mostly null effects (e.g., Adida *et al.* (2018); Alesina *et al.* (2018); Hopkins *et al.* (2019)), while correcting misperceptions regarding socioeconomic characteristics of immigrant outgroups have found positive effects limited to intergroup (but not policy) attitudes (Grigorieff *et al.* 2018; Williamson 2019). Highlighting positive benefits or examples improves policy attitudes in some contexts (Alesina *et al.* 2018; Facchini *et al.* 2016), while pointing to positive benefits (as well as negative costs) have null or negative effects elsewhere (Getmansky *et al.* 2018). Related

interactions and attitudes towards transgender individuals and illegal immigrants (Kalla & Broockman 2020), which find that standard in-person canvassing bundling multiple elements — social contact, perspective-taking, correcting misperceptions, and positive arguments — is only effective in changing attitudes when canvassers and respondents exchange personal narratives and the canvasser employs non-judgmental active listening tools to the respondent’s story. Promisingly, our study shows that simply *listening* to a pre-recorded personal narrative from a member of an immigrant outgroup absent in-person exchanges and other intervention tools is a powerful way to counter both negative intergroup and policy attitudes, even among the negatively predisposed. Our results thus join broader research on edutainment-style narrative interventions aimed at mitigating intergroup tensions through consumption of messages embedded in narratives (Bilali & Vollhardt 2013; Grady *et al.* 2019; Paluck 2009). Indeed, this evidence lends support to efforts to highlight personal experiences of refugees and immigrants in the mass media (see examples in Supplemental Information (SI) A).

Second, this study expands knowledge of public attitudes towards immigrant outgroups in the Global South, which despite hosting over 80% of the world’s refugees, has received much less attention. Such attitudes need more attention due to the differing nature of Global South contexts and immigrant outgroup dynamics (e.g., Adida (2011); Hartman & Morse (2015); Whitaker (2017); Zhou (2018) and related work by Scacco & Warren (2018)). With discrimination and violence on the rise toward immigrant outgroups in the Global South (Adepoju 1982; Whitaker & Giersch 2015), it is especially important to expand scholarship in this area.

Finally, this study contributes to broader methodological efforts among political scientists to involve the actors we study in the design of research programs. This imperative is especially important for experimental interventions aimed at improving the welfare of marginalized groups (Michelitch 2018; Thachil 2018).

studies show engaging in perspective-taking exercises boosts positive behaviors but not attitudes (Adida *et al.* 2018) or intergroup attitudes and vote intentions (Simonovits *et al.* 2018).

Combating Backlash towards Immigrant Outgroups

A voluminous literature examines opposition to immigrant outgroups³ in the Global North, and more recently, the Global South.⁴ Negative views are often rooted in misperceptions about the size of immigrant outgroups, their characteristics, or the costs of providing government services – perceptions that underlie cultural, economic, or security threat (Hainmueller & Hopkins 2014). Given that host-country citizens typically have little direct contact with members of immigrant outgroups, such misperceptions are often fueled by the media, where negative portrayals predominate (Brader *et al.* 2008), and in some cases are compounded by scapegoating from political leaders (Whitaker & Giersch 2015). These factors are particularly relevant to Muslims in Christian-majority countries, where the perceived association with global terrorism contributes to negative perceptions (e.g., (Creighton & Jamal 2015; Merolla & Zechmeister 2009)).⁵

This study expands a burgeoning scholarship aimed at discovering whether negative attitudes towards immigrant outgroups, and policies that benefit them, can be combatted through informational interventions that have the potential to be scaled at low cost (e.g., through mass or social media).⁶ There is good reason for skepticism about such interventions. Political attitudes regarding salient issues like immigration are often thought to be relatively fixed and difficult to change, and cognitive biases may lead individuals

³We use the term “immigrant outgroup” to refer to communities that include refugees and immigrants alongside longtime citizens that share their ethnicity and are often perceived as immigrants or foreigners by other members in society. Frequently studied immigrant outgroups include Latinos in the U.S. (e.g., Brader *et al.* (2008)), and groups from former colonies in Europe (e.g., Adida *et al.* (2010)).

⁴Scholarship on Africa notes that in many cases immigrant outgroups trace their origin to the arbitrary borders imposed by colonial powers that routinely divided ethnic communities between two or more countries (e.g., Adida (2011); Asiwaju (2003); Hartman & Morse (2015); Zhou (2018)). Oftentimes little distinction is made between longtime citizens and recently-arrived members of the same group from neighboring countries, as with the Somali in Kenya, described below.

⁵Although the link between Muslim immigrants and political violence in Christian-majority countries is thin, negative attitudes towards Muslims are often more commonplace and less subject to social desirability constraints than for other groups (Adida *et al.* 2010; Creighton & Jamal 2015).

⁶This study also connects to the broader literature on mitigating intergroup tensions (Paluck & Green 2009). A complementary vein of scholarship examines in-person contact, yielding mixed results on attitudinal change (e.g., Kalla & Broockman (2020); Scacco & Warren (2018)). One advantage of the treatments studied here relative to in-person interventions is that they are less demanding logistically and financially, and may thus be more scalable.

to reject or dismiss new information that runs counter to ingrained beliefs (e.g., Taber & Lodge (2006)). Moreover, prejudice toward outgroups is thought to be especially resistant to change (Grady *et al.* 2019; Paluck & Green 2009).

Indeed, attempts to reduce negative attitudes towards immigrant outgroups through informational interventions have had mixed success. Exposure to statistical information intended to correct misperceptions about the size of immigrant flows has yielded null results in multiple contexts (Adida *et al.* 2018; Alesina *et al.* 2018; Hopkins *et al.* 2019). While individuals may update their beliefs, attitudes towards immigrant outgroups remain unchanged.

Other types of information interventions have shown more promise. Exposure to statistical information that corrects misperceptions about socioeconomic characteristics – including employment status, incarceration rate, and language proficiency (Grigorieff *et al.* 2018) or hobbies, attitudes towards political violence, and the importance of national identity (Williamson 2019) – has been shown to be effective in improving intergroup attitudes in the U.S., with less consistent effects on policy views. In others studies, interventions that highlight the economic benefits of immigration have shifted policy attitudes by showing that immigrants are hardworking in Europe and the U.S. (Alesina *et al.* 2018), or by emphasizing the role of immigrants in addressing the workforce challenges faced by an aging population in Japan (Facchini *et al.* 2016). However, null and negative results were found in Turkey when individuals were exposed to messages emphasizing various benefits (and costs) associated with hosting Syrian refugees (Getmansky *et al.* 2018). Finally, of these studies, only Grigorieff *et al.* (2018) and Williamson (2019) investigate the critical question of whether positive effects stem simply from “preaching to the choir,” with both studies finding that effects were stronger among negatively predisposed participants.

In this study, we examine the effect of exposure to personal narratives from members of an immigrant outgroup that aim to address core anxieties among members of the

broader population. Personal narratives are communicative devices typically involving one or more characters, a series of events, and a coherent structure and context (Green & Brock 2000). Such narratives are routinely used by refugee or immigrant advocacy groups in their fundraising materials and on their websites, and occasionally by news outlets in reporting that aims to soften attitudes towards such groups (SI A provides illustrative examples).

Communications scholars have long regarded the personal narrative as an effective strategy for changing real world attitudes and behaviors (Braverman 2008; Green & Brock 2000, 2002; Krause & Rucker 2019), and although mixed findings abound, in many instances personal narratives are more effective than factual information (Braverman 2008; De Wit *et al.* 2008; Shen *et al.* 2015). The central idea is that when individuals are cognitively and emotionally immersed or “transported” into others’ experiences and perspectives, they are less likely to counter-argue and are therefore more receptive to persuasion by new information and perspectives (Green & Brock 2000; Nabi & Green 2015; Van Laer *et al.* 2013). Krause & Rucker (2019), for example, note that personal narratives “can capture attention, evoke emotion, and entrance listeners in a manner that reduces resistance to a message” (p. 1).

Personal narratives are thought to enhance persuasion through several related channels (Busselle & Bilandzic 2009). Audiences tend to give speakers relating personal experiences and perspectives added benefit of the doubt and, in some cases, may passively adopt their viewpoints (Krakow *et al.* 2018). It is difficult to discount or reject someone’s personal experiences (Chung & Slater 2013). Immersion in a personal narrative is also thought shift cognitive processing away from message-countering thoughts, because such thoughts lower the utility from engaging with the narrative (De Wit *et al.* 2008; Krakow *et al.* 2018). Thus, in one particularly relevant example, Wojcieszak & Kim (2016) find that, following a news article on illegal immigration, an additional commentator comment in narrative form caused greater self-reported immersion in the news article

relative to a factual comment.

Further, personal narratives may reduce negative backlash by evoking empathy toward the speaker through perspective-taking (Busselle & Bilandzic 2009; Nabi & Green 2015). Several recent studies in political science have shown perspective-taking exercises (e.g., imagining losing one's home, what one would bring, where one would go, etc) to be effective in improving attitudes or behaviors toward immigrant outgroups, in Hungary (Simonovits *et al.* 2018) and the US (Adida *et al.* 2018). Relatedly, Hartman & Morse (2015) suggest that inducing perspective-taking and empathy through survey questions evoking past vulnerability to civil war violence increased positive sentiments towards immigrant outgroups in Liberia.

For these reasons, personal narratives may be effective in contexts where motivated reasoning might otherwise lead individuals to reject or dismiss new information that runs counter to prior belief. Consistent with this idea, transport theory is often invoked as the foundation for a wide range of “edutainment” endeavors, where persuasive messages are embedded in dramatic narratives broadcast over mass media (see review in Grady *et al.* (2019)). While edutainment initially focused on children's learning, it has also been widely used for public health messaging, and post-conflict reconstruction aimed at adults. Promisingly, one edutainment study found that priming a well-known peace and reconciliation edutainment-style radio narrative (conducting the interview in the voice of a character) mitigated negative intergroup attitudes in the aftermath of civil war and genocide (Bilali & Vollhardt 2013). The idea of immersion and transport has also emerged in research studying interpersonal contact as a possible reason why interpersonal contact that involves exchange of personal experiences with an issue is more effective (Kalla & Broockman 2020).⁷

⁷In a novel study, the authors examine the ability of interpersonal contact to reducing negative stereotyping in door-to-door canvassing in the US regarding transgender individuals and illegal immigrants. They find standard canvassing practices (e.g., correcting factual misinformation, persuasive argumentation, and perspective-taking) only work when canvassers and residents additionally add an exchange of personal experiences coupled with canvassers employing active non-judgmental listening skills to residents' stories.

Yet, there are reasons why listening to someone's personal narrative may not be effective at countering negative political attitudes on controversial issues (like immigration). First, most previous research on listening to personal narratives in the communications field focuses on uncontentious topics that are unlikely to generate biased information processing, such as motivated reasoning (Wojcieszak & Kim 2016). When individuals have strong negative predispositions towards an outgroup, they may resist immersion and perspective-taking, limiting the potential for attitudinal change (Bilali & Vollhardt 2013). Similarly, while edutainment is thought to be effective when messages help facilitate pre-existing goals, as with public health interventions, it is thought to be less effective when they do not, as may be the case with interventions aimed at improving intergroup relations (Grady *et al.* 2019).

Second, even if personal narratives succeed in increasing acceptance of the narrator's perspective, they may fail to move attitudes (Wojcieszak & Kim 2016).⁸ Rather than change personal attitudes, they may only change beliefs about social norms - beliefs about others' attitudes (Paluck 2009). Moreover, Feldman *et al.* (2020) caution that empathy can also bump up against cognitive biases: individuals can "down-regulate" their empathy towards groups they dislike when confronted with their experiences.

Finally, we may observe heterogeneity in the effectiveness of personal narratives: they may work only among those with higher underlying levels of emotional empathy that allow for greater immersion (Busselle & Bilandzic 2009). In related studies of fictional TV dramas, only those with a higher baseline level of empathy experienced attitudinal change consistent with the TV story (Mutz & Nir 2010).

The present study extends the literature by asking three specific questions: Are personal narratives an effective strategy for reducing negative views toward immigrant out-

⁸The authors find that the addition of a personal narrative comment after a news story was no more effective than a factual commentator comment in changing attitudes toward immigrants. However, because the study did not have a control group, we cannot know whether attitudes were changed from baseline. The null findings relative to the factual comment may have also occurred because (a) the treatment was too limited and not a "true narrative," and/or (b) respondents were only assigned to counter-attitudinal messages, which is a hard test.

groups? Can they affect both intergroup and policy attitudes? And, do they affect only those more positively predisposed, or also those with greater baseline opposition toward immigrant outgroups?

Somalis in Kenya

Kenya is an important context for studying attitudes towards immigrant outgroups. Due to multiple conflicts in nearby countries, Kenya hosts one of the world's largest refugee populations at roughly a half a million refugees (UNHCR (2018)). Ongoing violence, environmental disaster, and state collapse in neighboring Somalia since the late-1980s has fueled a protracted refugee crisis for over three decades. Currently, the largest share of refugees in Kenya (about 55%) are from Somalia. Many live in the Dadaab refugee camp, which counted as the largest in the world at its peak in 2011 with over 500,000 inhabitants, and is currently ranked the third largest. Many also reside in Nairobi's Eastleigh neighborhood, an area that has become synonymous with Somalis.

The Somali community also includes more than two million longtime citizens, making up roughly 6% of the population. As in other parts of Africa where colonial borders split ethnic communities, borders drawn by the British divided traditionally-Somali territory into present-day Somalia, Kenya, and Ethiopia (Khadiagala 2010). These borders remained after independence, engendering irredentist movements seeking to unite the Somali population, including a violent insurgency in Kenya's Northeastern Province, where Kenyan Somalis predominate (Thompson 2015). Since the 1960s, the Kenyan government has employed an array of heavy-handed tactics to suppress separatist efforts in the area (Lochery 2012).

Regardless of citizenship status, Somalis in Kenya have been commonly viewed collectively as an immigrant outgroup – a foreign population that holds an ambiguous place in the Kenyan nation (Lochery 2012; Otunnu 1992; Scharrer 2018). As the opening quote of this paper illustrates, Somalis are subject to discrimination by non-Somali Kenyans, po-

lice brutality, and marginalization by state officials (Weitzberg 2017). Most other Kenyans have little contact with Somalis, due to spatial segregation at the national level and within Nairobi (IRC 2018). Economic tensions have emerged periodically over access to territory for herding in northern Kenya and the growing role of the Somali commercial diaspora in Nairobi (Carrier & Lochery 2013). Differences in religion also distinguish the Somali community: while Somalis are overwhelmingly Muslim (99%), most other Kenyans are Christian (90%).⁹ More recently, tensions have been greatly exacerbated by the rise of Al-Shabaab, a Somalia-based Islamist insurgent group, which has committed an estimated 297 separate attacks in Kenya with a fatality count of 1,025 since 2012.¹⁰ High-profile attacks include the Nairobi Westgate Mall in 2013, Garissa University College in 2015, and Nairobi's Dusit luxury hotel in 2019.

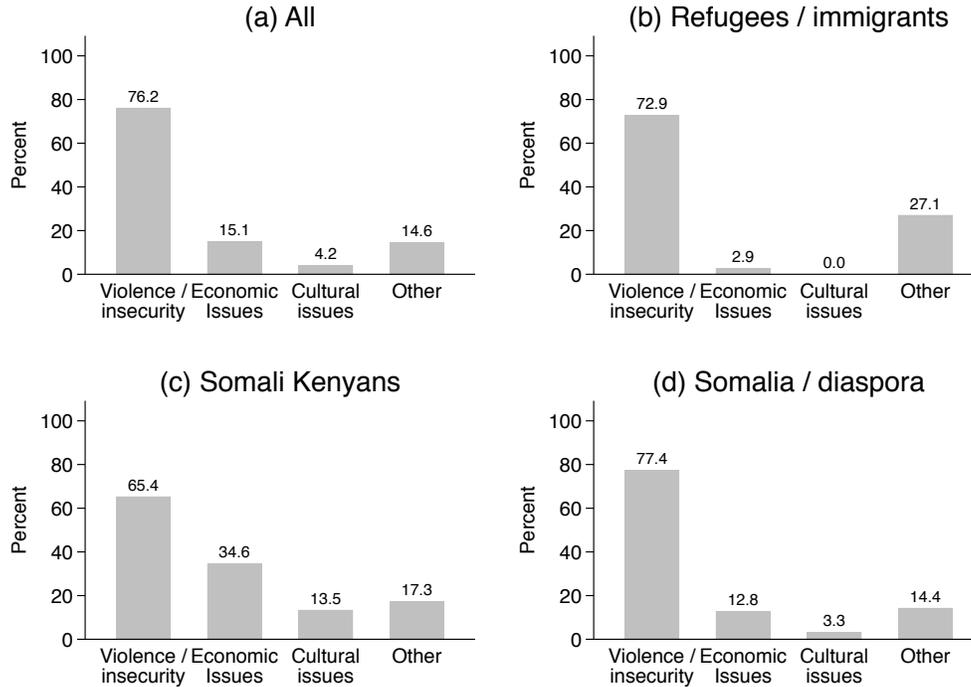
Public statements by Kenya's top political leaders have linked the terrorist threat to the local Somali community (IRC 2018). Government officials have repeatedly claimed that Al-Shabaab recruits from refugee camps and other Somali areas, portraying these populations as a threat to national security. Citing these security concerns, the government passed legislation in 2016 to shut the Dadaab refugee camp and expel Somalis from the country. Though the courts subsequently overturned the legislation, the government again announced plans to close Dadaab in 2019. Public opinion surveys conducted over the last decade find considerable opposition toward Somalis in Kenya and high levels of support for shutting Dadaab, likely due to negative media portrayals and the public views expressed by government officials (IRC 2018).

To examine the predominant frames employed in public dialogue regarding the Somali community in Kenya, we conducted an original content analysis of newspaper articles in Kenya's leading newspaper, *The Daily Nation*, for the 12 months prior to fieldwork (see details in SI B). A keyword search on the stem "Somali-" yielded a sample of 838

⁹Afrobarometer 2013 survey (Round 6, n=2,397)

¹⁰Such attacks are purportedly committed in retaliation for Kenya's military intervention in southern Somalia that began in 2011. Data on Al-Shabaab's attacks in Kenya are from the Armed Conflict Location and Event Data Project (ACLED).

Figure 1: Media Portrayal of Somalis and Somalia in Kenya



Notes: Figure shows the main themes mentioned in coverage of Somalis and Somalia in Kenya's leading newspaper, *The Nation*, in the 12 months prior to the study. Bars do not total to 100% because categories are non-exclusive.

articles. Security threat appears to be the most salient frame in public discourse about Somalis in Kenya. As shown in Figure 1(a), an overwhelming majority (76%) of articles referencing the Somali community mentioned violence and insecurity (and of those, a large share (82%) mentioned terrorism and terrorist organizations), with much less attention to economic, cultural, or other topics. This general pattern persists when we break down the results by mentions of Somali refugees/immigrants (Figure 1(b)), Somali Kenyans, that is, citizens of Kenya (Figure 1(c)), and Somalis outside Kenya or Somalia the country (Figure 1(d)). Articles often included quotes from the highest levels of government linking Somalis with security threat. For example, one article quotes President Uhuru Kenyatta as saying "Dadaab has become a protracted situation, characterized by hopelessness ... that allows terrorist operatives to exploit it for their operational efforts."¹¹

¹¹"Somalia Is Doing Well to Restore Peace - Says Uhuru." *Daily Nation* (online), March 25, 2017.

Research Design

To examine whether pre-recorded personal narratives offer an effective strategy for reducing negative intergroup and policy attitudes toward immigrant outgroups, we fielded a representative sample public opinion survey in Nairobi (n=1,112) on June 6-19, 2017 in which we randomly assigned survey respondents to listen to one of the two audio recordings or to no recording.¹² Sampling details, descriptive statistics, and balance checks are provided in SI D.

To develop the narratives, we began by holding a series of informal meetings and interviews with members of the Somali community – both refugees and Kenyan citizens – in Nairobi’s Eastleigh neighborhood (see SI C for details). These conversations were crucial for gaining an understanding of the types of messages Somalis thought might reduce discrimination against them among the broader Kenyan population and that were missing from the national discourse. To draft and record audio scripts for two narratives, we then collaborated with leaders from Eastleighwood, a local advocacy organization that creates TV and film content designed to bridge divisions between Somalis and non-Somali Kenyans.

By engaging members of the Somali community in crafting the scripts, we join others in emphasizing the value of directly involving local communities in research.¹³ Neglecting to involve local communities can reinforce implicit hierarchies between the research team and the subjects of the study, and may lead researchers to opt for interventions that are attractive for analytic reasons (e.g., to maximize control) but that do not reflect local contexts or priorities. Involving local communities at the design stage is especially important for experimental studies that seek to inform policy debates (Sheely 2016). Moreover, involving local communities produces more contextually-grounded interventions, improving ecological validity, and thus, the potential power of the treatment to alter out-

¹²A pre-analysis plan was pre-registered at (redacted) prior the conducting any analysis of the data.

¹³See Michelitch (2018) for a symposium and Kapiszewski *et al.* (2015) for an extended discussion of the “trade-offs” associated with collaborative research.

comes (Thachil 2018). This approach yielded complex treatments that do not allow us to hold constant specific elements across the two scripts. As a result, we are unable to directly compare the results of each treatment relative to the other, or to isolate the effects of specific components of the scripts. Future research should employ more controlled tests of particular treatment elements (see conclusion).

The collaboration with members of the Somali community generated two personal narratives aimed at addressing distinct outcomes. In particular, the concerns expressed by members of the Somali community tended to differ between recent refugees and long-term citizens. The first narrative reflects the experience of refugees fleeing violence in Somalia, highlighting the reasons for leaving Somalia, the challenges faced in Kenya, and gratitude to the Kenyan nation for safe refuge. The second narrative reflects concerns voiced by longtime citizens about the perception that Somalis in Kenya support groups like Al-Shabaab and seeks to dispel such views by communicating shared opposition to terrorism.

These treatments likely convey information and sentiments that are novel to most non-Somali Kenyans, the target of the intervention. Further newspaper content analysis found that only 3.3% of articles mentioned refugee hardships and only 0.9% mentioned unity against terrorism. The infrequent media coverage of the treatment themes bolsters our expectation that they might plausibly shift public sentiments, since they do not overlap with information or views routinely encountered in mass media. Our survey data also show that non-Somali Kenyans have relatively little direct contact with Somalis: 85% report that they have seldom or never spoken with a Somali refugee in the past year, with 57% having seldom or never had a conversation with a Somali Kenyan in the same time period.

Treatment 1: Refugee Hardship Narrative

Treatment 1 (T1), the *refugee hardship narrative*, describes experiences and sentiments common to Somali refugees through the lens of one person's journey (Figure 2). In a context where refugees are often portrayed in collective terms, the biographical nature of T1 provides a human face to the refugee crisis and encourages the listener to appreciate the challenges refugees commonly encounter.

Figure 2: Treatment 1 – Refugee Hardship Narrative

Intro (read by enumerator): Now I will ask you to listen to a message recorded by a Somali refugee living in Eastleigh. After the recording, I will ask you some questions about your views

Recording: Many Somali refugees, like my family, have come to Kenya since the civil war broke out in Somalia over twenty-five years ago. We are originally from Kismayo where my father was a businessman and my mother owned a small shop. We came to Kenya when I was baby fleeing the violence of the civil war. We had to leave behind many of our possessions and journey several days from Kismayo to the border. My parents walked and took lorries until they reached Dadaab refugee camp.

We stayed in the camp for around three years before moving to my grandfather's place in Wajir. We had only tents to live in and we depended completely on relief for food and the three goats my father was given for milk. It was very crowded, with children everywhere. I remember sometimes if it got dark, we would just sleep where we were. These conditions were not perfect, but we were appreciative of the ability to play like kids without fear of being killed. Life in Dadaab was much better than back in Somalia. My family, like most refugees, is very grateful for Kenya's warm welcome.

Recently, the government of Kenya has announced plans to close Dadaab refugee camp, where hundreds of thousands of Somalis live. I do understand the argument of the Kenyan government, but I do not think it is safe for the refugees to be forced back to Somalia. The situation is still not safe. When it is safe, many Somali refugees in Kenya would gladly return to a peaceful Somalia. Right now the refugees, like me, are just thankful for the safety Kenya has provided to them.

Outcome measures, listed in Table 1, include questions that probe general group affect and policy attitudes regarding ongoing refugee issues that emerged from our media analysis. Similar to related studies, the measure of general affect is based on a question that asks how close respondents feel to Somalis. Policy attitudes include: (1) government spending on refugees, (2) support for building a border wall, (3) the percentage of

refugees that should be granted citizenship, and (4) support for shutting the main refugee camp (Dadaab) and repatriating refugees. Of particular interest is whether the narrative has an effect across many policy areas, or whether effects are confined to the main issue area discussed in the treatment, closing Dadaab. Outcome variables are rescaled, as necessary, to range from 0 to 1 with higher values indicating more favorable attitudes toward refugees and policies that would benefit them. We create an index, also ranging from 0 to 1, that is the average of the non-missing values for the five items.¹⁴

Table 1: Outcome Measures – T1: Refugee Hardship Narrative

<i>Closeness</i>	How close do you feel to Somalis? 0 means not very close, 5 means in the middle, and 10 means very close.
<i>Spending too low</i>	In your view, does the government spend too much, too little, or the right amount of money on helping Somali refugees, or haven't you heard enough to say? Recoded to dichotomous variable: 1 = gov't spends too little; 0 otherwise.
<i>Oppose wall</i>	How much do you support the current proposed government initiative to build a wall on the border with Somalia to decrease the ability for Somali citizens to enter Kenya? For this, 0 means not at all, 5 means in the middle, and 10 means very much. [Reverse scale]
<i>Percent citizens</i>	Out of every 10 Somali refugees in Kenya now, how many should be allowed to become Kenyan citizens?
<i>Keep Dadaab</i>	In your view, should the government shut down the Dadaab refugee camp and force the refugees to return to Somalia? [0=yes, 1=no]
<i>T1 index</i>	Average of non-missing values for all items.

Figure 3 shows mean values for respondents in the control and T1 in panel (A) and estimated treatment effects in panel (B) with full regression results in SI E. Panel (A) shows that attitudes on most outcome measures are relatively unfavorable at baseline, both with regard to general affect and support for pro-refugee policies. Among respondents in the

¹⁴Results are robust to using listwise deletion to create indices for both T1 and T2 (available in replication file).

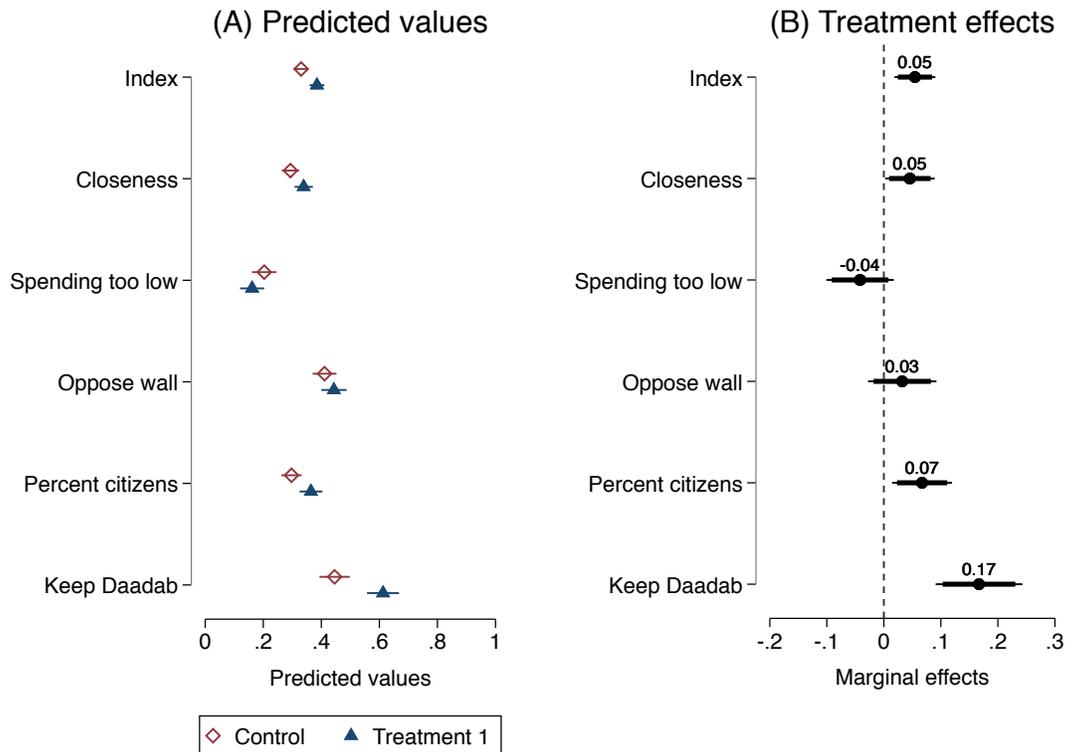
control condition, affect was low at an average of a 3 on the 10 point scale. Less than half support keeping Dadaab open (45%), and on average, favored granting citizenship rights to only three of every 10 Somali refugees. Only about a fifth (20%) of control respondents believe that spending on refugee assistance is too low, and less than half oppose building a wall on the Somali border (41%).

We observe in Panel (B) a positive statistically significant effect on the composite index and three of the five individual outcome measures. Listening to the refugee hardship narrative increased affect toward Somalis, as shown by the results for *Closeness*, by 5 percentage points. The narrative increased support for keeping the main refugee camp open rather than repatriating refugees back to Somalia by 16 points. This effect is particularly striking given that, as noted above, high-level government officials – including the resident and vice president – publicly called for its closure in the year prior to the survey, routinely linking the camp to Al-Shabaab recruitment and terrorist attacks in Kenya.

Interestingly, the treatment increased support for granting citizenship status to a larger share of refugees by 7 points. The citizenship status of refugees in Kenya has been an issue of historical importance for several decades, and is of increasing importance given that some refugee families have now been present in the camps for multiple generations. The observed effect on citizenship, which is not directly referenced in the narrative, suggests that the treatment “spilled over” to a highly-related issue area.

We find no significant effect on the other two policy issues: perceptions of government spending and the border wall. Like citizenship, these policies are not specifically mentioned in the treatment, suggesting that there may be limits to “spill over” for issues that are less directly related to the treatment’s message. Yet, it is also possible that the treatment did not affect these attitudes for more nuanced reasons related to the policy issues at hand. The null result for government spending may be due to the fact that the bulk of refugee funding comes from the international community rather than the government, or to the common sentiment that Kenya does more than its fair share compared to

Figure 3: Effects of T1 – Refugee Hardship Narrative



Notes: Figure shows predicted values and estimated treatment effects based on OLS models with robust standard errors. Treatment effects in (B) are shown with 95% (thin line) and 90% (thick line) confidence intervals.

other countries in hosting refugees (IRC 2018). Alternatively, views on government funding could be unaffected because the speaker indicates that things are hard but still better; a narrative emphasizing persistent hardships in the camp and need for greater funding might evoke a stronger reaction among listeners. The null effects on the border wall may reflect the view that the border wall would offer no positive benefit for *current* refugees – those featured in the treatment. Further, we note that all press coverage of the wall included public criticism of corruption scandals and a lack of progress that have plagued the wall’s construction.

Treatment 2: Anti-Terror Narrative

Treatment 2 (T2), the *anti-terror narrative*, is shown in Figure 4. Notably, this script emphasizes a superordinate national identity, stressing that opposition to violent extremism is common across religious faith communities in Kenya. Prior research suggests that priming superordinate identities can reduce intergroup bias, including in African contexts where national identity is often weak (Bleck & Michelitch 2017; Gaertner *et al.* 2000; Robinson 2016). It is also noteworthy that the script frames the “bridging” message in terms of religion, rather than ethnicity. While Somalis are distinct both with regard to ethnicity and religion from most non-Somali Kenyans, the links to terrorism are often understood in religious, not ethnic, terms. Moreover, given Kenya’s high-level of ethnic diversity, cultural and linguistic differences are commonplace, and perhaps less relevant than religious differences, which are not. Finally, relative to T1, T2 is less biographic in nature, instead conveying the speaker’s personal perspectives in the narrative.

The outcome measures, shown in Table 2, include a range of intergroup and policy attitudes. Intergroup perceptions include (1) group affect (using the same measure employed for T1), as well as (2) beliefs about Somalis as violent or peaceful, (3) beliefs about Somalis as nationalist versus tribalist, and (4) perceptions of support for terrorist groups. These outcome measures are designed to reflect the specific content of T2 and the policy themes observed in our analysis of media portrayals of the Somali community. Policy-oriented questions probe views about inclusion of Somalis in the Kenyan nation, specifically: (5) whether Somali Kenyans should be forced to leave Kenya, and (6) whether Kenya would be better off without Northeastern Province. Debates about the place of Somalis in the Kenyan nation and the status of Northeastern Province have been sources of reoccurring tension since before independence in 1963, as noted earlier. These policy issues are not directly addressed in the narrative, though they are related to basic questions about inter-communal relations between Somalis and others in Kenya. As with the outcome measures for T1, we rescale all items to range from 0 to 1, with higher values indicat-

Figure 4: Treatment 2 – Anti-Terror Narrative

Intro (read by enumerator): Now I will ask you to listen to a message recorded by a Kenyan Somali Muslim living in Eastleigh. After the recording, I will ask you some questions about your views.

Recording: Kenya is a country of peace and harmony as well as diversity. Islam and Christianity are both peaceful religions founded on love and respect for religious diversity. It is a country where Christians and Muslims work together to build a better future for everyone. Right now, we are facing a common enemy – Al Shabaab – who is not only killing people in Kenya, but also trying to turn Christian neighbor against Muslim neighbor. They are threatening to destroy our diverse communities that live together in peace.

As a Kenyan Somali, I am supportive of peace, but many suspect that we sympathize with al Shabaab just because we are Somali. That is not true. Al Shabaab is an enemy who wants to make us enemies based on differences in ethnicity and religion. We must not allow al Shabaab to divide us. We must be united in the fight against violent extremism. We must not allow violent extremists to turn Muslim against Christian or Christian against Muslim in Kenya. We must not allow people to view all Somalis as terrorists.

I desire the same Kenya as every other Kenyan citizen. I don't want division, hatred, violence and disorder. I want love, wisdom, compassion for one another, and a feeling of hope and justice to all those who still suffer within our country, Christian or Muslim. We need to stand together against terrorism. I stand with my Christian friends in rejecting terrorism wherever it occurs. I rejoice with all Kenyans when a terror attack is stopped before it can occur. Kenya is rising. As we rise and shine, let us make sure we leave no one behind. We must rise as one indivisible nation.

ing more positive attitudes, and we create a composite index that averages non-missing values for the six items.

Mean values in Figure 5 (A) show that baseline attitudes are fairly negative (see SI E for regression results). Affect and peacefulness were low at an average of a 3 and a 4, respectively, on a 10 point scale. A majority (58%) of respondents in the control condition believe that Somalis oppose terrorism. On the two policy measures, we observe only moderate support for the view that Somalis should remain in Kenya: although 58% of respondents in the control condition believe that Somalis should remain, more than a third (42%) support their expulsion.¹⁵ The data show strong support for the idea that Kenya is better off with Northeastern Province, likely because even those who might

¹⁵Of equal concern, a follow-up question reveals that among those in the control condition who expressed support for Somalis leaving Kenya, a substantial share (39%) registered support for forcing Somalis to leave even if they chose not to do so voluntarily.

Table 2: Outcome Measures – T2: Anti-Terror Narrative

<i>Closeness</i>	How close do you feel to Somalis? 0 means not very close, 5 means in the middle, and 10 means very close.
<i>Peaceful</i>	Would you describe Somalis as peaceful or violent? For this, 0 means very peaceful, 5 means in the middle, and 10 means very violent.
<i>Oppose terrorism</i>	In your opinion, how many Somalis in Nairobi support Islamic extremists like Al Shabaab? [0=all, 1=many, 2=some, 3=a few, 4=none]
<i>Nationalist</i>	Would you describe Somalis as nationalist, caring about all Kenyans, or tribalist, caring only about their own tribe? For this, 0 means very nationalist, 5 means in the middle, and 10 means very tribalist.
<i>Remain in Kenya</i>	In your view, should Kenyan Somalis leave Kenya and go to Somalia?
<i>Better w/Northeastern</i>	Do you think Kenya would be better off without the Northeastern Province?
<i>T2 Index</i>	Average of non-missing values for all items.

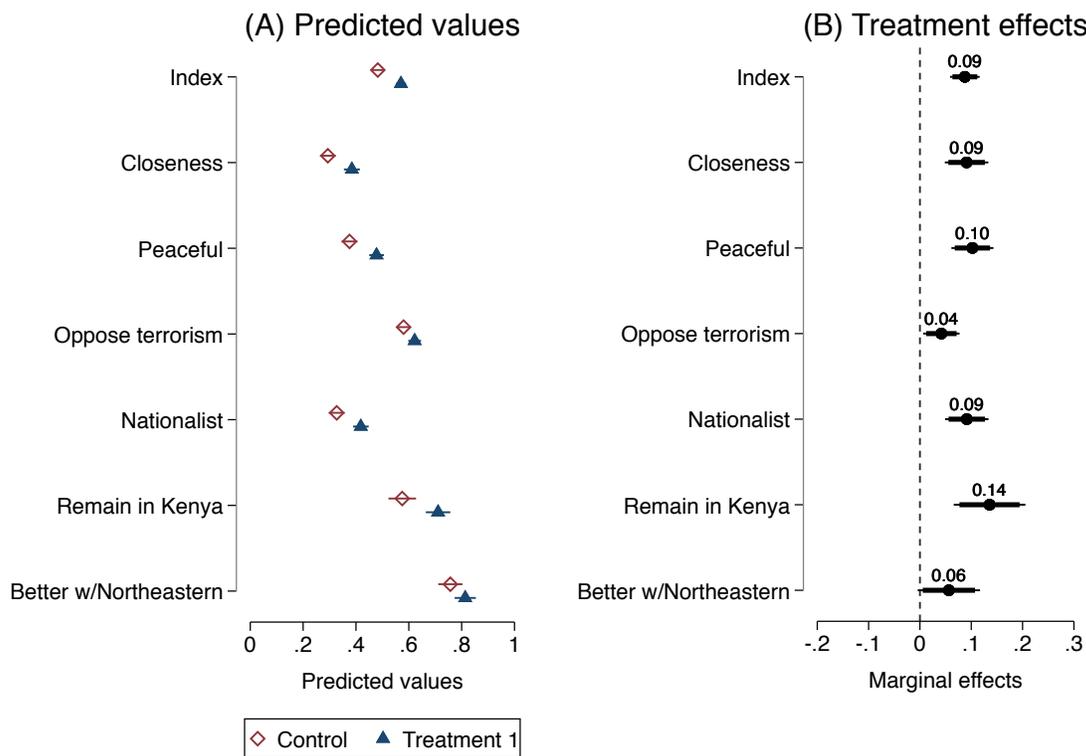
favor expelling Somalis would not support territorial concessions.

Estimated treatment effects in Figure 5(B) show that the anti-terror narrative had positive effects across all outcome measures and the composite index, significant at the $p < .05$ level or better for all items save for *Better w/Northeastern* which is significant at $p < .10$. The treatment improved general affect as measured by *Closeness* by 9 percentage points, relative to .29 at baseline. The treatment altered scores on the three perceptions measures, increasing views of Somalis as peaceful (by 10 points, relative to .38 at baseline), the belief that Somalis oppose terrorism (by 4 points, relative to .58 at baseline), and the view of Somalis as nationalists rather than “tribalists” (by 9 points, relative to .33 at baseline). Given the low to moderate values on these indicators at baseline and the routine linkage between in Somalis and terrorism in the Kenyan media, these changes represent substantively meaningful improvements.

We also observe positive effects on the two policy outcomes. The treatment increased

the view that Somali Kenyans should remain in Kenya by 14 percentage points. This finding is particularly compelling, indicating that personal communication designed to dispel notions that Somalis pose a security threat can meaningfully counter views that the community does not belong in Kenya. T2 also increased the share of respondents reporting that Kenya is better off with Northeastern Province as part of the county by 6 points, relative to .76 in the control – a striking finding given the high mean value at baseline and the possibility that ceiling effects might limit the potential for change on this outcome.

Figure 5: Effects of T2 – Anti-Terror Narrative



Notes: Figure shows mean values and estimated treatment effects based on OLS models with robust standard errors (full regression results in SI E). Treatment effects in (B) are shown with 95% (thin line) and 90% (thick line) confidence intervals.

Robustness Tests

In the above analyses, we find that two distinct personal narratives reduce negative sentiments, not only toward an immigrant outgroup, but also toward ongoing policy debates that affect members of the group. We consider two common threats to causal inference in survey experiments and conduct a series of robustness checks to allay potential concerns (see SI F for results).¹⁶ First, it is possible that the treatments activate social desirability concerns, making respondents less willing to express negative views of the Somali community, rather than altering attitudes and policy views. We doubt this explanation for the simple reason that respondents – including those treatment groups – do not appear to be inhibited in expressing negative beliefs about Somalis or voicing support for policies that would negatively affect the Somali community, including the forced expulsion of group members.

Nonetheless, to address concerns about this type of bias, we conduct three tests. First, we show that the treatment effects are robust to dropping interviews in which bystanders were present (37% of the sample), and that the treatment effects are not systematically conditioned by bystander presence (SI F.1). If we found that outcome responses were consistently correlated with the presence of bystanders, or only found treatment effects (or larger effects) among interviews with bystanders, we might suspect that social desirability bias is driving the results. Second, we speculate that respondents might be less comfortable expressing negative sentiments toward any outgroup in the presence of a non-co-ethnic interviewer (Adida *et al.* 2016). We find, however, that enumerator ethnicity is unrelated to the outcome variables and does not systematically condition the treatment effects (SI F.2). Third, we draw on a battery of questions to gauge respondents' beliefs about the undesirability of expressing negative views of various ethnic groups,

¹⁶Results are also robust to standard quality control checks for survey research – i.e., dropping observations in which respondents were rated by enumerators being uninterested or as having difficulty answering questions (see replication file).

political parties, and prominent figures in Kenya.¹⁷ Here too we find that treatment effects are no different among those with high versus low perceptions of social desirability pressures (SI F.3). Collectively these results suggest that the study's main findings are not attributable to social desirability bias.

A second concern relates to interviewer demand effects, whereby participants in survey experiments may “infer the response researchers expect and behave in line with these expectations” (Mummolo & Peterson 2019, p. 517). While this concern is more relevant to participants with extensive prior survey experience and who have incentives to please researchers to enable further participation (not the case in our sample), it is still worth discussing why we do not believe such a concern is driving our results.¹⁸ We reason that if respondents who were exposed to the personal narratives felt compelled to report positive attitudes toward Somalis in order to please the enumerators, we would observe *consistently positive* responses among the treated. However, on most outcome items, mean responses among treated participants were at the lower end of the attitudinal scales – they were simply less negative than in the control group. Further, if people felt compelled to give the “correct answer,” one would expect to see that the treatments shift *every* attitudinal outcome relative to the control. Yet, we observe variation across outcomes; as noted, we find that T1 did not affect views about government spending on refugees or opposition to the border wall. Finally, it is worth noting that all respondents answered a large battery of common questions about Somalis prior to the survey experiment, suggesting that the narratives likely did not differentially alert those in the treatment condition to the nature of the study.

¹⁷The questions asked respondents to “suppose that someone said [statement]. Would your neighbors be very offended, somewhat offended, a little offended, or not at all offended?” Respondents heard a battery of negative statements about different groups in Kenya, including Somalis and Muslims. These questions were placed at the end of the survey in order to avoid evoking self-censorship earlier in the survey. Given that the measures are post-treatment, we additionally show that responses are unaffected by treatment assignment (see SI F.3).

¹⁸Demand effects are more concerning for field or lab experiments. Mummolo & Peterson (2019) note that for most survey experiments, it is unclear why respondents would have incentives to assist researchers. Moreover, because random assignment is typically between, not within, subjects, it would be difficult for respondents to guess treatment assignment and researcher hypotheses.

Do Personal Narratives Affect the Most Resistant?

The final set of analyses investigates whether the personal narratives affect only those already favorably disposed toward the immigrant outgroup (as found in Adida *et al.* (2018)) or also those who hold less positive baseline attitudes (as in Grigorieff *et al.* (2018) and Williamson (2019)). Exploring heterogeneity is important for both theoretical and practical reasons. Theoretically, we are interested in understanding whether prior dispositions constrain attitudinal shifts. The literature suggests competing *ex ante* expectations for whether and how prior predispositions should matter in the context of our treatments. On the one hand, those who are favorably predisposed may be more receptive to the narratives, resulting in positive effects, while those with negative predispositions will be more inclined to reject or dismiss the information, producing more modest or null effects. This view is developed in a number of studies that find null or limited results from informational interventions (e.g., Hopkins *et al.* (2019)). On the other hand, if transport theory is correct, personal narratives may be able to reduce motivated reasoning among the negatively predisposed, and treatment effects may be as large or larger among the negatively disposed given that they have more “room to grow.” By contrast, we might observe limited effects among the positively predisposed if the narratives simply reinforce existing views.

Beyond these theoretical questions, the exploration of conditional effects also has practical policy importance. Organizations that advocate on behalf of immigrant outgroups seek to target those with negative predispositions. Advocacy groups routinely endeavor to raise awareness of the plight faced by refugees and immigrants, and to increase public support for national policies that aid them. Moreover, in the specific context of our study, the Somali respondents we interviewed in Nairobi to develop the scripts expressed an explicit desire to counter *negative* views. It is important therefore to know whether personal narratives can alter perceptions among those who hold less positive initial attitudes.

To examine conditional effects among those who hold more/less favorable views of

Somalis, we employ four potential moderators that reflect the predominant explanations for opposition to refugees and immigrants in the literature. The variables are listed in Table 3.¹⁹ *Security threat* is measured with an implicit association test (IAT) conducted with respondents prior to the main survey. The IAT has been used to assess implicit associations for out-groups in psychology and political science research, including for immigrant outgroups (Pérez 2010), although we are among the first to employ the technique in an African context and have adapted it in ways described in SI G (see also Lowes *et al.* (2015)). Our implementation measures implicit views of Somalis as “peaceful” versus “violent.” We opt for an implicit measure because the outcomes used for T2 include two explicit questions that probe beliefs about whether Somalis support violent extremism. *Labor market threat* is measured with a question that examines beliefs about whether Somalis take jobs from Kenyan citizens in Nairobi.²⁰ *Cultural threat* is measured with a question that probes beliefs about religious dissimilarity between Muslims and Christians. *Contact* is measured with two questions that ask respondents how often they have interacted with “Somali refugees” and “Somali Kenyans” in the past year; we employ these measures as moderators for T1 and T2 respectively (which are positively correlated). The four moderators are only weakly correlated, suggesting that they are not merely reflections of a single underlying orientation (see SI H).

All four moderators are associated with views of the Somali community in the expected way: respondents who associate Somalis with violence, view them as reducing employment prospects, believe there is little in common, and interact with them less frequently hold less favorable views and are less supportive of policies that would benefit Somalis (see SI H). To visualize effects succinctly for the reader, we dichotomize each moderator into *low* (below the median for each item) and *high* (median and above) values and interact the models with the composite indices for each treatment. We refer the reader

¹⁹The replication file shows results for additional demographic moderators listed in the pre-analysis plan as “exploratory” analyses.

²⁰The question refers to “Somali refugees,” and we do not have a parallel question for Somali Kenyans due to survey repetition and space. We therefore employ this measure for both treatments.

to SI H which lists results for each outcome and continuous versions of the moderators.

Table 3: Moderating Variables

<i>Security threat</i>	Implicit Association Test (IAT) with “peaceful” and “violent” as the target words.
<i>Labor market threat</i>	In your view, how much are Somali refugees reducing the employment prospects of Kenyan citizens here in Nairobi? For this, 0 means not at all, 5 means in the middle, and 10 means very much.
<i>Cultural threat</i>	From what you know, do you think that the Muslim religion and the Christian religion have a lot in common, some things in common, a little in common, or nothing in common?
<i>Contact</i>	How often did you have a conversation with a [Somali refugee / Kenyan Somali] in the last year?

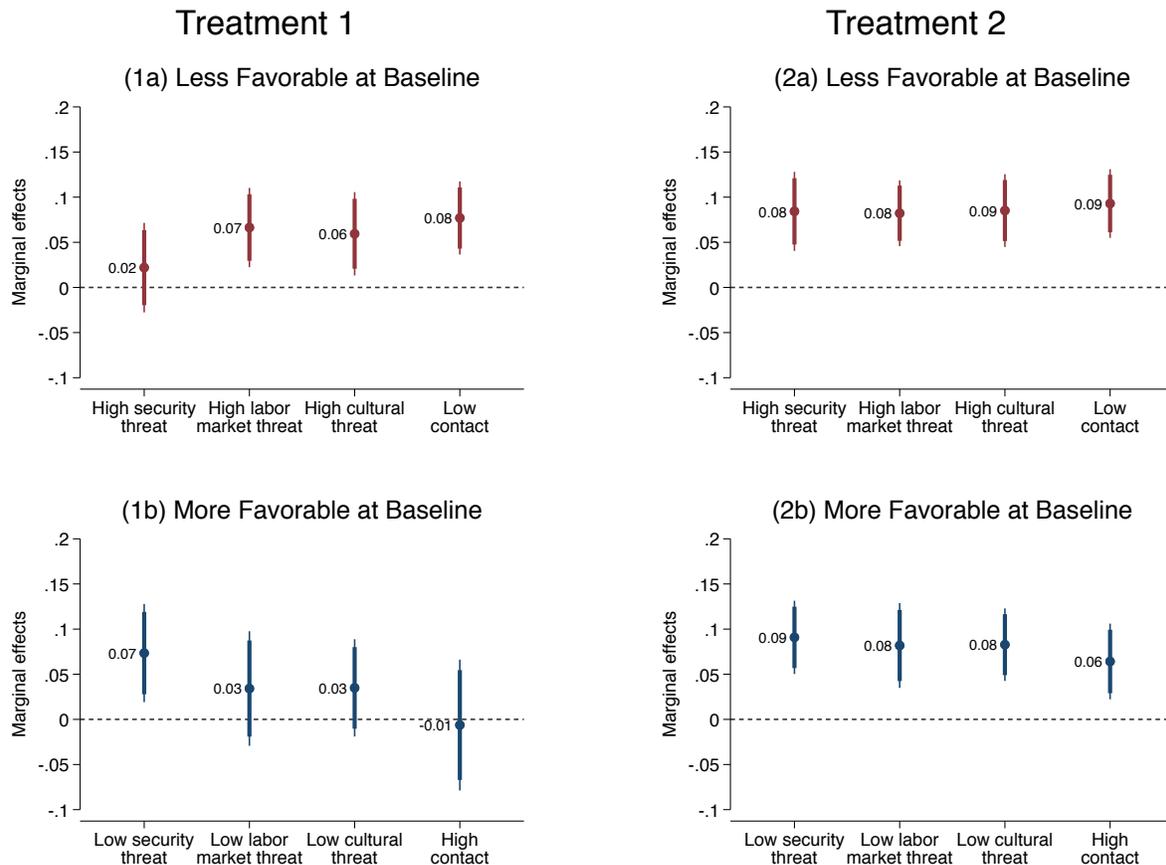
Figure 6 presents results on the composite outcome indices for T1 and T2 described above. The results indicate that the positive effects of the narratives are not confined narrowly to respondents who initially held more positive attitudes toward the Somali community. The effects of each treatment are in most instances as large or larger among respondents who have less contact and perceive greater security, economic or cultural threats.

For the refugee hardship narrative (T1), positive effects on the composite index are significant only for those less positively disposed at baseline on most moderators (results are fairly consistent across individual outcomes). The one exception is security threat, where we find positive and significant effects in the composite index among those who perceive Somalis as *less* threatening. However, examining the individual outcomes (see Figure 2 SI H), we see that we observe positive and significant effects among those who associate Somalis with high security threat on support for keeping Dadaab refugee camp open - the main policy outcome related to the treatment.

For the anti-terror narrative (T2), positive effects are observed among both those positively and negatively disposed. The larger effects for T2 relative to T1 among those who

view Somalis as a security threat raise the possibility that treatments that directly address security fears among host-country nationals (here, T2) may be more effective than those that do not (here, T1).

Figure 6: Treatment Effects Conditional on Baseline Attitudes



Notes: Figures show treatment effects for the Refugee Hardship Narrative (T1) and the Anti-terror Narrative (T2) relative to the control condition, based on OLS models that interact each treatment with dichotomized versions of the moderating variables described in Table 3. High and low values for moderators are defined as below the median (low) and median and above (high). Estimates are shown with 95% (thick line) and 90% (thin line) confidence intervals.

Yet, given that the treatments are distinct in multiple ways, we do not wish to argue for a definitive explanation for why T2 more consistently produced positive effects. In addition to directly addressing the security threat head on, one plausible explanation is that T2 may provide more novel information for both the positively and negatively pre-disposed. Given that the refugees crisis has been ongoing for three decades, those who

are positively predisposed are likely to have considered that refugees are fleeing violence and facing hardships. However, given the more recent nature of Al-Shabaab's activities in Kenya and emotional intensity around the attacks in Nairobi, even the positively predisposed may have little exposure to Somali perspectives about religion and terrorism.

Conclusion

This study draws on transport theory to investigate the power of personal narratives from immigrant outgroup members to combat xenophobic intergroup and policy attitudes. Listening to pre-recorded personal narratives from members of the Somali community in Kenya caused a statistically and substantively significant positive effect on a range of beliefs and policy attitudes within the target population. Moreover, the interventions generally worked equally well or better among respondents who were more negatively predisposed towards the immigrant outgroup based on higher perceived security, economic, and cultural threat, as well as lower contact. These findings are consistent with one of the main tenets of transport theory, namely, that cognitive and emotional immersion in narratives reduces the tendency to dismiss or counter-argue against information that conflicts with prior views.

These results provide a springboard for further investigating the power of personal narratives as an informational intervention that may be relevant to a variety of contexts and issue areas. Given that informational interventions – particularly those that provide corrective information – often produce null or limited effects on attitudes toward immigrant outgroups, personal narratives may represent an especially attractive approach. Moreover, in light of the number of null results from information experiments more broadly, these findings are also promising in the context of the growing *cri de coeur* that political scientists have not sufficiently delineated the conditions under which exposure to information leads to attitudinal change (Hopkins *et al.* 2019).

We suggest three promising directions for future research:

- Under what conditions are personal narratives more effective than facts or statistics in head-to-head tests regarding controversial political issues? Under what conditions does adding facts and statistics enhance the power of the personal narrative? Does the issue area (e.g., economic, cultural, security issues) matter?
- Does the speaker's identity affect the power of the personal narrative? For example, in the context of intergroup relations, are narratives from an ingroup member more powerful than those from an outgroup member? Do effectiveness vary for speakers from various outgroups in systematic ways?
- How can personal narratives be made most effective? For example, does biographical information enhance effectiveness, since it might be harder to reject someone's personal experience versus their perspective regarding their group as a whole? Do they work better if they ignore versus directly name and address contentions? Do they work less well when embedded in news programming where individuals may "tune out" — especially those less interested in the topic?

Finally, these findings bode well for policymakers and advocacy groups aimed at reducing xenophobia or other negative intergroup attitudes and behaviors, since listening to personal narratives is low-cost and scalable relative to interventions that are more cognitively or emotionally demanding (e.g., perspective taking exercises (Adida *et al.* 2018; Simonovits *et al.* 2018))²¹ and/or require in-person contact (e.g., canvassing or a skills course (Kalla & Broockman 2020; Scacco & Warren 2018)). It will be important to understand "dosage" and effect duration as a priority.²² These findings will, we hope, serve as

²¹Perspective-taking interventions are also relatively low-cost and scalable. However, outside a research setting, individuals may only select into doing the cognitive and emotional effort involved in the exercises if they are very positively predisposed toward immigrant outgroups. By contrast, listening to personal narratives over mass media (e.g., consuming news or an ad on the radio) requires relatively less cognitive and emotional effort and may therefore be less subject to selection. We say relatively because of course people do select their news channel and they do selectively apply their attention based on interest.

²²Promisingly, Global North studies able to leverage online panel surveys (Facchini *et al.* 2016; Grigorieff *et al.* 2018) have shown evidence that effects can last over time.

a launching pad for further policy evaluations of scaled-up versions of this intervention that would include more repeated exposures (e.g., utilizing podcasts or mass media).

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Supplemental Information for:
Personal Narratives Reduce Negative Attitudes toward Refugees and
Immigrant Outgroups: Evidence from Kenya

July 14, 2020

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A Examples of Personal Narratives in the Mass Media and Policy Community

Refugee/immigrant assistance organizations:

- (1) UNHCR's "Stories" series, <https://www.unhcr.org/en-us/stories.html?page=search&skip=0&docid=49c3646c24e&scid=567aa8034or49aea93a4c&comid=56ec23bb4>
- (2) UN Migration Agency's (IOM) "I am an immigrant" platform, <https://iamamigrant.org/about> and "In Their Own Words and Voices" documentary, <https://www.iom.int/video/their-own-words-and-voices>
- (3) HIAS's video series, <https://www.hias.org/blog/video-we-open-our-hearts-them>
- (4) International Rescue Committee (IRC), <https://www.rescue.org/article/meet-nasro-i-am-bravest-girl-world>
- (5) International Refugee Assistance Program (IRAP), <https://refugeerights.org/resettled-abdullahs-story/>.
- (6) Refugee Consortium Kenya, <https://www.youtube.com/watch?v=3iUnybSHqZY&feature=youtu.be>
- (7) I am Kakuma, <https://www.i-am-kakuma.online/>

Media outlets:

- (1) BBC "100 Stories of Migration in Leicester", <https://www.bbc.co.uk/programmes/p029s9h7>
- (2) *The Nation's* "Migrant Voices" series, <https://www.thenation.com/content/migrant-voices/>
- (3) *The Atlantic's* reporting on US policies toward migrant families, <https://www.theatlantic.com/politics/archive/2018/06/kids-describe-the-fear-of-separation-at-the-border/564227/>
- (4) France24's coverage of the Daadab refugee camp in Kenya, <https://www.france24.com/en/20170105-reporters-africa-somalia-kenya-dadaab-refugee-camp-children-united-nations>.

B Newspaper Content Analysis

To examine media portrayals of the Somali community, we collected newspaper articles from Kenya's leading daily paper, *The Daily Nation*, for the twelve months prior to our data collection, August 8, 2016 to August 8, 2017. Articles were obtained from the Nexis Uni portal using "Somali*" as the search term. The search was restricted to English-language articles from *The Daily Nation* and *The Sunday Nation*. The search yielded 838 articles.

We examined the topics of newspaper articles that mention Somalis, including Somali refugees/immigrants, Somali Kenyans (citizens of Kenya), as well as Somalia or Somalis outside of Kenya (i.e., citizens of Somalia or the Somali diaspora). The goal was to understand how Somalis are covered in the Kenyan media in order to get a sense of what associations may come to mind when individuals think about the Somali community (broadly defined) in Kenya. The codebook that was designed to examine the actors and topics mentioned in each article, as well as whether the articles contained content related to the themes in our treatments.

The content analysis proceeded in three steps after all coauthors and an undergraduate research assistant honed the coding instrument by coding iterative sets of 50 articles until codings were identical. First, an undergrad research assistant coded all 838 articles (we thank [omitted]). Then, one of the study's authors provided a second set of codings and identified any disagreements. Finally, a separate study author served as a tie-breaker for any disagreements between the first two. A key task was to identify articles that only mentioned Somalis/Somalia in very brief passing and mainly focuses on something else. We identified 388 such articles (46.3%) and excluded these from the analysis.

C Creating the Treatment Scripts

We drew upon three sources to start the process of recording personal narratives: 1) focus group discussions, 2) informal interviews, and 3) background research on Somalis in Kenya. We also drew heavily on one coauthor's long term engagement with Somalis in the policy community in Kenya as well as Somalia. In March 2017, we convened two focus groups, each with six non-Somali Kenyans, to discuss perceptions of the Somali community. From March-June 2017, we conducted 10 informal interviews in Nairobi with Somali Kenyans (three refugees and seven citizens) and compiled news articles and documentaries. Additionally, we conducted an interview with an International Rescue Committee employee based in Nairobi who worked closely with the Somali community.

For the treatments, we sought to highlight two themes that emerged from this material, one relating to the plight of Somali refugees and a second relating to the perceived link between Somalis and terrorism - the two dominant themes that emerged for refugees and Somali Kenyans, respectively. In discussing Somali refugees, non-Somali Kenyans noted there is very little meaningful interaction between Somali refugees and host-country citizens in Kenya. They instead get their information about Somalia and the refugees in Kenya from the media. Few of the participants had ever heard how the refugees ended up in Kenya or the types of struggles they face. Several participants conveyed that since the Dadaab refugee camp has been open for so long, refugees were never going leave unless forced out — referencing the recent moves by the government to shut Dadaab. They were also unsure about flows coming across the border or conditions at the camp. There were also widespread beliefs that Somali refugees might be terrorists. Likewise, our discussions with Somali refugees living in Nairobi confirmed that there are few opportunities for Somali refugees to interact with non-Somali Kenyans. Several noted, moreover, that Somali refugees are often hesitant to share their own personal stories. When asked what they wanted Kenyans to know about them, the refugees we spoke to universally conveyed that that they wanted Kenyans to know that they would not be in Kenya if they did not have to flee violence and hardship in Somalia, and that if it were safe for to go back, they would. Respondents also sought to convey that they were grateful to Kenya for all that it has provided to them.

The second treatment, the Anti-Terror Message (T2), emerged from commonplace sentiments among non-Somali Kenyans that Somalis are terrorists, that Islam is a violent religion, and that Somali Kenyans support Al-Shabaab. Non-Somali participants in the focus groups routinely noted that much of the information they receive from the media about Somalis focuses on Al-Shabaab and terrorism. Participants further noted that they do not trust Somalis because they seemed to all congregate together and they had no personal contact with the Somali community. On the other side, Kenyan Somalis we interviewed were heartbroken over the attacks Al-Shabaab had carried out in Kenya and were proud of being Kenyan. They were frustrated by the fact that Islam was being portrayed as a violent religion and that being Somali seemed to automatically make them associated to, or at least supportive of, Al-Shabaab. They noted that in their minds, they were Kenyan, had Kenyan documents, contributed to the Kenyan labor force, and wanted nothing more than peace in Kenya and Somalia. Several said they would help their fellow Kenyan citizens fight Al-Shabaab if there was any way they could.

To create the final scripts for the treatments, we worked with leaders from Eastleighwood, a local advocacy organization that implements programs seeking to bridge the divide between Somalis and non-Somali Kenyans through training and cultural events. Their programs also aim to reduce insurgency recruitment among unemployed and under-employed youth in Nairobi and North Eastern Kenya by providing training in skills such as computer programs, photography, and music editing. To date, Eastleighwood has trained over 3,000 young people. We worked with two

leaders from the organization to construct and record the treatments. The Refugee Displacement Message (T1) is a rather biographical personal narrative recounted by one of our collaborators at Eastleighwood who was himself a refugee. He sought to present his story in consideration of the general themes brought up by other Somali refugees that participated in these discussions. Similarly, the Anti-Terror Message (T2) was crafted in collaboration with another leader (a Somali Kenyan citizen) who helped identify the most salient parts of our interviews and craft a message that reflected his own desire to dispel the perceived link between Kenyan Somalis and terrorism.¹

¹This is a correction from a previous draft, where one coauthor mistakenly wrote that it was the same person - a refugee cum citizen.

D Sampling, Descriptive Statistics, and Balance

Sampling. The survey was conducted in Nairobi County, Kenya from June 6 to 19, 2017. We selected 54 starting points (clusters), which were allocated across parliamentary constituencies (a convenient geographic unit for stratification) according to population.² In each cluster, we sought to reach 20 respondents. Enumerators were assigned to work in two-person teams (with pairings randomly assigned each day). Within constituencies, we randomly chose polling stations (typically primary or secondary schools) as starting points, based on a 2013 list from the Independent Electoral and Boundaries Commission, the government agency charged with administering national elections. For each selected starting point, an alternate was also selected (randomly from within the constituency), in case the first polling station could not be located or was too insecure. From starting points, enumerators were instructed to follow a random-walk procedure to identify households. Within households, respondents were randomly selected from adults (18+) at home at the time of the visit. The survey team included 12 enumerators of mixed ethnic and gender backgrounds. We hired a separate, independent team to conduct quality-control audits using audio recordings from the interviews. The final sample was 1,035. In the analysis we exclude 16 respondents who were Somali or who were from ethnic groups that reside predominantly in neighboring countries, as our target population for the treatments is non-Somali Kenyans.

Descriptive Statistics. Table 1 provides details for outcome variables (rescaled as necessary to range from 0 to 1, with higher values indicating more positive views), binary moderators used to examine heterogeneous effects, and covariates for the full sample

Balance. For the survey experiment, respondents were randomly assigned to either one of the two treatment conditions, or to a control group. Table 2 shows that the sample is well balanced. The one exception is that the T1 group included a larger share of Kamba respondents than the control group (21% vs. 14%). Estimated treatment effects for T1 are nearly identical to those reported in Table 3 when we include a control for Kamba (not shown).

²We excluded the Eastleigh neighborhood, which is predominantly Somali, because we are interested in the treatment effects on non-Somali Kenyans.

Table 1: Descriptive Statistics

	mean	sd	min	max	N
Outcome measures - T1:					
T1 index	0.37	0.23	0.00	1.00	1,033
Closeness	0.34	0.29	0.00	1.00	1,020
Spending too low	0.18	0.39	0.00	1.00	1,029
Oppose wall	0.44	0.39	0.00	1.00	1,021
Percent citizens	0.34	0.34	0.00	1.00	987
Keep Dadaab	0.53	0.50	0.00	1.00	1,017
Outcome measures - T2:					
T2 index	0.52	0.20	0.00	1.00	1,031
Closeness	0.34	0.29	0.00	1.00	1,020
Peaceful	0.41	0.28	0.00	1.00	1,018
Oppose terrorism	0.59	0.24	0.00	1.00	961
Nationalist	0.37	0.28	0.00	1.00	1,003
Remain in Kenya	0.65	0.48	0.00	1.00	1,015
Better w/Northeast	0.78	0.42	0.00	1.00	1,007
Moderators (binary):					
Security threat high	0.51	0.50	0.00	1.00	956
Labor market threat high	0.64	0.48	0.00	1.00	984
Cultural threat high	0.50	0.50	0.00	1.00	1,017
Contact w/Somali refugee high	0.25	0.43	0.00	1.00	1,011
Contact w/Somali Kenyan high	0.44	0.50	0.00	1.00	1,030
Covariates:					
Male	0.48	0.50	0.00	1.00	1,035
Age	28.3	9.3	18.0	82.0	1,032
Education	3.66	1.24	0.00	5.00	1,030
Wealth index	-0.00	1.58	-4.75	4.68	947
Time in Nairobi	9.38	9.20	0.00	60.00	697
Kikuyu	0.24	0.43	0.00	1.00	1,031
Luo	0.18	0.39	0.00	1.00	1,031
Kamba	0.17	0.38	0.00	1.00	1,031
Luhya	0.23	0.42	0.00	1.00	1,031

Table 2: Balance across Treatment Conditions

	Control mean	T1 mean	Diff (T1-C)	p-values (T1-C)	T2 mean	Diff (T2-C)	p-values (T2-C)
Male	0.49	0.47	-0.02	0.70	0.49	0.00	0.93
Age	28.68	28.22	-0.46	0.54	27.89	-0.79	0.24
Education	3.63	3.63	0.00	1.00	3.72	0.09	0.31
Wealth index	-0.09	0.04	0.13	0.30	0.05	0.14	0.27
Time in Nairobi	9.62	8.68	-0.95	0.27	9.74	0.12	0.89
Kikuyu	0.26	0.22	-0.03	0.33	0.24	-0.01	0.70
Luo	0.20	0.16	-0.04	0.18	0.18	-0.03	0.39
Kamba	0.14	0.21	0.07**	0.02	0.17	0.03	0.28
Luhya	0.23	0.25	0.03	0.45	0.22	-0.00	0.93
Observations	355	305			375		

E Regression Tables for Average Treatment Effects

Table 3: Refugee Hardship Narrative versus Control

	Index	Closeness	Spending too low	Oppose Wall	Percent Citizens	Keep Dadaab
Treatment 1	0.55*** (0.02)	0.46** (0.22)	-0.04 (0.03)	0.32 (0.31)	0.67** (0.27)	0.17*** (0.04)
Constant	0.33*** (0.01)	0.29*** (0.15)	0.20*** (0.02)	0.41*** (0.02)	0.30*** (0.18)	0.45*** (0.03)
Observations	659	650	657	651	629	652

Notes: OLS models with robust standard errors in parentheses. *p<0.10, **p<0.05, ***p<0.01

Table 4: Anti-terror Narrative versus Control

	Index	Closeness	Peaceful	Oppose terrorism	Nationalist	Remain in Kenya	Better w/Northeast
Treatment 2	0.88*** (0.01)	0.91*** (0.216)	1.02*** (0.208)	0.17** (0.072)	0.91*** (0.216)	0.17*** (0.056)	0.06* (0.031)
Constant	0.48*** (0.01)	2.94*** (0.151)	3.76*** (0.153)	2.32*** (0.053)	3.27*** (0.153)	1.41*** (0.041)	0.76*** (0.023)
Observations	726	717	716	680	706	716	707

Notes: OLS models with robust standard errors in parentheses. *p<0.10, **p<0.05, ***p<0.01

F Robustness Tests

We implement three robustness tests to examine whether the main results are driven by social desirability bias. First, we examine whether enumerator ethnicity affected the size of the treatment effects. We expect that respondents may be more willing to express “unpopular” views in the presence of co-ethnic enumerators. Thus, if the results are not conditioned by enumerator ethnicity, we can have greater confidence that the treatments did not differentially activate social desirability biases. Second, we examine whether the presence of bystanders during the interview conditions the treatment effects. Our reasoning is similar to the enumerator ethnicity test: if we observe that treatments effects obtain only when bystanders are present (or are larger in this case), we will have greater cause to worry that the treatments activate concerns social desirability rather than altering respondents’ views. Third, we draw on a battery of post-treatment questions that examine perceptions about whether one’s neighbors would be offended by negative statements about various social groups. From this we create a social desirability index that takes higher values for respondents who believe that negative public statements would be met with disapproval in their localities. We also generate narrow measures that focus on beliefs about whether neighbors would disapprove of negative statement about Somalis or Muslims. We then examine whether these measures condition the treatment effects. Our reasoning again is that if the effects result from social desirability pressures, they should obtain primarily among those who believe that others in their community would take a dim view of voicing negative public statements about various social groups and/or Somalis in particular. Results from these three sets of robustness tests show that enumerator ethnicity, the presence of bystanders, and perceptions about social norms do not condition the results, bolstering the conclusion that the treatment effects cannot be attributed solely to social desirability bias.

F.1 Bystanders

Tables 5 and 6 present models that interact the treatment indicators with a dummy for the presence of bystanders (37% of the sample was interviewed with one or more bystanders present). The presence of bystanders does not systematically affect treatment sizes, and we observe only two instances in which the interaction is significant.

Table 5: Treatment Effects Conditional on Bystanders - T1: Refugee Hardship Narrative

	Index	Closeness	Spending too low	Oppose Wall	Percent Citizens	Keep Dadaab
Bystanders	-0.01 (0.03)	0.02 (0.03)	-0.03 (0.04)	-0.03 (0.04)	0.00 (0.04)	0.00 (0.06)
Treatment 1	0.05** (0.02)	0.06** (0.03)	-0.05 (0.04)	0.03 (0.04)	0.03 (0.03)	0.17*** (0.05)
Bystanders × Treatment 1	0.02 (0.04)	-0.03 (0.05)	0.04 (0.06)	-0.01 (0.07)	0.10* (0.06)	-0.02 (0.08)
Constant	0.33*** (0.02)	0.29*** (0.02)	0.21*** (0.03)	0.42*** (0.03)	0.30*** (0.02)	0.44*** (0.03)
Observations	659	650	657	651	629	652

Notes: OLS models with robust standard errors in parentheses. *p<0.10, **p<0.05, ***p<0.01

Table 6: Treatment Effects Conditional on Bystanders - T2: Anti-Terror Narrative

	Index	Closeness	Peaceful	Oppose terrorism	Nationalist	Remain in Kenya	Better w/NE
Bystanders	-0.01 (0.02)	0.02 (0.03)	-0.07** (0.03)	-0.00 (0.03)	-0.02 (0.03)	-0.01 (0.06)	0.01 (0.05)
Treatment 2	0.09*** (0.02)	0.10*** (0.03)	0.07*** (0.03)	0.04* (0.02)	0.09*** (0.03)	0.16*** (0.04)	0.06 (0.04)
Bystanders × Treatment 2	0.00 (0.03)	-0.04 (0.05)	0.08* (0.04)	0.00 (0.04)	0.00 (0.04)	-0.06 (0.07)	-0.01 (0.06)
Constant	0.49*** (0.01)	0.29*** (0.02)	0.40*** (0.02)	0.58*** (0.02)	0.33*** (0.02)	0.58*** (0.03)	0.76*** (0.03)
Observations	726	717	716	680	706	716	707

Notes: OLS models with robust standard errors in parentheses. *p<0.10, **p<0.05, ***p<0.01

F.2 Enumerator Ethnicity

Tables 7 and 8 present models that interact the treatment indicators with a dummy for coethnic enumerator (17% of the sample was interviewed by a coethnic enumerator). Interviewer ethnicity does not systematically affect treatment sizes for either T2 or T2, and we observe only two instances in which the interaction is significant.

Table 7: Treatment Effects Conditional on Enumerator Ethnicity - T1: Refugee Hardship Narrative

	Index	Closeness	Spending too low	Oppose Wall	Percent Citizens	Keep Dadaab
Coethnic Enum	0.00 (0.03)	0.06 (0.04)	-0.02 (0.05)	-0.06 (0.05)	0.06 (0.05)	-0.03 (0.07)
Treatment 1	0.05** (0.02)	0.05** (0.02)	-0.05 (0.03)	0.01 (0.03)	0.05* (0.03)	0.15*** (0.04)
Coethnic Enum × Treatment 1	0.06 (0.05)	-0.03 (0.06)	0.03 (0.08)	0.10 (0.08)	0.15* (0.08)	0.07 (0.11)
Constant	0.33*** (0.01)	0.28*** (0.02)	0.21*** (0.02)	0.42*** (0.02)	0.28*** (0.02)	0.46*** (0.03)
Observations	656	647	654	648	626	649

Notes: OLS models with robust standard errors in parentheses. *p<0.10, **p<0.05, ***p<0.01

Table 8: Treatment Effects Conditional on Enumerator Ethnicity - T2: Anti-Terror Narrative

	Index	Closeness	Peaceful	Oppose terrorism	Nationalist	Remain in Kenya	Better w/NE
Coethnic Enum	0.04 (0.02)	0.06 (0.04)	0.00 (0.04)	-0.00 (0.03)	0.02 (0.04)	0.07 (0.07)	0.09 (0.05)
Treatment 2	0.10*** (0.02)	0.10*** (0.02)	0.10*** (0.02)	0.04* (0.02)	0.09*** (0.02)	0.17*** (0.04)	0.07** (0.04)
Coethnic Enum × Treatment 2	-0.05 (0.04)	-0.03 (0.05)	0.02 (0.05)	0.02 (0.05)	-0.02 (0.05)	-0.20** (0.09)	-0.06 (0.07)
Constant	0.48*** (0.01)	0.28*** (0.02)	0.37*** (0.02)	0.58*** (0.01)	0.32*** (0.02)	0.57*** (0.03)	0.74*** (0.03)
Observations	722	713	712	676	702	712	703

Notes: OLS models with robust standard errors in parentheses. *p<0.10, **p<0.05, ***p<0.01

E.3 Perceived Social Desirability

Measuring Perceived Social Desirability. To assess respondents’ perceptions of social norms regarding the expression of negative views, respondents were prompted to “suppose that someone said [STATEMENT]. Would your neighbors be very offended, somewhat offended, a little offended, or not at all offended?” The battery included 11 statements related to common stereotypes: (1) Somalis are terrorists, (2) Kikuyus are greedy, (3) Luos are violent, (4) Chinese are racist, (5) Wazungu (whites) are colonizers, (6) homosexuals are dirty, (7) Muslims are terrorists, (8) Barack Obama is a dictator, (9) Donald Trump is a dictator, (10) NASA supporters are tribalist, (11) Jubilee supporters are tribalist. We recode the perceived degree of offensiveness as 0=not offensive, 1= a little offensive, 2 = somewhat offensive, and 3 = very offensive.

Because the questions came after the treatments in the survey, we first assess whether treatment assignment affected respondents’ answers. Tables 9 and 10 show results from a series of OLS models that regress these measure on each treatment (relative to the control) in turn. Treatment assignment does not systematically increase the perception that neighbors would be offended by the battery of negative statements, though we observe a few instances in which the treatments were associated with higher/lower perceptions. Specifically, T1 increases perceptions that saying “Obama is a dictator” would offend neighbors. T2 decreased perceptions that saying “homosexuals are dirty” would offend neighbors, while increasing perceptions of offense for “Obama is a dictator” and “Jubilee supporters are tribalists”. The magnitude of these effects are small and we see no reason why the treatments would affect these perceptions. We thus chalk these correlations up to small, random imbalances across treatment and control groups. We create an index of potential social desirability bias using responses regarding the statements about ethnic groups (the Somali, Kikuyus, Luos, Chinese, Wazungu, Muslims), and leave out statements regarding US presidents, Kenyan parties, and homosexuals. We compute a latent variable using principal component analysis.

Table 9: Does Treatment Assignment Affect Perceived Social Desirability? – Treatment 1 vs. Control

	(1) Somali	(2) Kikuyu	(3) Luo	(4) Chinese	(5) Wazungu	(6) Homosexuals
Treatment 1	0.03 (0.10)	-0.02 (0.10)	0.05 (0.09)	-0.12 (0.10)	0.06 (0.09)	-0.13 (0.11)
Constant	1.19*** (0.07)	1.82*** (0.06)	1.85*** (0.06)	1.10*** (0.06)	0.99*** (0.06)	1.37*** (0.07)
Observations	642	647	647	631	646	639
	(7) Muslims	(8) Obama	(9) Trump	(10) NASA	(11) Jubilee	
Treatment 1	-0.08 (0.10)	0.26** (0.10)	-0.03 (0.09)	0.03 (0.10)	0.13 (0.10)	
Constant	1.56*** (0.07)	1.51*** (0.07)	0.86*** (0.06)	1.75*** (0.07)	1.68*** (0.07)	
Observations	646	634	633	645	645	

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

Table 10: Does Treatment Assignment Affect Perceived Social Desirability? – Treatment 2 vs. Control

	(1) Somali	(2) Kikuyu	(3) Luo	(4) Chinese	(5) Wazungu	(6) Homosexuals
Treatment 2	0.13 (0.09)	0.04 (0.09)	0.10 (0.09)	-0.05 (0.09)	0.03 (0.09)	-0.20* (0.10)
Constant	1.19*** (0.07)	1.82*** (0.06)	1.85*** (0.06)	1.10*** (0.06)	0.99*** (0.06)	1.37*** (0.07)
Observations	707	714	715	700	714	706

	(7) Muslims	(8) Obama	(9) Trump	(10) NASA	(11) Jubilee
Treatment 2	0.06 (0.09)	0.18* (0.10)	-0.01 (0.09)	0.12 (0.09)	0.18** (0.09)
Constant	1.56*** (0.07)	1.51*** (0.07)	0.86*** (0.06)	1.75*** (0.07)	1.68*** (0.07)
Observations	713	707	700	714	712

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

Do Social Desirability Perceptions Moderate the Treatment Effects?

Results in Tables 11 and 12 show that the treatments are not moderated by perceptions of general social desirability pressures from neighbors. Treatment effects are robust in these models, though the treatment effect of T1 drops below conventional standards of statistical significance for one outcome, closeness. Interestingly and perhaps unsurprisingly, such perceptions of general social desirability are positively correlated with some of the outcomes: closeness with Somalis, percentage of Somalis that should be given citizenship, Somalis as peaceful, and Somalis as nationalist. We also examine whether more narrow measures related to perceptions of whether neighbors would be offended by negative statements about 1) Somalis or 2) Muslims condition the results and similarly find no evidence that they do (results not shown).

Table 11: Treatment Effects Conditional on Perceived SDB Index - T1: Refugee Hardship Narrative

	Index	Closeness	Spending too low	Oppose Wall	Percent Citizens	Keep Dadaab
SDB Index	0.02*** (0.01)	0.04*** (0.01)	0.01 (0.01)	0.02 (0.01)	0.04*** (0.01)	0.02 (0.02)
Treatment 1	0.05** (0.02)	0.03 (0.02)	-0.04 (0.03)	0.03 (0.03)	0.06** (0.03)	0.15*** (0.04)
SDB Index × Treatment 1	-0.01 (0.01)	-0.02 (0.02)	-0.02 (0.02)	0.00 (0.02)	-0.02 (0.02)	0.01 (0.03)
Constant	0.33*** (0.01)	0.30*** (0.02)	0.21*** (0.02)	0.41*** (0.02)	0.30*** (0.02)	0.45*** (0.03)
Observations	607	604	606	602	586	604

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

Table 12: Treatment Effects Conditional on Perceived SDB Index - T2: Refugee Hardship Narrative

	Index	Closeness	Peaceful	Oppose terrorism	Nationalist	Remain in Kenya	Better w/NE
SDB Index	0.02*** (0.01)	0.04*** (0.01)	0.03** (0.01)	0.01 (0.01)	0.03*** (0.01)	0.01 (0.02)	0.01 (0.02)
Treatment 2	0.08*** (0.02)	0.09*** (0.02)	0.10*** (0.02)	0.03* (0.02)	0.09*** (0.02)	0.11*** (0.04)	0.06* (0.03)
SDB Index × Treatment 2	-0.01 (0.01)	-0.02 (0.02)	-0.00 (0.01)	-0.00 (0.01)	-0.01 (0.02)	-0.00 (0.03)	0.00 (0.02)
Constant	0.49*** (0.01)	0.30*** (0.02)	0.38*** (0.02)	0.58*** (0.01)	0.33*** (0.02)	0.58*** (0.03)	0.76*** (0.02)
Observations	675	670	668	644	663	667	661

* p_i0.10, ** p_i0.05, *** p_i0.01

G Implicit Association Tests (IATs)

We implemented two Single-Target Implicate Association Tests (ST-IATs) prior to the main survey in order to probe implicit beliefs about the Somali community in Kenya. The IATs were administered on Android tablets using OpenSesame. After an extensive pilot test, we set up the IATs to present stimuli both visually and through headphones simultaneously. The inclusion of the audio prompts was designed to avoid excluding illiterate and semi-literate respondents. In pre-testing the field team found that the audio prompts often slowed down respondents who did not need them. We thus instructed the enumerators to turn off the volume for literate respondents (it typically became clear during the practice round whether respondents needed the audio prompts). The ST-IATs were administered in English and Swahili.

We conducted two IATs. The first explores association with “good” and “bad” as target words, the standard practice in many implementations of the IAT. The second examines associations with “peaceful” and “violent” in order to examine whether respondents view Somalis as associated with violence. The words used as stimuli in the Somali ST-IATs are shown in Table 14.

Each IAT contained four blocks: two practice blocks and two actual blocks. The block structure is shown in Table 13. In the first practice block, participants were introduced to the game and were asked to sort stimuli (good and bad words) into two the appropriate categories. This was aimed at getting individuals who may have never played a game on a tablet more familiar with sorting words into categories, and also exposing respondents to the list of words they would see in the actual IATs. Each of the six words on each list appears once in this practice block for a total of 12 words. In the second practice block, the original two categories (good and bad) again appear on the same sides of the screen, but this time the word Somali also appears on the screen on only one side (chosen at random). Participants are asked to sort the six words from each of the original opposing lists, as well as six words from a Somali word list. After the practice blocks, participants are given the actual IAT. The first test block is the same as the second practice block, with Somali appearing randomly on one side of the screen. The participants sort 27 words, 6 from each of the 3 lists (18) and nine chosen at random from among all three lists. The word Somali switches sides for the second test block. Block were repeated if accuracy was below 75%.

Table 13: Block Structure - Example

Block	Left key assignment	Right key assignment
1. Good-bad Practice	Good	Bad
2. Good-bad Practice	Good + Somali	Bad
3. Good-bad	Good + Somali	Bad
4. Good-bad	Good	Bad + Somali
5. Peaceful-violent Practice	Peaceful	Violent
6. Peaceful-violent Practice	Peaceful	Violent + Somali
7. Peaceful-violent Practice	Peaceful	Violent + Somali
8. Peaceful-violent Practice	Peaceful + Somali	Violent

Note: The order of left-side and right-side assignment for “Somali” in each pair was randomized.

We constructed D-scores using procedures in Greenwald *et al.* (2003), Lane *et al.* (2007), and Lowes *et al.* (2015). Specifically, we exclude data from practice blocks and repeated blocks that fell below the accuracy threshold (75%). We truncate trials above 3000 msec. to that value, and we replace response times (latencies) for incorrect trials with the block mean + standard deviation (calculated from the correct trials in each block). We do not exclude respondents with >10% of trials <300 msec., as recommended by Greenwald *et al.* (2003) and Lane *et al.* (2007), because we

had few respondents for whom this was true. We also did not delete or replace response times <300 msec. because these were rare in our data.

D-scores are measured using the following formula:

$$D - score = \frac{Mean(latency^{bad}) - Mean(latency^{good})}{SD(latency^{both})}$$

where $Mean(latency^{bad})$ is the average response time for the block in which Somali is paired with bad, $Mean(latency^{good})$ is the average response time for the block in which Somali is paired with good, and $SD(latency^{both})$ is the standard deviation of both blocks. If the average response time for the Somali+good pairing is lower than for Somali+bad, the D-score takes a value greater than 0, indicating a stronger association with good; negative scores indicate a stronger association with bad.

Table 14: Word List

Good (English)	Nzuri (Swahili)	Bad (English)	Mbaya (Swahili)
Laughter	Kicheko	Wicked	Unyama
Happy	Furaha	Hate	Chuki
Joy	Mzuri	Hurt	Mwovu
Love	Upendo	Sad	Huzuni
Kind	Furahi	Scary	Inatisha
Nice	Ukarimu	Cruel	Kuumia
Peaceful (English)	Amani (Swahili)	Violent (English)	Vurugu (Swahili)
Secure	Usalama	Killing	Mauwaji
Safety	Imara	Danger	Vita
Protection	Ulinzi	Threat	Tishio
Calm	Salama	Afraid	Uoga
Forgiveness	Kusamehe	Beating	Kupiga
Stable	Utulivu	Attack	Shambulizi
Somali			
Somali Language	Utamaduni wa waSomali		
Somali Tribe	Kabila la Somali		
Somali Person	Lugha ya Somali		
Somali Tradition	Mila za waSomali		
Somali Culture	mSomali		
Somali Elders	Wazee waSomali		

IAT Validation Test:

Because the IAT has been used only a handful of times in similar contexts, we conducted a simple validation test in the pilot phase.³ Similar to the study by Lowes *et al.* (2015) in Eastern Congo, we developed a pair of ST-IATs that used targets for which we had clear *ex ante* expectations about the direction of the associations: foods (positive) and diseases (negative). The stimuli are shown in Tables 15 and 16. The protocols were similar to those used in the main study. The practice block (good and bad stimuli only) included 12 trials; the test blocks included 27 each; and blocks were repeated if the accuracy was <75%. Good (*nzuri*) was always on the left side of the screen, and Bad (*mbaya*) was always on the right. The order of the Food and Disease ST-IATs was randomized, as

³We are aware of four other studies that employ IATs with similar study population: Beaman *et al.* (2009); Berge *et al.* (2015); Lowes *et al.* (2015); and McCauley (2014).

was the order of the left-right pairings within each IAT. The pilot, which included 187 respondents in Nairobi County, was carried out in June 2017. The results, shown in Figure 1, confirm that IATs worked as expected, generating large positive mean D scores for foods and negative D scores for diseases.

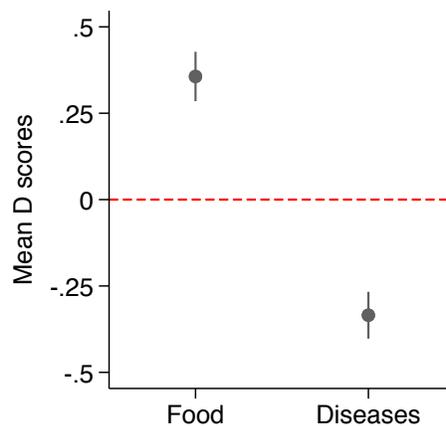
Table 15: Stimuli used in validation test

GOOD		BAD	
English	Swahili	English	Swahili
Happy	<i>Furaha</i>	Cruel	<i>Unyama</i>
Joy	<i>Furahi</i>	Hate	<i>Chuki</i>
Kind	<i>Ukarimu</i>	Hurt	<i>Kuumia</i>
Laughter	<i>Kicheko</i>	Sad	<i>Huzuni</i>
Love	<i>Upendo</i>	Scary	<i>Inatisha</i>
Nice	<i>Mzuri</i>	Wicked	<i>Mwovu</i>

Table 16: Stimuli used in validation test

FOODS		DISEASES	
English	Swahili	English	Swahili
Chapati	<i>Chapati</i>	AIDS	<i>Ukimwi</i>
Githeri	<i>Githeri</i>	TB	<i>Kifua kikuu</i>
Kuku	<i>Kuku</i>	Cancer	<i>Saratani</i>
Nyama	<i>Nyama</i>	Diabetes	<i>Ugonjwa wa sukari</i>
Pilau	<i>Pilau</i>	Epilptic	<i>Kifafa</i>
Ugali	<i>Ugali</i>	Malaria	<i>Malaria</i>

Figure 1: D scores from validation ST-IATs (with 95% confidence intervals)



H Heterogeneous Effects

Correlations between the moderators. Table 17 shows that the inter-item correlations between the four moderators (dichotomous versions) are weakly associated. Note that contact is based on measure of interaction with Somali refugees used as a moderator for T1. Results are similar when contact is measured based on interaction with Somali Kenyan, the moderator for T2.

Table 17: Correlation Matrix

	Security threat high	Labor market threat high	Cultural dissimilarity high	Contact high
Security threat high	1.00			
Labor market threat high	0.02	1.00		
Cultural dissimilarity high	0.11	0.09	1.00	
Contact high	-0.01	-0.05	-0.20	1.00

Associations with the outcome indices. Consistent with prior literature, Table 18 shows that the four moderators employed in the conditional effects tests are associated with the outcome measures in the expected ways. The table shows the results of a series off bivariate regression models that use the T1 index of outcome measures (models 1-4) and the T2 index (models 5-8) as dependent variables, regressed on continuous versions of the moderators. As expected, those who implicitly associate Somalis with violence, view Somali refugees as a labor market threat, and believe that Christians and Muslims have little in common hold less favorable attitudes toward the Somali community. Likewise, those who interact more frequently with Somali refugees (model 4) or Somali Kenyans (model 8) hold more positive views.

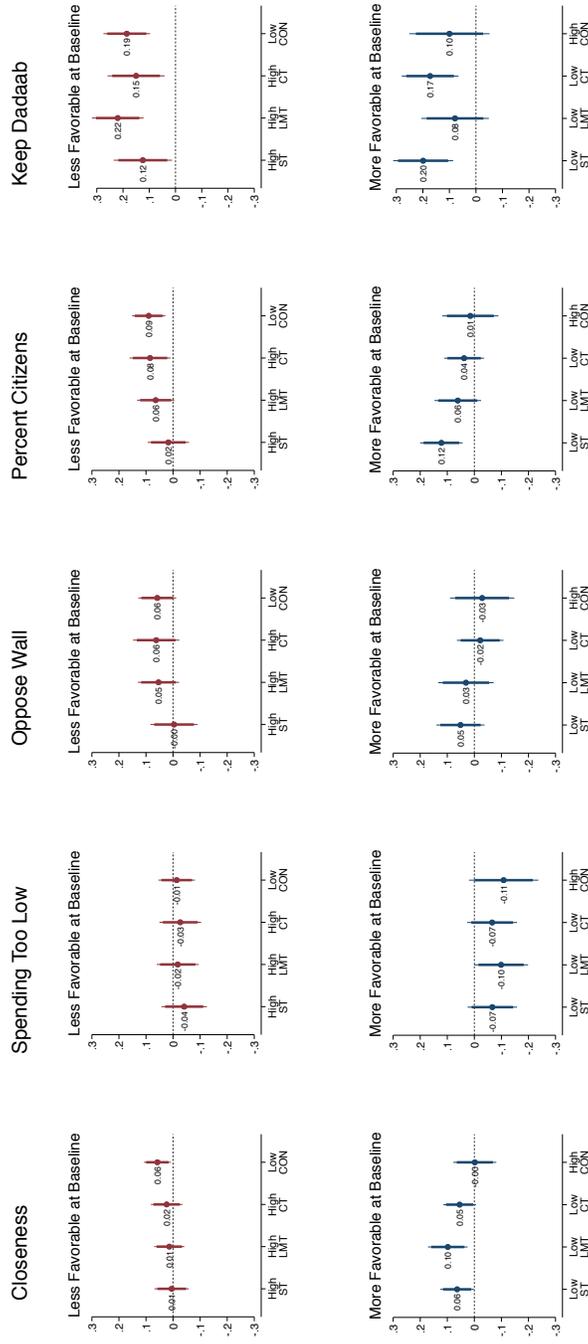
Table 18: Association between Moderators and Outcome Indices

	(1) T1 index	(2) T1 index	(3) T1 index	(4) T1 index	(5) T2 index	(6) T2 index	(7) T2 index	(8) T2 index
IAT score	-0.03** (0.02)				-0.04*** (0.01)			
Labor market threat		-0.01*** (0.00)				-0.01*** (0.00)		
Religious dissimilarity			-0.06*** (0.01)				-0.06*** (0.01)	
Frequency of contact				0.04*** (0.01)				0.03*** (0.00)
Constant	0.37*** (0.01)	0.43*** (0.01)	0.46*** (0.02)	0.34*** (0.01)	0.53*** (0.01)	0.58*** (0.01)	0.61*** (0.01)	0.48*** (0.01)
Observations	954	983	1,017	1,010	952	982	1,016	1,027
R-squared	0.00	0.03	0.05	0.04	0.01	0.03	0.07	0.06

Notes: OLS models with robust standard errors in parentheses. *p<0.10, **p<0.05, ***p<0.01

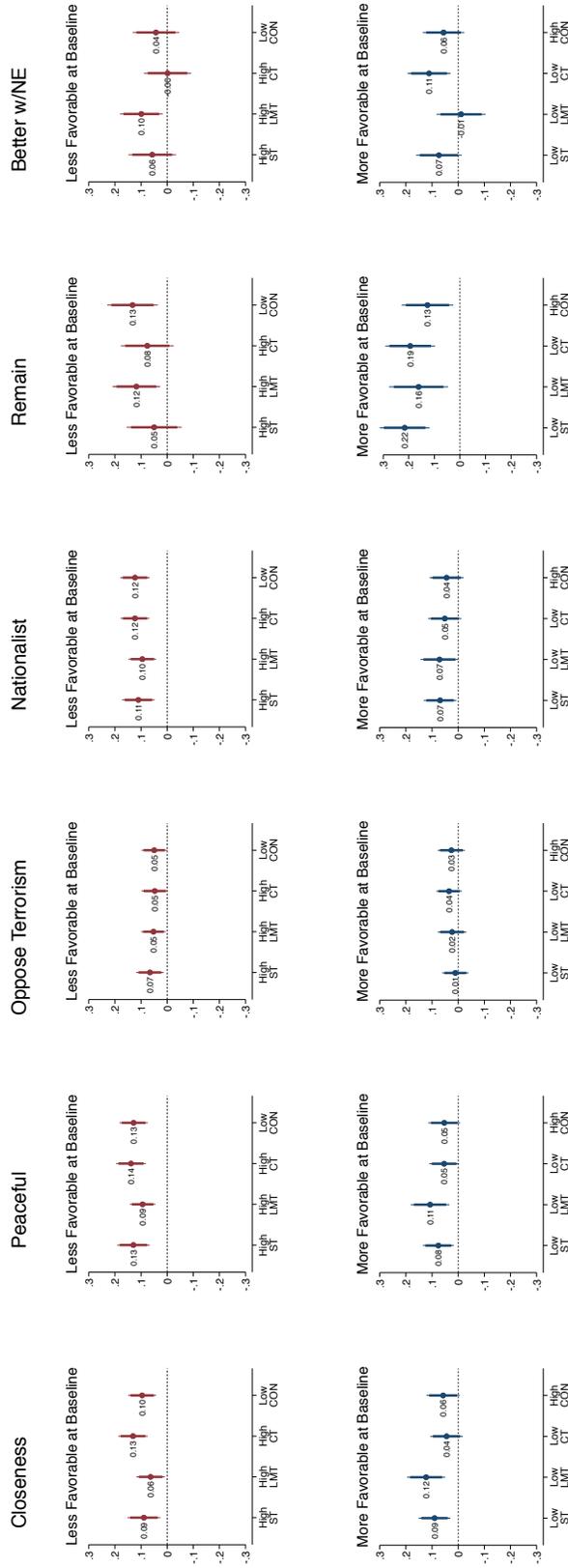
Conditional Effects on Individual Outcomes. The main text reports conditional effects using the outcome indices for T1 and T2. In Figures 2 and 3 we report conditional effects on each of the outcome variables that make up the composite indices. For both treatments, we observe effects both among those who hold more positive baseline predispositions and among those who hold more negative baseline views. For T1, there is more variation. Thus, with regard to security threat, we observe more consistent effects for respondents who view Somalis as a low security threat, though we do find that the treatment also produced a positive effect on one indicator (support for keeping Daadab open) among those who view Somalis as a higher security threat. With regard to labor market threat, cultural threat, and contact, positive effects were more consistently observed among those who were less favorably disposed at baseline and those with less routine contact with Somali refugees. For T2, the pattern is more consistent, with positive effects observed on most items both for those more/less positively predisposed at baseline.

Figure 2: Treatment 1 Effects on Individual Outcomes, Conditional on Moderators



Notes: Figures show treatment effects conditional on: 1) security treat (ST); 2) labor market threat (LMT); cultural threat (CT); and contact (CON).

Figure 3: Treatment 2 Effects on Individual Outcomes, Conditional on Moderators

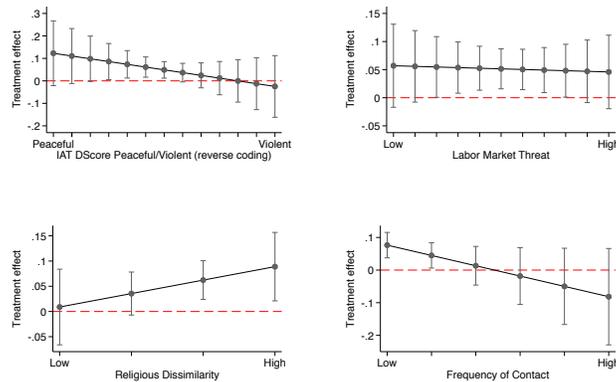


Notes: Figures show treatment effects conditional on: 1) security treat (ST); 2) labor market threat (LMT); cultural threat (CT); and contact (CON).

Continuous moderators.

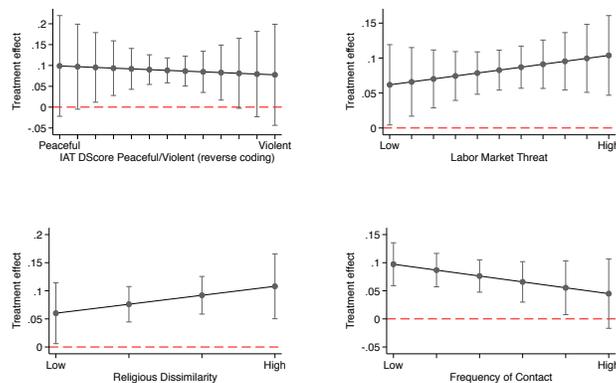
The main tests for heterogeneous effects employ dichotomous versions of the moderators (above/below the median on each variable). Figures fig:T1cont and fig:T2cont show estimated treatment effects for T1 and T2, respectively, based on models that use continuous versions of the moderators (with the outcome indices as dependent variables). The results mirror those presented in the main text. For T1, positive effects are observed among those who implicitly view Somalis as peaceful, believe Islam and Christianity have little in common, and have little contact with Somali refugees. Positive effects are observed across the range of labor market threat perceptions. For T2, positive effects are observed at both low and higher values of the moderators.

Figure 4: T1 Effects with Continuous Moderators



Notes: Figures show the estimated effects of T1: Refugee Hardship Narrative relative to the control condition based on OLS models that interact treatment assignment with continuous versions of each moderating variable.

Figure 5: T2 Effects with Continuous Moderators



Notes: Figures show the estimated effects of T2: Anti-Terror Narrative relative to the control condition based on OLS models that interact treatment assignment with continuous versions of each moderating variable.

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