Deference, Dissent, and Dispute Resolution:

An Experimental Intervention using Mass Media to Change Norms and Behavior in Rwanda

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Deference and dissent strike a delicate balance in any polity. Insufficient deference to authority may incapacitate government; too much may allow leaders to orchestrate mass violence. Although cross-national and cross-temporal variation in deference to authority and willingness to express dissent has long been studied in political science, rarely have scholars studied programs designed to change these aspects of political culture. The present study, situated in post-genocide Rwanda, reports a qualitative and quantitative assessment of one such attempt, a radio program aimed at discouraging blind obedience and reliance on direction from authorities and promoting independent thought and collective action in problem solving. Over the course of one year, this radio program or a comparable program dealing with HIV were randomly presented to pairs of communities, including communities of genocide survivors, Twa people, and imprisoned génocidaires. Changes in individual attitudes, perceived community norms, and deliberative behaviors were assessed using closed-ended interviews, focus group discussions, role-play exercises, and unobtrusive measures of collective decision-making. Although the radio program had little effect on many kinds of beliefs and attitudes, it had a substantial impact on listeners' willingness to express dissent and the way they resolved communal problems.

Societies in which genocides occur are often said to have distinctive political cultures in which deference to authority and conformity run high. Whether obedience is traced theoretically to child-rearing practices (Adorno et al. 1950), cultures within large bureaucratic organizations (Arendt 1963), highly centralized authority (Chalk and Jonassohn 1990), or individuals' motivation to reduce internal dissonance (Hinton 2005), genocidal perpetrators and fellow-travelers in Germany (Craig 1980; Lewin 1948), Cambodia (Chandler 1999), and Turkey (Ramsauer 1957) are said to be unusually compliant and unusually reluctant to express dissent.

The cultural origins of genocide have special resonance for the interpretation of the Rwandan genocide in 1994 and for efforts to develop interventions to prevent future ethnic violence. Journalistic accounts stress Rwanda's "entrenched culture of obedience" when accounting for the swiftness with which Hutus killed their Tutsi victims (Lacey 2004). A scholarly history of the genocide likewise describes the Rwandan citizen's mindset: "[w]hen the highest authorities in that state told you to do something, you did it, even if it included killing" (Prunier 1995, 245). Political and human rights observers concur (African Rights 1995, 249; Dallaire and Beardsley 2003; Prendergast and Smock 1999, 13). Rural Rwandan interviewees have commented to various academic researchers that Rwandans are meek followers, "like cows" (Lyons and Straus 2006; Paluck 2006; Zorbas 2007). The current Tutsi-led government, moreover, decries the "[p]assivity, lack of initiative and dependency syndrome on the part of the majority of the population" (Republic of Rwanda 2001, 4).

The adequacy of such cultural explanations of genocide is debatable.[1] Nevertheless, many post-conflict policies and programs target culture, which is thought to exacerbate intergroup enmity and facilitate structural problems that perpetuate antagonism. Governments and international and non-governmental organizations have embarked on ambitious cultural change campaigns to address violence, corruption, and other post-conflict problems (e.g., Transparency International 1999; United Nations 1999). The government of Rwanda, for example, officially promotes development policies incorporating "open debate with collective responsibility for development…to replace the culture of passive obedience" (Republic of Rwanda 2002, 4).

These efforts raise fundamental questions about the extent to which, and the conditions under which, political culture changes. To answer this question, one must first define political culture and explain how it guides political conduct. Although there is little consensus on this matter, Sewell (2005) argues that contemporary work on culture falls into two general categories. The first characterizes culture as a broad system of shared meanings and symbols (e.g., Laitin 1986; Schatzberg 2001).[2] The second

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[1] The cultural traits that are said to facilitate genocide often fail to do so unless accompanied by an array of contextual factors. Obedience depends on many situational factors such as the presence of peers, inconsistencies in authoritative instructions (Milgram 1974; Packer 2008), and the support of like-minded dissenters (Asch 1956; Bond and Smith 1996). Add to this the many proximal causes of genocidal violence, such as small group dynamics favoring peer pressure, solidarity, and conformity (Browning 1993; Fuji 2009; Straus 2006), the beliefs and attitudes that subordinates harbor about their victims (Goldhagen 1996; Klemperer 1998), and economic opportunism (André and Platteau 1998). The contextual emphasis of this research reveals the inadequacy of cultural explanations involving static accounts of national character, describing shared values and understandings bounded by language, religion, and nation state (Almond and Verba 1963; Eckstein 1992; Huntington 2000; Inglehart 1997; Parsons 1951; Pye and Verba 1965).

[2] Other research that portrays political culture as a shared, coherent system defines it differently, for example as a set of incentives and strategies (Chwe 2001), a typology of

characterizes culture largely as behavioral practice, stressing forms of conduct that

constitute an individual's behavioral repertoires or "toolkit" (Swidler 1986; see Wedeen

2002).[3] Drawing on Sewell, we treat political culture as neither one nor the other; for us,

culture is a system of meaning linked to a set of available behavioral practices. For our

purposes, we focus on the practices thought to be most closely related to genocide –

deference to authority, willingness to speak out in defiance of a group norm, and

acceptance of collective responsibility for the mediation of disputes.[4]

Shifting the locus of culture away from national character to everyday behavior

allows for the possibility that interventions can change culture by targeting political

conduct. Sewell notes that the relationship between system and practice "[possesses] a

real but thin coherence that is continually put at risk in practice and therefore subject to

transformation" (Sewell 2005 p. 169). However, most observational research on political

cultural change has examined change through shifts in large-scale forces, to the neglect of

more modest interventions aimed at affecting political conduct. For example, Rogowski

(1974) argues that German political attitudes shifted dramatically after World War II,

with relatively muted differences between age cohorts socialized under the Third Reich

and those who came of political age afterward (see also Laitin 1986 on British colonial

rule). Likewise, Rwandans' deference to authority has been traced to institutional

arrangements imposed by Belgian colonial rulers, who refashioned the intricate

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behaviors and identity groups (Douglas and Wildavsky 1982), or an enduring product of
institutional history (Putnam 1993; Rohrschneider 1999; cf. Jackman and Miller 2004).
[3] Galvan (2004) offers another concept of political culture based in part on practice,
arguing that post-colonial political culture in Senegal is a syncretic product of new
institutions embedded in traditional memory and practice.
[4] These practices relate to central themes in past studies of political culture, specifically
orientation toward authority and collective political conduct (Almond and Verba 1963;
Laitin 1986; Weber 1978; Wedeen 1999).

monarchical system characterized by competing patterns of local allegiance into a more centralized, oppressive, and ethnically homogenous system of governance (Lemarchand 1970; Newbury 1988).

Such examples, however, are small consolation to domestic policy-makers and international actors who hope to bring about cultural change. Rarely do those who intervene in post-conflict societies have the capacity to effect fundamental shifts in political institutions (Jackman and Miller 2004; Putnam 1993) or economic conditions (Inglehart 1997), or the mandate to wait decades for results. The question of immediate practical concern is whether change can be induced in the short run. This question is also of enormous theoretical importance.

How malleable are the aspects of political culture thought to be associated with genocide? Past research has examined cross-regime, cross-national, and long-term temporal variation in aspects of political culture, but thus far no studies have traced change in response to an experimental intervention. This study considers one such intervention, a Rwandan radio program designed to challenge norms of deference, legitimize expressions of dissent, and encourage local problem solving and dispute resolution. We present the results of an unusual experiment, one which randomly exposes rural Rwandans either to this program or a parallel program about health over the course of one year. We measured changes in listeners' attitudes, perceptions of typical or desirable conduct (i.e. "social norms": Miller, Monin and Prentice, 2000), and behavior using an array of qualitative and quantitative measures. The study cannot adjudicate among different accounts of political culture and cultural change as a whole. However, the results contribute to the study of political culture by demonstrating how important

aspects of cultural practice do or do not change in the wake of exposure to media messages over the course of a year.

Our results indicate that while the program did little or nothing to change many domains of individual belief and attitude, it effected profound changes in behavior. Radio listeners in the treatment group became more likely to express dissent with peers and less likely to defer to local officials when solving local problems. These changes were balanced by an increased sense of collective responsibility and local initiative. Our findings suggest that certain aspects of political culture are susceptible to short-term change in the wake of non-institutional interventions, such as media programs. Evidently, the mass media can influence the set of culturally available behavioral practices that citizens use—the "toolkit" of political cultural conduct (Swidler 1986). Using appealing, archetypal rural Rwandan characters to act out the behaviors of interest, the radio program made dissent and local collective action acceptable and available for use in everyday life. Such changes do not constitute a fundamental transformation of Rwandan political culture. Still, our results show that modest interventions, at least in the short term, can have large and significant behavioral effects. This represents a significant step forward for theories attentive to the role of political conduct in cultural change.

Our essay is structured as follows. We begin by discussing media interventions as a general tactic for influencing culture and the special role of radio in the Rwandan setting. Next, we describe in detail the experimental design and measurement strategies used to assess the impact of a post-genocide reconciliation radio program in relation to a comparison program dealing with health. The results section describes findings from closed-ended interviews, focus group discussions, role-playing exercises, and unobtrusive

measures of collective decision-making. We conclude by discussing the implications of our findings for ongoing theoretical debates about media influence, the malleability of political culture, and post-conflict intervention.

Media as Agents of Change in Post-Genocide Societies

In 2004, a non-governmental organization in Rwanda began broadcasting a radio soap opera (*Musekeweya,* or New Dawn) to teach listeners about the roots of violence, the importance of independent thought, and the dangers of excessive deference to authority. This media intervention, which enfolds educational messages in a dramatic fictional story, is part of a global phenomenon called "entertainment-education," which has become a popular technique among social change campaigns in developed and developing countries (Rosin 2006; Singhal et al. 2004). Such campaigns are especially popular in post-conflict countries where government agencies and civil society are often unreliable vehicles for promoting social or political change. Entertainment-education programs weave messages about health, conflict resolution, or development strategies into a story featuring realistic and entertaining characters. The theory, which draws upon psychological social learning theory (Bandura 2002), is that media can "both entertain and educate, in order to increase audience members' knowledge about an educational issue, create favorable attitudes, shift social norms, and change overt behavior" (Singhal and Rogers 2004, 5).

The soap opera launched in Rwanda one decade after the genocide featured a fictional story of two Rwandan communities. Due to government restrictions against public discussion of ethnicity, the story of the communities serves as a transparent

allegory for the history of cooperation and conflict between Rwandan Tutsis and Hutus. Inter-community tensions created by a land shortage are set aflame by demagogic authorities who seek to accumulate power, and relations between the fictional communities disintegrate as the less prosperous community attacks its rival. Against this backdrop of communal violence, a romantic storyline unfolds between a young man and woman, each from a different community. Instead of falling victim to the violence and prejudices between their two communities, the Rwandan Romeo and Juliet form a coalition for peace with citizens from both communities. Their coalition defies the power-hungry authorities and seeks to mediate the conflict and help the victims.

We ask the following questions regarding the impact of this media program. First, can a drama written to reflect common experiences of the average Rwandan citizen encourage the adoption of norms and behaviors portrayed by the program's heroes? More broadly, can media interventions influence an aspect of a country's political culture? Questions about media influence on political behavior and culture abound, but rarely are investigators able to observe a media program unfold and to deploy a methodological design that isolates its causal effects. We conducted a randomized experiment to assess whether one year after the radio program began changes could be observed in Rwandan radio listeners' deference to authority, willingness to dissent, and collaborative participation in dispute resolution. By deference to authority we mean submissive behavior toward another on the part of a subordinate actor or group (Shils 1972); by dissent we mean the expression of opinions that are at variance with those previously, commonly, or officially expressed by peers or authorities (*Oxford English Dictionary*, 2d ed). In Kinyarwanda, the language in which the interviews were conducted, dissent was

signified as *ndabivuga*, "I speak [when I disagree]," in opposition to *ndicecekera,* "I keep quiet."

The project is part of a broader assessment of the impact of media on citizen beliefs, norms, and behavior. The radio program's social psychological effects have been described elsewhere. Paluck (2009) shows that the radio program shifts listeners' perceptions of social norms, or perceptions of typical and desirable behaviors, without affecting factual beliefs regarding the causes or consequences of those behaviors. In this article, we ask whether the media can influence Rwandans' perceptions of the desirability of certain political behaviors, and whether these perceptions translate into political conduct.

Empirical Method and Results

Sampling of Participants

We selected 14 research sites to represent salient political, economic, and ethnic categories of present-day Rwanda: two genocide survivor communities (mostly Tutsi), two Twa communities (the Pygmy minority), two prisons, and eight general population communities from the four general provincial regions of Rwanda. The four provincial regions (excluding the capital) represent differing social and political circumstances. The Northwest region was the base of Hutu extremism and support for former President Habyarimana, whose assassination marked the starting point of the genocide. The current (Tutsi-led) regime distrusts and monitors this region. The Western region was the site of some of the most rapid genocidal killing in 1994 (in one prefecture, more than three quarters of its 59,050 victims were killed in less than two weeks; Straus 2006, 56-58). The southern region is the historical seat of Tutsi royalty, and in modern times has been

the intellectual heart of the country, hosting the national university. The largest

percentage of Rwandan Tutsis lived in the South prior to the genocide, and the region had

one of the latest onsets of genocidal violence due to initial resistance by local authorities.

The Northeast region was in the Tutsi rebel (RPF) army's path as it invaded from Uganda

in 1993 and 1994, eventually ending the genocide, but carrying out reprisal violence

aimed at Hutu along their route to the central capital, Kigali.

Because prison, survivor, and Twa communities are relatively scarce and

scattered across the country, we worked through the prison system and Twa and survivor

advocacy groups to obtain demographic, socioeconomic, and detainee characteristics (for

the prisons) for a range of sites, and we chose the two most similar sites of each

community type even if they were located in different provinces. We chose each general

population community site on the basis of its accessibility by paved or dirt road (we

eliminated sites unavailable by road for logistical reasons), and on the quality of its

demographic and socioeconomic match with another site in the region, a site far enough

away that the communities did not share markets (to prevent spillover) but close enough

to be similar on a range of characteristics. We used Rwandan census data to match the

sites, including gender ratio, quality of dwellings, religion, and education level. Figure 1

shows the exact locations of each research site within the four provincial boundaries.[5]

We randomly assigned one site in each pair to listen to the reconciliation program,

and the other to the health program. Random assignment ensures that, in expectation, the

treatment groups have the same observable and unobservable attributes. Block

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[5] The four provincial boundaries were drawn after our site selection in 2004, when the Rwandan government redesigned the country's administrative boundaries in 2006 as part of a decentralization effort.

randomization of sites helps to minimize observable differences between the communities in small samples. Even after blocking there could be remaining observable differences, but these were controlled in multivariate analyses of the outcome data. Since the reconciliation and health sites have similar background attributes, these controls turned out to have little effect on the results.

Because radios and batteries are relatively expensive for Rwandans, they usually listen to the radio in groups. Thus, we used a group-randomized design in which adults from a community listened together either to the treatment (reconciliation) radio program or to the control program (another entertainment-education radio soap opera about health and HIV). Forty adults within each community were randomly sampled from official lists of the population after stratifying for sex and age (18-30 and 30 and older). The sampling technique invited at most one person per family.

The first author visited each community with four Rwandan research assistants who represented Hutu and Tutsi ethnic backgrounds. Research assistants sought out the selected individuals and explained the purpose and the procedure of the study. The purpose—"…to understand Rwandans' opinions about radio programs and the issues addressed in those programs"—was defined broadly so as not to create expectations of any particular set of future questions. Nearly all individuals selected to participate accepted the invitation. On average, one or two selected individuals at each site turned down the invitation to participate due to poor health or indifference. We drew replacements from a randomized backup list created in advance.

Pretest

When an individual agreed to participate, the researcher conducted a brief pretest interview to collect information about the individual's background. Baseline pretest data for each community cluster confirmed that the matched randomization had divided the sample into two groups with similar background attributes. The pretest data also provided covariates that help to minimize disturbance variance in the posttest analyses.

Table 1 presents statistics on the characteristics of participants at each research site. The total participant sample was 50% male, and the average age was 38.9 years. We did not achieve a male-female balance in every site because of the disproportionate loss of men during the genocide in some areas (in survivor, Twa, and in two general population villages). Ninety-three percent of men and 81% of women reported regular listening to the radio. Only 53% of the participants actually owned a radio; 83% of those who did not have a radio reported listening in groups with family or friends, which affirms the logic of our group-listening study design. Seventy-nine percent of participants identified themselves as farmers, and 73% of men and 67% of women in the total sample had some schooling. The Twa and survivor communities were the poorest of all research sites.

Ninety-nine percent of the sample was in Rwanda at the start of the genocide, and approximately 50% was displaced by the violence for a time of one week to a few years. Sixty-nine percent of the sample reported one or more of their relatives were killed in 1994; similar proportions of each community claimed material losses (property looted or burned) during the genocide. Twenty-eight percent of the general population participants had a relative in prison compared to 7% of survivors and 57% of Twa participants. As a randomization check, we regressed the binary treatment variable on background

characteristics (including dummies for missing data in the pretest and accounting for clustered random assignment). An F-test was insignificant ($F = 0.73$, $p = .65$), meaning that there was no unexpected association between characteristics of the participants and radio program to which they were assigned.

Experimental Design

The same Rwandan research assistants visited each community over the course of one year and played each month's four 20-minute episodes on a portable stereo for the listener groups. Although research assistants were aware of the program differences, they were blind to specific research hypotheses. Participants gathered in their respective community spaces as they do for non-research occasions to listen to the radio. Program content was the only difference between the two conditions—listening protocol, frequency, and outcome measurements were the same.

Control groups listened to the education-entertainment radio soap opera *Urunana*, which aims to change beliefs, norms, and behaviors about reproductive health and HIV. Comparing the outcome of groups listening to a radio soap opera with a different message isolates the impact of the *content* of the radio program from the social environment that accompanies media consumption. An alternative design would involve a no-listening control group. But the no-listening subjects would then differ along many dimensions (e.g., participation in groups, common knowledge about other listeners' reactions, a monthly schedule) that potentially threaten the experiment's internal validity.

Monthly field visits ensured that participants listened to the program but preserved the most natural environment possible. Research assistants who visited every

month sat and listened with the group as part of what was designed to be a casual community gathering. The group shared customary local drinks (purchased by the research team) and often lingered afterward to chat. Research assistants never initiated or guided discussion. They filled out standardized observation sheets after they left each site to record attendance and to rate the group's levels of observable enthusiasm, attentiveness, confusion, emotional expressions, and the amount and subjects of discussion during and after the program.

A content analysis of the radio program's scripts confirms the essential similarity of the two soap operas.[6] As Table 2 makes plain, the principal topics of each program are distinct. Health issues (for example, AIDS testing, health insurance, and pregnancy precautions) appear in 83% of *Urunana* episodes compared to 2% of *Musekeweya* episodes. Expressions of dissent, coded when opposition to authorities or peers was voiced (for example, disagreeing with plans to attack the neighbors, denouncing looters, proclaiming friendship with "the enemy," and excluding minor interpersonal disagreement like the best way to make banana beer), never appear in *Urunana* episodes but arise in 56% of the episodes in the *Musekeweya* reconciliation program. That the programs' messages do not overlap boosts confidence that any observed change pertaining to the reconciliation program content can be attributed to listening to the reconciliation program. In other respects, the programs are similar in format and present the same or homologous topics, providing study participants with relatively equivalent listening experiences. Like all soap operas, the radio dramas were filled with romance, humor, villains, deceit, and emotion. In the reconciliation program, the lovers were the

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[6] An independent judge coded a random subsample of the scripts and reached an acceptable level of interrater reliability with the first author's codes, $\alpha = .91$.

Romeo and Juliet from opposing communities (27% of episodes); the heath program also featured two young lovers, and a comedic and affectionate married couple expecting their first baby (25% of episodes). The reconciliation program villains were local authorities and elders who fomented hatred and violence between the two communities (29% of episodes); health program villains included elders who covered up the rape of a young girl, an ignorant work supervisor who stigmatized people with HIV, and "quack" doctors who charged high prices for unhygienic and retrograde medicine (17% of episodes). When violence was depicted, it was primarily interpersonal (rape) in the health program (10%), and mostly intergroup (attacks and looting) in the reconciliation program (8%). Equivalent amounts of conflict spurred positive but different resolutions in each program: interpersonal apology and economic cooperation in the health program (23%), and empathy and cooperation for peace in the reconciliation program (21%). As indicated by Table 2, both programs portrayed rural Rwanda communities in which some people lived comfortably but others struggled in poverty.

Overall, the reconciliation program focused on social and political conflict and citizens' responsibility for conflict reduction, while the health program focused on social and familial conflict and citizens' responsibility for their health. Both programs were penned by Rwandan scriptwriters relying on traditional Rwandan storytelling styles (one reconciliation scriptwriter originally worked for the health program) and were financed by non-governmental organizations.

Random assignment of listeners to one of the radio programs addresses the chronic problem of self-selection—listeners' preexisting tastes may guide their choice of media programs *and* their attitudes and behaviors. To ensure the health group remained

"untreated" by the reconciliation program, which was broadcast nationally during the evaluation period, we asked the health program listeners to refrain from listening to the reconciliation program for one year. As an incentive to comply we promised 14 cassette tapes containing the year's worth of reconciliation program episodes at the end of the year. Thus, health participants understood their promise as a postponement and not a sacrifice. In order to maintain symmetry across experimental groups, these cassettes were also promised to the reconciliation group. (See Appendix for a detailed discussion of the experimental procedure and the ethical considerations that guided the design.)

Health participants do not appear to have listened to broadcasts of the reconciliation program. We instructed research assistants to make casual comments to health participants about the reconciliation program halfway through the year, but participants indicated that they were not listening and seemed unaware of its main characters. The high rate of compliance may reflect the fact that the new reconciliation drama had yet to build up a following, and three alternative programs were aired on other stations in its time slot. If, however, some participants "crossed over" to the treatment group without our knowledge, our statistical findings would underestimate the true effect of the reconciliation program (Freedman 2006). Our results therefore provide a conservative estimate of the reconciliation program's impact.

Data and Statistical Considerations

At the end of one year a team of seventeen Rwandan researchers (including those who had visited the communities throughout the year) accompanied the first author to each research site for three days. Researchers conducted individual structured interviews,

semi-structured focus groups, "role-plays," and unobtrusive observations of community

negotiations. Before analyzing the results, we first comment on some statistical issues.

Analytic issues of clustered random assignment. With fourteen clusters and

approximately 40 individuals per community, the total sample is 556 individuals (fewer

than 10 people left the study over the course of the year; there was no differential attrition

for reconciliation and health). However, the "effective N" of this study is lower because

individuals within each cluster are not independent observations. Participants living

together in each cluster may share unobservable characteristics. Their shared

characteristics violate the assumption of independent disturbances, an assumption on

which conventional standard errors are calculated. We therefore present robust cluster

standard errors, which account for within-cluster covariance (Arceneaux 2005). We also

increase the power of the experiment by including covariates from the pretest, which

potentially reduce the intra-cluster correlation among the disturbances and decrease the

disturbance variance.

Evidence of equivalent listening experiences. A mean of 35.6 participants tended

each month's listening sessions at each site, with no meaningful difference in attendance

between health ($m = 35.8$, $sd = 3.5$) and reconciliation ($m = 35.4$, $sd = 3.7$) treatment

groups. There were no differences between reconciliation and health groups' observed

interest in the program, using the research assistants' ratings combined across all visits

(using a scale from least to most, 1 to 5; $m = 4.0$, $sd = .75$; $m = 4.2$, $sd = .83$,

respectively), enthusiasm ($m = 3.3$, $sd = .96$; $m = 3.6$, $sd = .90$), distraction ($m = 1.9$, $sd = .90$; $m = 1.7$, $sd = .78$), confusion ($m = 1.5$, $sd = .60$; $m = 1.5$, $sd = .78$) and discussion

during the broadcast (m $= 2.9$, $sd = .90$, $m = 3.3$, sd $= 1.1$). After the broadcast ended,

researchers observed any further spontaneous discussion and reported that participants

spent on average 63% of their time discussing the program (as opposed to other topics)

before leaving, a rate that was almost identical in the two experimental conditions. These

results indicate that the listening experience was similar for reconciliation and health,

with the key difference being the content of the media program.

Individual interviews and focus groups. In the structured individual interviews,

researchers read each participant a series of statements. Participants specified how much

they agreed or disagreed with each statement by pointing to one of four progressively

larger circles printed on a large index card; the smallest circle represented "disagree

strongly" and the largest "agree strongly." We focus here on the item used to measure

perceptions of a prescriptive ("that is the way people should act") norm about dissent:

When I disagree with something that someone says, I should dissent. Because the

response options are a series of ordered categories, we used ordered probit regression to

analyze the results.

Table 3 shows the effect of the reconciliation program on responses to this item

across three specifications. The first specification includes only the random treatment

("Reconciliation program") as a predictor. The second includes dummy variables for

each of the community pairs—from the Northwest sites to the survivor community sites.

The final specification includes the community dummies as well as measures from the

pretest survey. These pretest measures included whether the respondent was ever

displaced by the violence in Rwanda, respondent sex, and amount of radio listening.

The results show that reconciliation listeners were .26 to .29 probits more likely

than health listeners to indicate that they should speak up. These estimates are statistically

significant (p < .001) regardless of model specification, including the most conservative specification, a linear model using the research site as the unit of analysis (β= 1.70, *se* = 0.63, *p*< .05, N=14). They are also substantively large. A shift of .26 probits implies, for example, that a health group respondent with a 30% chance of strongly agreeing to dissent would move to a 40% chance if assigned to the reconciliation program group. This is a large, but not implausibly large, shift in opinion.

Focus Group Results

Does a perception that one should express an unpopular viewpoint translate into actual behavior? To test this, we raised the question of trust in both the private interview and the public focus group, to determine if participants would express similar views in the two contexts. From knowledge of the research site as well as previous research (e.g., Gabisirege and Babalola 2001), we expected trust to be low in the wake of the genocide. However, we also knew that the expression of mistrust would go against the official government line of unity and reconciliation.

In privately conducted individual interviews participants were asked to rate their agreement with the statement: *There is mistrust in my community.* The vast majority (80%) of participants agreed with this statement. There was no difference in privately reported mistrust comparing reconciliation and health listeners. This finding is consistent with other evidence demonstrating that social desirability did not guide the responses of reconciliation listeners. Paluck (2009) reports that reconciliation listeners did not become more sanguine about the effects of intermarriage and other types of cross-group social interaction.

Half of all participants were organized into single-sex focus groups of 10 before their private interview, and the other half took part in a focus group after the interview.[7] Researchers posed open-ended questions and encouraged participants to discuss them with each other. With little moderation by researchers, the focus groups were more like community forums than question and answer sessions; on average, there were 11 contributions for each question, and there was no significant difference in the average amount of talking between reconciliation and health focus groups (β= -4.96, se = 3.59, p = .22).

Among other topics, researchers asked focus groups to discuss whether there was mistrust in their community. Figure 2 shows that in these public settings denials of mistrust became much more frequent—but only among health groups.[8] With the exception of the survivor communities (described below), over 60% of the health group comments were denials of mistrust, compared to fewer than 20% of reconciliation group comments (β= 0.96, se = 0.37, p< .01). In light of the uniformly high levels of mistrust reported in the individual interviews, the difference in focus group responses seems to reveal more about the reconciliation group's willingness to speak out on difficult subjects than about actual levels of community mistrust.

The one exception to this finding was the survivor groups—none of whom modified their strong stance that there is mistrust in their community. A plausible

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[7] We counterbalanced the order of the individual and focus group interviews and found no significant differences between the individuals who participated in one sequence or another. We conducted focus groups and role-plays (below) in only eight of the 14 sites due to logistical constraints.

[8] Going beyond the data depicted in Figure 2, we note further that 39% of the health groups' comments were unqualified denials of any mistrust in their community (e.g., "there is no mistrust at all!" as opposed to statements downplaying mistrust), compared to 7% in the reconciliation groups.

explanation for this break in the pattern, which we discuss further below, is that their

identity as genocide survivors and as co-ethnics with the current regime grants them

greater license to speak out about the social effects of the genocide. Although the current

governmental regime pressures Rwandans to adhere to their official line of "unity and

reconciliation," genocide survivors (backed by strong political interest groups within

Rwanda and featured in government appeals for aid) are to a certain extent granted

exception.

Social Distance Attitudes

It should be emphasized that the behavioral changes just described were *not*

accompanied by a more general willingness to affiliate with members of other groups.

Our questionnaire asked whether participants were interested in greeting, sharing beer

with, working with, and intermarrying a child with a member of a different group (the

implication was a different ethnic group, although the prohibition on using ethnic terms

prevented us from specifying this directly).[9] We found no reduction in social distance

when comparing the health and reconciliation groups. The null results reported in Table 4

are important insofar as they run counter to the hypothesis that demand characteristics of

the experiment caused respondents in the reconciliation group to express more tolerant

opinions.[10]

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[9] See Appendix for the full questionnaire administered to the reconciliation and health
groups.
[10] The fact that some survey outcomes show significant effects while others do not raises
the issue of how to maintain the appropriate test size across multiple comparisons. The
questionnaire (see Appendix) contains four distinct dependent variables: an index of
questions concerning social norms, an index concerning factual beliefs, an empathy scale,
and a social distance scale (see Paluck 2009 for a list of the factual and social norm

Role-Playing

We were also interested to measure group-generated outcomes, because dissent and deference to authority is expressed socially and conditioned by one's social surroundings. In particular, we wished to test participants' approach to a collective dispute. To single-sex groups of participants at each site, we played recordings of unfinished radio scenes written by the NGO's scriptwriters and the first author. Each unfinished scene centered on a common problem in Rwandan society that also had been addressed in the reconciliation radio program. In the scene relevant to the present analysis, the characters argue about how to handle a group of refugees fleeing a famine.

This refugee scene (reprinted in the Appendix) presented three main characters. One alarmed and angry man comes running to tell two neighbors that he has learned about the fleeing neighboring community. He exclaims that their own community is too poor to help the refugees and asks the other two to help him block the border and, if necessary, use force to repulse the refugees. The two neighbors hearing the news are divided: one agrees, but the other argues that they should welcome the refugees. The three men debate, raise a few different points about why they should or should not help the refugees (i.e., violence is wrong; these neighbors may help us in the future; we have no money; I suspect them of stealing money from me in the past), when the scene suddenly ends. The narrator who introduces the scene announces that she would like the participants to act out the end of the scene: "What do you think should happen now?"

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indexes). The questionnaire contains four additional items related to program content, which we do not examine here. A Bonferroni correction for the target significance level of 0.05 would therefore be 0.05/8=0.0063. All of the estimated treatment effects in Table 3 remain significant despite this quite conservative threshold.

This exercise was performative by definition—our aim was not to approximate what group members would *actually* do in such a situation, but rather to gauge their prescriptive ideas about what they *should* do. Educators, therapists, and activists use participatory theater in other settings (e.g., Breed 2007; Boal 1992), but rarely have social scientists measured group dynamics or social prescriptions with role-playing, making this an exploratory measure. After listening to a scene about a community meeting that familiarized them with the exercise, both male and female participants seemed to enjoy and even "lose themselves" in the role-plays. One group of women staged an argument in their practice scene with such conviction that the group attracted the attention of a military guard who was patrolling the general area (he was persuaded to leave by the first author).

Seventeen groups were formed across eight research sites. Each group on average performed approximately two unique new endings (allowing different members of the group to assume the primary roles) for a total of twenty-one scenes. Typically, the entire group participated in each scene; those who did not assume one of the three primary roles acted as bystanders or invented new characters who joined the action (e.g., a local authority or a family relation of a main character). Two researchers hand-recorded their speech and action in script-format.[11]

Content Analysis of Role Play Scripts

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[11] Hand-recording the scenes meant that we captured a less than fine-grained account of each scene, but was superior to a tape-recorder for its relative unobtrusiveness; we were concerned participants would feel inhibited with a mechanical recorder.

The first author coded each speaking turn in the "scripts" that resulted.[12] We were interested in how each group solved the problem—i.e. by welcoming them or mobilizing in various ways to provide for them. We noted patterns in the vocabulary participants used to argue for and against various ideas.

Problem resolution codes. We coded whether the script ended by helping the refugees; if the refugees were offered help, we coded how participants mobilized to help them. It turned out that the means of helping, and not whether they did help, was the distinguishing factor among the scenes. Specifically, we found, as illustrated in the following two excerpts, that actors either helped the refugees themselves or called on the Rwandan government or on non-governmental or international organizations (NGOs/IOs) for help.

Scene resolution 1: *Helping refugees with own resources*

[Action: The refugees, dragging their feet and looking hungry and tired, approach the two men at the border who wish to fight them (Mukama and Cacana)]

Mukama:	Good morning. (pauses) How are you?
Refugee A:	Nothing goes right. We are hungry and tired, and we seek your generosity. Our life is in your hands.

[Action: Mukama and Cacana walk away from the refugees to talk, where others from their community stand watching]

Cacana:	Hmm, Mukama. Do you know what. One never knows. What if we don't save these people, in the future we may need their help. Would they help us? Look at them, and imagine they are us. I think Kandonyi [3rd character advocating for aid] was right. Let's welcome them.
Mukama: (turns to all):	You are welcome in our community. We will share what we have, even if it is not enough. *Aho umwaga utari uruhu*

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[12] An independent judge who coded a random subsample of the scripts reached an acceptable degree of interrater reliability, $\alpha = .89$.

rw'urukwavu rwisasira batanu.(Where there is no greed, five people sleep on one pallet made of a rabbit's skin.)

Refugee B: I see that people in need make you feel pity, and empathy. These other men Mukama and Cacana saw them and were taken by pity. I think we should thank and applaud the decision they took.

[END]

Scene resolution 2: *Helping refugees with state or NGO resources*

Bystanders: They are also human! Why stop them? Why shouldn't we share?

Cacana: (to bystanders)   Are you going to make the rain?

Bystander: The HCR (United Nations High Commission for Refugees) should intervene!

Cacana: (to first bystander)   Are you are going to put them in your family's house?

Local mayor: Let them come, we are going to look for the donors.

(Later)

[Action: Important local authority calls a meeting with the ten smaller authorities (Nymbakumi), each in charge of a block of ten households]

Local authority: Here's the problem: we have these people who are coming. I want to hear people's point of view. Cacana, tell us your point of view.

Cacana: They are coming to invade us! They could have ulterior motives. They stole money from Mukama, they may have other reasons for coming.

Local authority: Everyone should speak.

Executive secretary: Cacana shouldn't prevent anyone from coming. There are the NGOs who provide for refugees

Nyumbakumi 1:   Cacana has a very bad idea. Let the people come.

Nyumbakumi 2:   God is there, he should intervene, Cacana should be punished.

Nyumbakumi 3:   Bring the refugees to the sector office so they can be accessible to the NGOs and donors.

Local authority: As the population is for this, the refugees should come.

(Later)

[Action: approval of the group, arrival of donors]

    Language. We also content analyzed the vocabulary used in each scene. A

remarkable aspect of these transcripts is the way the "public transcript" of the Rwandan

government appeared to influence the language used in each research site. Following

Scott (1990), we use public transcript to mean government discourse, with which

Rwandan peasants are familiarized through speeches broadcast on the radio and in

community "sensitization" meetings in which local authorities teach citizens about new

policies.

Some of the most important policies publicized and enacted by the Rwandan

government in recent years draw on language of *forgiveness* (e.g., community court

processes that emphasize public apologies and acts of forgiveness), *reeducation* (e.g.,

ingando or reeducation camps to which newly-released prisoners convicted of crimes of

genocide visit before returning home), and *decentralization* of state power. This

discourse appeared frequently in the role-plays, for example: "I publicly ask for

forgiveness for trying to block the refugees"; *"these people have bad ideology and need*

to change!"; and "as the decentralization system stipulates, it's up to you to take a final

decision." We coded each of these speaking turns to note their themes and prevalence.

Role-Play Results

We coded 359 "lines" from the scripts, which include turns of speech and notes

about action. Each scene featured on average seventeen unique speech or action lines,

and each line could receive more than one code.[13] We calculated the relative frequency of

each code in terms of the total number of codes using two methods: weighting all sites

equally, and weighting according to scene length. The results do not change appreciably

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[13] There were significant differences among the seven researchers in terms of number of spoken lines recorded: four hand-recorded an average of 14 lines per scene, and three others averaged 8. When the number of lines is smaller, the length of each line is longer; thus it appears scribes made tradeoffs between fidelity and quantity of comments recorded. Because both longer and shorter scribes were assigned to both reconciliation and health groups, this does not bias the results.

in either method (see Appendix for calculations), and we present results weighting sites equally in Figure 3.

   Problem resolution results. In every role-play, participants decided to welcome the refugees and to shame and sometimes punish those who wished to keep them out. The striking difference between reconciliation and health scenes lies in *how* participants arranged to care for the refugees. The two dominant motifs were to handle the problem within the community, by collectively organizing shelter and gathering resources from each family, or to request assistance from the government or NGOs/IOs.

   Figure 3 shows that reconciliation groups never asked for help from the government or from an NGO/IO—each time they decided to welcome the refugees, they agreed that they would share with them "the little they had." By comparison, 16 of the health group's 21 "resolution" comments about how they would provide for the refugees involved asking the government or an NGO to help out ($p< .001$). Requesting assistance from the state or aid organizations was not a dominant theme of the health program (see Table A1 in Appendix for precise ratios of speaking turns focusing on community vs. government / NGO / IO help). Some reconciliation scenes did not reach one particular conclusion about how to provide for the refugees (for example, in three scenes played at the reconciliation prison group, one role-play group self-organized to help the refugees, and the two others were resolved by punishing those who wanted to fight off the refugees). In the health condition, some scenes chose both community and government/NGO/IO help (for example, deciding to feed the refugees until the Red Cross came).

Despite this striking difference between local responsibility and external aid, it is important to point out that both reconciliation and health participants invented authority characters for each scene. Twenty-six percent and fifteen percent of all "process" comments in scenes in health and reconciliation groups, respectively, concerned the local government. Characters in scenes across all research sites called upon important local authorities or on the police for help and advice.

Results for language use. The percentage of comments that used government language shows that on average eight percent of all comments made in each scene drew from the "public transcript." There were no differences between the reconciliation and health listeners in the percentage of comments using government language. More importantly, the use of government language was not reliably associated with any particular decision regarding the refugee dilemma. Participants used government language to justify whatever actions they took. ("This is the time of decentralization" was used to argue for providing for the refugees themselves and also for applying to international organizations like the Red Cross for help.) This finding reveals participants' opportunistic use of elite parlance, rather than a passive acceptance of media-borne messages "coming from the top."

Behavior: Unobtrusive Measurement of Community Negotiations

Thus far, we have measured behavior within artificial settings—in focus group discussions and in role-playing activities. We also sought to trigger a more natural dilemma for our participants that would not feel simulated or monitored so that we could observe behavior that is closer to "actual" behavior. At the end of our time in each

community, the first author and the research team gathered community members together to thank them for their participation and to share refreshments. During this goodbye party, we presented the group with one battery-operated portable stereo and a set of 14 cassette tapes of the radio program. We acknowledged that there was only one, and suggested that since they were all together they could use this time to decide how to share the stereo, when the group members would listen, and how to keep it supplied with batteries. After this casual suggestion, the research team thanked the participants and sat back down.

Given the monetary value of a portable stereo, this discussion was of great significance to the participants. The measure also captured spontaneous behavior that participants believed to be "off record"—their discussions took place immediately after the research team's presentation. Two researchers sitting discreetly in the back of the group recorded these ensuing discussions by hand, with notebooks in front of them to appear as if they were finishing notes from earlier in the day.

Did the reconciliation radio program's messages have an effect on actual participant behaviors regarding community issues of consequence? Of interest was whether the participants allowed for multiple viewpoints and whether they expressed optimism about cooperating to share this community property. We were also interested in the groups' ultimate decision about how to share the communal stereo.

During the health groups' deliberations about the portable stereo and cassettes, we frequently observed the following pattern: the first member of the group to speak would propose handing over the stereo and cassettes to the village's local authority, who could

regulate usage and financial contributions for the batteries. Following this proposal, group members would overwhelmingly support the motion and close the discussion.

In the reconciliation groups, deliberations typically followed a different pattern. After the same initial proposal to entrust the stereo to the authorities, one or more of the participants would challenge this suggestion, for example, claiming that the group should be collectively responsible or should elect one of their members to manage it. Comments about the group's ability to cooperate came up more frequently, such as: "We've been coming together to listen all of this time, why can't we come together to listen to this stereo together, just as we did before?"

These different patterns were borne out by statistical analyses of the coded transcripts. Table 5 presents the number of dissenting propositions that followed the initial proposal to assess the extent and openness of the deliberation session. This indicator reveals that reconciliation groups proposed and debated a significantly greater number of views on how to share the communal stereo compared to health groups (using a Mann-Whitney test, $z = -2.6$, $p < .01$; using Wilcoxon signed-rank test, which controls for the site strata, $z = -2.2$, $p < .05$). The number of positive comments made about group cooperation was also more frequent in reconciliation groups (using a Mann-Whitney test, $z = -2.6$, $p < .01$; using Wilcoxon signed-rank test, which controls for the site strata, $z = -2.2$, $p < .05$). Importantly, these results were the same for ethnically homogenous Twa and survivor communities and for heterogeneous communities in the general population.

Heterogeneity of experimental effects

Table 6 summarizes individual and group level results for each separate research site, underscoring the remarkable homogeneity of the reconciliation program effects across a range of Rwandan communities. As described below, we do find exceptions to this homogeneity in two ethnic sub-communities: the Northwest (predominantly Hutu) communities, and the genocide survivor (Tutsi) communities. We test but find little evidence of significant interactions between individual characteristics and exposure to the reconciliation program.

Community characteristics. At the community level, Hutu living in the Northwestern research sites and Tutsi living in the genocide survivor communities deviated from the general pattern of experimental findings. Although our small sample of each type of community does not allow us to rule out the possibility of chance fluctuations, these interactions between community identity and reaction to the radio program seem to accord with the communities' political standing in Rwanda.

As described above, the predominantly Hutu communities in the Northwest region (the seat of Hutu extremism prior to the genocide) are closely monitored by the current Tutsi regime. During data collection, citizens in this region were keenly aware of government surveillance as a result of attacks launched by ex-Habyarimana military from the nearby border, which were reportedly supported by members of the local population (in focus groups many participants discussed the importance of trusting that your neighbor will not harbor "infiltrators" and thus invite repercussions on the whole community). Table 6 shows that unlike the rest of the sample, the Northwest reconciliation listeners were not more likely than the Northwest health listeners to perceive a norm of dissent or actually to dissent in the group deliberation (in fact, neither

group dissented at all). On the other hand, we observe an experimental effect on Northwest reconciliation listeners' open discussion of mistrust, cooperation in group deliberation, and reliance on local aid in the role-plays. These findings tell a story consistent with the region's political standing: the reconciliation program successfully facilitated better local interaction and cooperation, but had no effect on willingness to speak out in the context of government surveillance and censure.

Results for the genocide survivor communities stand out in a different way. Genocide survivors are the least likely of all communities in the sample to be censured for politically incorrect speech, as co-ethnics of the current government and as the government's living justification for speech restrictions and international aid. At odds with government rhetoric about Rwandan unity, and contrary to the rest of the communities' pattern, no genocide survivor publicly denied the existence of mistrust in their communities. In addition, Table 6 shows that reconciliation listeners in the survivor community called on the government for aid almost as frequently as they offered their own aid in role-plays. In line with the rest of the sample, however, survivor reconciliation listeners were more likely to perceive a norm of dissent and to express dissent in the group deliberation compared to survivor health listeners.

Although the two communities react differently to the radio program with respect to certain outcomes, it is important to remember that these communities are similar to other communities with respect to other outcomes—dissent among survivors, and collective action among the Northwest communities. In other words, the communities' politicized identities did not push them entirely out of the radio's range of influence.

Individual characteristics. Our data do not reveal differences in experimental effects according to individual characteristics like age, experience of violence, and access to media (see Appendix tables A2 and A3). Although some theories of political cultural change predict that younger generations are more likely to adopt new cultural values (Inglehart 1997, 15; c.f. Prewitt 1975), like Rogowski (1974), we find no real differences for older and younger cohorts.[14] Models of self-interest (Sears and Funk 1991) or grievance and blame (Gurr 1970; Iyengar 1991) might predict the radio impact would vary according to the magnitude of participants' personal loss in the 1994 violence—but we do not find this to be the case. Treatment effects do not appear to vary by a pretest question asking how many family members were killed by war, genocide, or related violence in 1994. Finally, theories of media sophistication and socialization (Gerbner et al. 2002; Heath and Bryant 1992) would predict that radio ownership might affect participants' responses; radio ownership also does not interact with experimental media exposure. This finding also addresses concerns that participants with radios surreptitiously listened to radio programs not assigned to their group in their own time. If contamination had been a serious problem, we might have found different effects for those who own radios.

Discussion

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[14] We used age cohorts that represent significant periods of Rwandan history (a child cohort aged 12 or younger in the 1994 war and genocide and 18-24 during the study, young adult cohort aged 13-25 in 1994, an older adult cohort aged 26-41 in 1994 that came of age after independence and the "Hutu revolution" overthrowing Tutsi rule, and an elder cohort aged 42-75 in 1994 that grew up before independence and the Hutu revolution. The lack of apparent interaction effects is interesting given that the middle cohorts were the most likely to be involved in the violence of 1994 (Verwimp 2005).

Our evidence suggests that certain behavioral aspects of political culture are malleable in the short run. A mass media program was sufficient to shift perceived norms of open expression and local responsibility for community problems, as well as actual open expression and dissent about sensitive community issues like trust and resource distribution. Listeners did not become contrarians or anti-authoritarians—for example, when reconciliation listeners decided to take collective responsibility for the hypothetical refugee problem, they created roles for local authorities in their decision making process. Moreover, the radio program was not a panacea—attitudes toward interaction across social lines were resistant to change. Personal convictions about social group boundaries may be more difficult to change; but, as we have shown in other work, personal convictions may be less important motivations for political behavior than perceptions of what is socially and politically normative (Paluck 2009).

When accounting for change or continuity in some aspect of political culture, most theories point to far-reaching changes in institutional structure or economic conditions (Eckstein 1988; Inglehart 1997; Laitin 1986). We do not claim that the radio program, after one year, induced transformative change in Rwanda's political culture. However, the radio drama's portrayal of Rwandan attitudes and behavior toward authority and toward other citizens appears to have influenced the availability of a certain set of behavioral practices (or the cultural "toolkit" of behaviors; Swidler 1986). Theories of political culture that take seriously the role of political practice (see Sewell 2005) might regard this as a potential first step toward more fundamental cultural change. We return to this point below.

The behavioral changes induced by this radio program seem to reflect something other than "blind obedience" to the radio or to the research team. For one, we obtained our key measures of behavior in a situation that was putatively off record, in which participants believed researchers were not gauging their response. In addition, we repeatedly find that listeners did not merely endorse what they heard on the radio— reconciliation listeners were not more likely to report they would affiliate with members of another group, did not adopt beliefs the soap opera encouraged (reported in Paluck 2009), and selectively aligned with characters that broke with rather than conformed to traditional expectations.[15] As further evidence against passive acceptance of media messages, role-play participants in both listening groups opportunistically used the same government rhetoric to justify different decisions about how to resolve the hypothetical refugee crisis.

The direction of media influence in this study is, in large part, vertical and top-down. It is a program written by educated Rwandans and broadcast on national radio. However, our results suggest that the radio program sparked horizontal peer influences as well. Research assistants' observation notes from the listening sessions describe high levels of spontaneous discussion about both media programs. The participants' individual and group-generated responses (regarding social norms, speaking about sensitive social topics, responding as a group to a hypothetical crisis, and group management of a communal resource) suggest they had come to a joint understanding about the

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[15] The content analysis shows that the reconciliation program presented both dissenters and obedient followers, good and bad authorities. One interesting fact is that the program's primary villain, the leader of the perpetrator community, was played by the best known and loved actor in Rwanda. Although this might have afforded his character a more sympathetic hearing among listeners, this does not seem to be the case.

acceptability of dissent and desirability of collective action in their group. Certain group responses may also have been moderated by assessments of the local political context (for example, Northwestern Hutu communities). Separate research programs in very different contexts concur that much of the media's influence is mediated by audience discussion (e.g., Katz and Lazarsfeld 1955). We suggest an appropriate way to think about the media's role in influencing political culture is as a connective tissue that transmits messages about culturally appropriate behavior, messages that are discussed and in some cases adopted by all levels of society.

A balance of dissent and collective action emerges from various measures. We found an increase in the perceived acceptability of dissent, as well as actual dissent in the individual interviews and the focus groups. Then, holding dissent constant (by presenting dissenting actors in the unfinished radio scenes to all participants), we observed an increase in willingness to collectively provide for hungry refugees among the reconciliation listeners. Our behavioral measurement strategy captured the two phenomena at once: we observed more dissenting opinions on how to share the communal resource (the stereo and cassettes) along with more expressions of cooperation about how to accomplish this feat among reconciliation listeners.

From a normative standpoint, a balance of dissent and collective action seems desirable. Fully realized collective action with little dissent may lead to phenomena like blind obedience, crowd behavior, and collective violence. As Gourevitch (1998, 95) observed, "[g]enocide, after all, is an exercise in community building." On the other hand, unrelenting dissent thwarts collective action. This dilemma calls for a behavioral theory of dissent and collective action that describes mechanisms for achieving

productive balances between the two. One mechanism used to explain collective action among social psychologists is collective efficacy, or group members' belief in the power of the group to achieve goals through collective action (Bandura 2000, 75). Researchers propose that the act of participating in group discussion and decision-making enhances the sense of efficacy necessary to the execution of collective action and may teach individuals to avoid blind obedience (e.g., Kelman and Hamilton 1989, 324-325).

Political science is concerned with the ways institutions are internalized—it is one thing to write legislation and enact policies, and it is another for citizens to recognize opportunities and constraints set by these institutions. Clearly, mass communication is an important way in which institutions are translated for public understanding.[16] This leads to the question: is institutional change a necessary condition for changing public understanding of institutional opportunities and constraints? The provocative suggestion of our current findings is that perhaps it is sufficient to encourage a new understanding of social norms of dissent, deference, or dispute resolution using the media, rather than to launch far-reaching changes in law or policy. Perceptions of social norms—of the typicality and desirability of certain behaviors—may be sufficient to alter which behaviors are selected from the "cultural toolkit."

Restated, perhaps it is possible to instigate changes in deference, dissent and collective action by modeling or communicating new social norms rather than by reshaping institutions (formal or informal). The present study did not track the effects of an institutional change, yet the observed shifts in rural citizens' normative perceptions

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[16] Wilson's (2000) review of the political culture literature discusses the importance of transmission mechanisms for public understanding, but surprisingly leaves out the mass media.

and behavior were of the magnitude that we might expect from institutional or economic adjustment (Jackman and Miller 2004), not from a radio soap opera. Most citizens have very poor understanding of how institutions work, even those especially interested or motivated (Robinson and Darley 2003). Citizens also refashion externally imposed institutions according to local traditions (Galvan 2004). Our proposition is social psychological as opposed to structural: what matters, most social psychologists would posit, is the way people perceive rules and structures, rather than the rules or structures themselves. Incentives and constraints can have psychological reality even without a structural basis. Institutional changes and non-institutional changes may be close cousins when they affect citizens' perceptions of descriptive norms (i.e. perceptions of what others in their environment *are* doing) and prescriptive norms (i.e. perceptions of what people in that environment *should* do).

These results suggest new perceptions of norms and new patterns of political conduct can develop without institutions, but the next question is whether they can endure without institutional backing. This question is of special relevance for Rwanda, where the current government relies on the same mechanisms previously recognized as facilitating conditions for subordination and conformity. The government has largely maintained a pre-1994 bureaucratic structure and regulation of rural life, including "sensitization" meetings in which peasants gather to receive instructions from state-designated local authorities and *umuganda*, or forced monthly labor, for the state. Speech is limited—citing previous hate media, the government censors journalists and only recently allowed private radio and press. Speech about ethnicity is criminalized as "divisionist." One wonders whether a fledgling norm of open dissent can long survive in

this context. Moreover, our own findings remind us of the coercive power of institutions for shaping political behavior. The different patterns of dissent we found in communities who are favored or mistrusted by Rwanda's current regime are consistent with other micro-level research showing how institutional authority can channel media messages in Rwanda, with important behavioral consequences (Straus 2007).

Given the behavioral constraints that Rwandans face, it is unclear whether the behavioral changes induced by the reconciliation program can precipitate broader changes in Rwandan political culture. We lack systematic evidence with which to gauge long-term change in Rwandan political culture. Recall that our experiment concluded after one year, at which point we provided the reconciliation program to the health group, and follow-up research showed the expected convergence in survey responses across the two experimental groups a year later. In order to assess the long-term impact of the reconciliation program, now into its fifth year of broadcast, we would at very least need longitudinal survey data, but to our knowledge no such surveys exist. From our long-term research engagement in the country, we know that knowledge of the soap opera is widespread, but its long-term effects remain unknown. Research in years to come may investigate the rate of change and the dynamics of contestation between tradition and transformation in Rwanda.

Deepening our understanding of media influence, behavioral change and political culture requires more studies in a variety of media and institutional settings. The current study presents a provocative set of findings, but more importantly it provides a template for future work. This template brings together a number of elements that are often recommended but seldom used in concert: the use of random assignment to create

treatment and control groups, the study of real-world media interventions in naturalistic

settings, and the development and implementation of a variety of qualitative and

quantitative approaches to the measurement of outcomes. Like other recent experiments

and quasi-experiments in developing countries (Blattman 2008; Wantchekon 2003), the

present study calls into question the presumed infeasibility of this type of political

science research. Nevertheless, this line of research remains in its infancy, and the task

ahead is to use this template to study longer time frames, different interventions, and

varying political contexts.

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Table 1: Sample characteristics by research site

Variable Pairs:	General Population Communities								Twa		Survivor		Prison	
	West		Northwest		Northeast		South							
	R	H	R	H	R	H	R	H	R	H	R	H	R	H
Sex (% male)	72	58	50	60	56	75	48	33	35	33	68	20	62	69
Age (mean)	30	44	37	31	37	42	47	41	37	32	38	44	40	43
Lived elsewhere (%)	41	23	75	63	73	60	78	63	50	59	48	44	54	36
Attended Primary school (% yes)	77	48	78	80	90	54	63	73	45	54	63	80	67	90
Listen radio (%)	92	93	83	80	100	87	75	88	75	85	95	90	74	95
Present in '94 (%)	100	97	100	98	98	100	100	100	100	95	100	100	100	100
Lost relative (%)	69	49	33	36	85	70	73	78	59	76	100	100	79	71
Relative in prison (%)	51	38	25	3	32	23	38	15	50	65	3	13	46	60
n	39	40	40	40	41	40	40	40	40	39	40	41	39	39

Notes: R = Reconciliation, H = Health. Figures are percentages for each research site.

Table 2: Topics of the Reconciliation and Health Radio Programs as a Percentage of Total Episodes Played to Participants

	Reconciliation	Health
Principal topics		
Dissent	56%	0%
Health	2%	83%
Topics in common		
Love	27%	25%
Humor	25%	31%
Bad Authority	29%	17%
Trauma	17%	8%
Poverty	19%	13%
Mistrust or Deceit	13%	23%
Trauma Healing	13%	8%
Homologous topics		
Positive authority	19%	2%
Hospital	4%	19%
Social cooperation	13%	2%
Economic cooperation	2%	10%
Intergroup violence	8%	0%
Rape	2%	10%
Empathy	8%	0%
Apology	2%	13%
Different topics		
Discrimination	17%	2%
Marital discord	6%	44%
Rumor	21%	6%
Intrigue	0%	35%
Scapegoat rhetoric	15%	0%
Agriculture	2%	10%
Friendship	15%	6%

Note: Percentages are calculated by dividing the number of episodes in which each theme appears by the 48 total episodes. Each episode contained more than one theme, thus percentages do not total to 100.

Table 3: Ordered Probit Estimates of the Reconciliation Program's Effects on Willingness to Express Dissent

	1	2	3
Reconciliation program	0.264*	0.285**	0.288**
	(0.084)	(0.062)	(0.058)
Northwest		-0.175	-0.126
		(0.116)	(0.132)
Northeast		-0.255**	-0.189*
		(0.076)	(0.092)
South		-0.177*	-0.105
		(0.064)	(0.083)
Twa		-0.305*	-0.252*
		(0.109)	(0.116)
Prison		-0.114	-0.085
		(0.168)	(0.167)
Survivor		0.047	0.111
		(0.064)	(0.085)
Displaced by violence			-0.060
			(0.072)
Sex			0.081
			(0.109)
Age			-0.003
			(0.004)
Radio listening habits			0.071
			(0.082)
Cut 1	-0.510	-0.647	-0.655
	(0.076)	(0.071)	(0.228)
Cut 2	-0.058	-0.191	-0.206
	(0.068)	(0.075)	(0.227)
Cut 3	0.270	0.138	0.122
	(0.073)	(0.084)	(0.213)
Log likelihood	-626.92	-624.22	-616.03

*$p < .05$; **$p < .001$, two tailed. The response scale for dissent is 1(I should stay quiet) to 4 (I should dissent); pairs of communities are entered 1-0 dummies for each general population (NW—S), and Twa, Prison, and Survivor pair. The omitted pair of communities is the Western pair. Sex is a dummy variable with males equal to one. Age is measured in years. Displacement and radio listening are coded from 1 (never displaced, do not listen often) to 3 (displaced a long time, listen often).

Table 4: Linear Regression Estimates of the Reconciliation Program's Effects on Social Distance

	1	2	3
Reconciliation program	-0.029	-0.029	-0.041
	(0.135)	(0.086)	(0.085)
Northwest		0.050	0.018
		(0.097)	(0.068)
Northeast		0.285*	0.287*
		(0.114)	(0.083)
South		0.158*	0.157
		(0.103)	(0.076)
Twa		-0.069	-0.079
		(0.271)	(0.250)
Prison		0.241*	0.237
		(0.130)	(0.117)
Survivor		-0.284*	-0.317*
		(0.114)	(0.094)
Displaced by violence			0.006
			(0.047)
Sex			0.068
			(0.092)
Age			-0.003
			(0.004)
Radio listening habits			0.110*
			(0.045)
Constant	3.351	3.300	3.215
	(0.087)	(0.104)	(0.152)

*p<.05; **p<.001, two tailed. Social distance is an index of willingness to greet, share a beer, work together, marry child to another group. The response scale for each social distance item is 1 (not willing) to 4 (very willing). Pairs of communities are entered as 1-0 dummies for each general population (NW—S), and Twa, Prison and Survivor pair. The omitted pair of communities is the Western pair. Sex is a dummy variable with males equal to one. Age is measured in years; displacement and radio listening are coded from 1 (never displaced, do not listen often) to 3 (displaced a long time, listen often).

Table 5: Behaviors Observed During Discussion of Community Resource

		Pair	*Health*	*Reconciliation*
Number of dissenting opinions	General Population	a	1	1
		b	0	0
		c	0	2
		d	0	1
	Twa	e	0	2
	Survivor	f	0	1
	Prison	g	0	2
Mann-Whitney test $z = 2.64$, p < .01				
Wilcoxon signed-rank test $z = 2.17$, p < .03				
Number of cooperative comments	General Population	A	0	2
		b	0	1
		c	0	2
		d	1	1
	Twa	e	0	0
	Survivor	f	0	1
	Prison	g	0	1
Mann-Whitney test z = 2.59, p < .01				
Wilcoxon signed-rank test $z = 2.17$, p < .03				

Notes: Letters a-g each represent a pair of communities; in each pair, one community was randomly assigned to listen to the health program and the other, the reconciliation program. Transcripts from community discussions were assigned one point for offering a dissenting opinion about the initial position taken by one or more members of the group and for any comment made about the group's ability to cooperate.

Table 6: Overview of Results

Pair/ Region	Expt. group	1 I should stay quiet	2 Social distance	3 Deny Mistrust	4 Role play: reliance on local aid	5 Role play: reliance on government aid	6 Dissent in negotiation	7 Cooperate in negotiation
		(-)	(+)	(-)	(+)	(-)	(+)	(-)
West	R	2.03	3.40				1	2
West	H	2.14	3.18				1	0
NW	R	2.27	3.32	1	4	0	0	1
NW	H	2.29	3.35	5	1	0	0	0
NE	R	2.31	3.64				2	2
NE	H	2.44	3.51				0	0
South	R	2.16	3.38	0	5	0	1	1
South	H	2.41	3.50	2	2	6	0	1
Twa	R	2.11	2.88				2	0
Twa	H	2.70	3.60				0	0
Prison	R	1.70	3.68	0	1	4	2	1
Prison	H	2.57	3.45	2	1	0	0	0
Survivor	R	1.90	3.09	0	5	4	1	1
Survivor	H	2.19	2.95	0	0	0	0	0
Experimental difference[a]		0.29**	-0.04	0.96*	3.0*	-3.5*	2.6*	2.6*

Note: R = Reconciliation, H = Health

* = p < .05; ** = p < .01. Pluses and minuses represent the prediction for each variable, where a plus indicates that we expect higher scores for the reconciliation listeners.

Entries for columns 1 & 2 are averages of the ratings reported by each individual to statements about dissent and social distance; entries for columns 3-7 are counts of group generated behavior observed in focus groups (3), role plays (4 & 5), and in the community negotiation (6 & 7).

[a] Columns 1 & 2 present ordered probit estimates of treatment effects at the individual level; columns 3, 4, & 5 present ordered probit estimates of treatment effects at the group level; the Z-statistics in columns 6 & 7 are Mann-Whitney test results of treatment effects at the group level. Focus groups and role-plays were not conducted in Twa, Western, and Northeastern pairs.

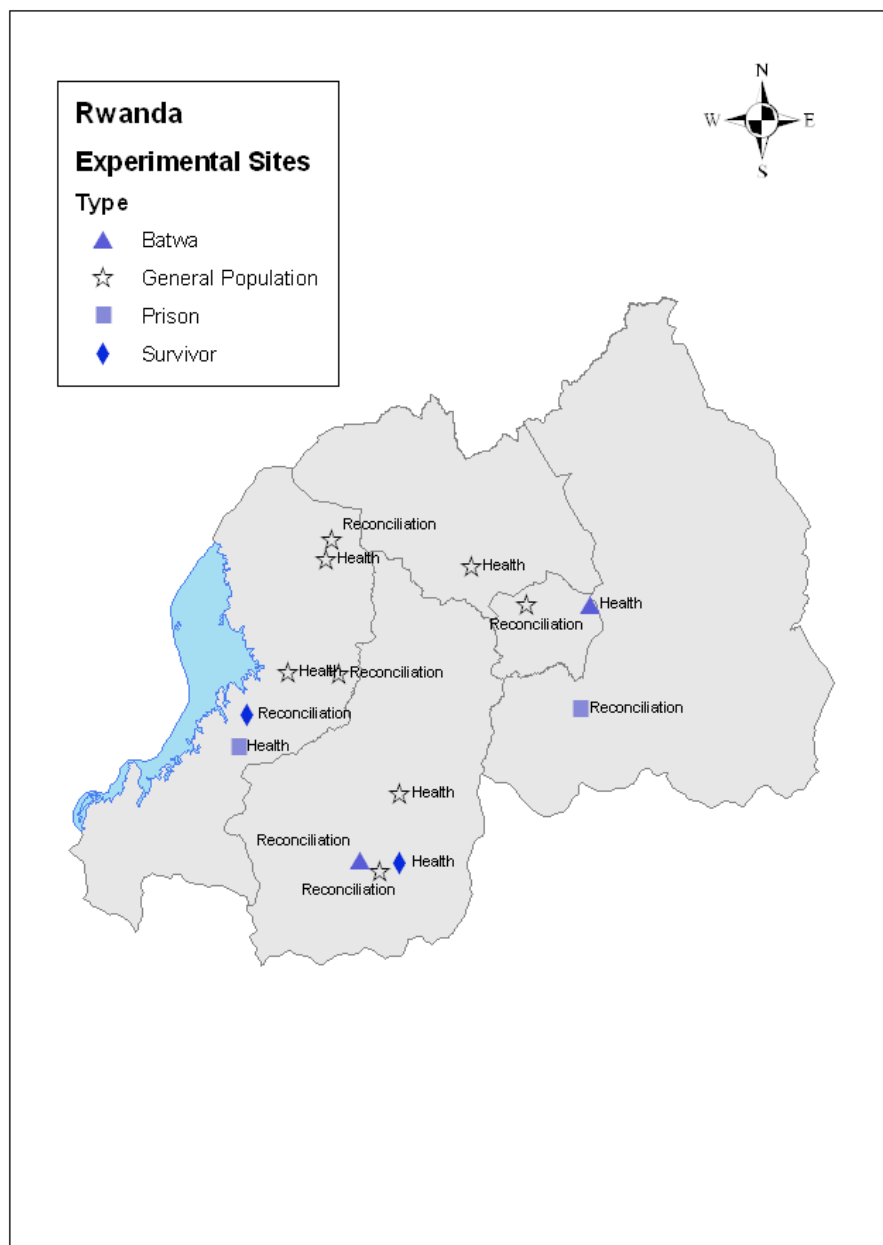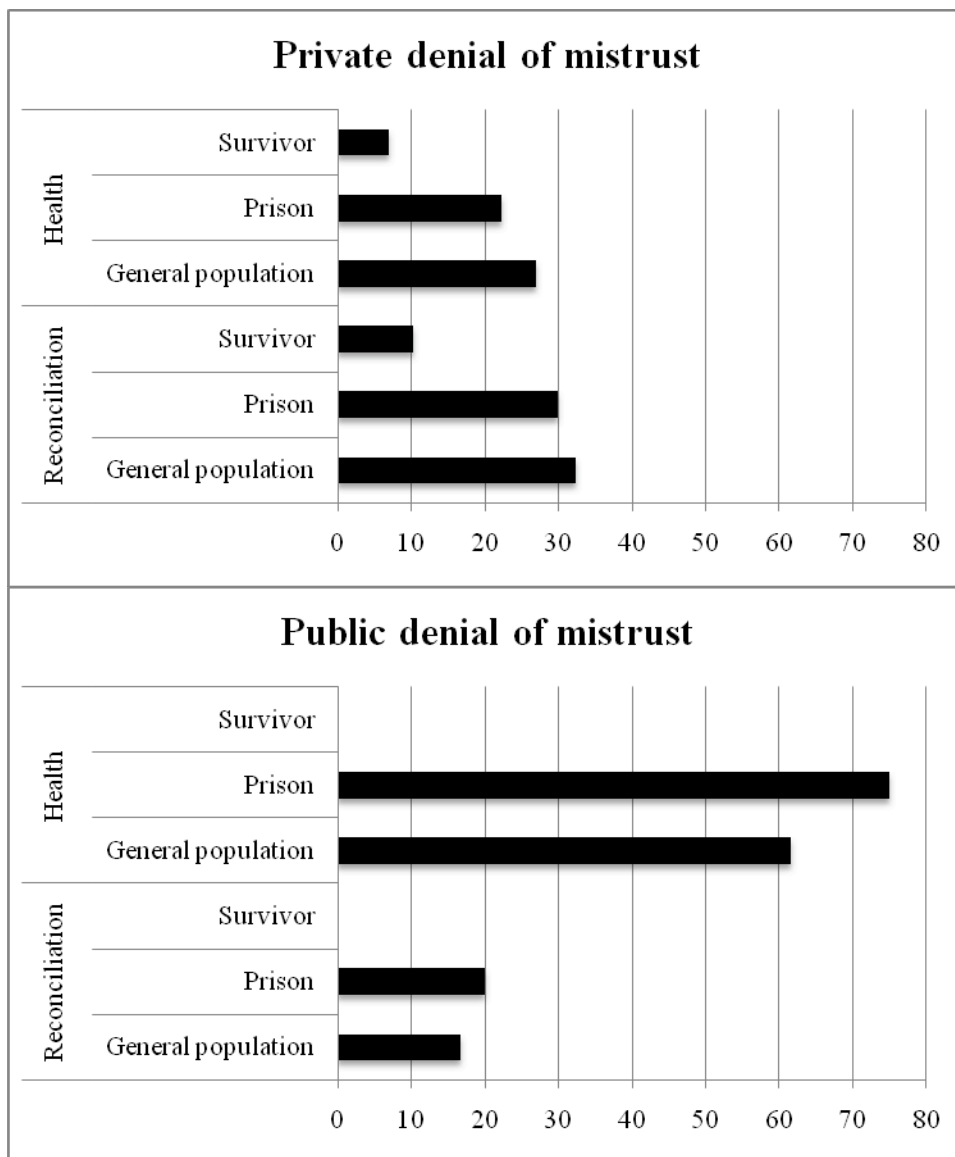Figure 1: Research sites by location and experimental assignment

Figure 2: Denials of mistrust are more frequent when made in public among health listeners

Focus groups were only conducted in prisons, survivor communities, and in the South and Northwest communities (combined here into "General Population" communities).

Figure 3: Content analysis of reconciliation and health listeners' resolutions of the role-play dilemma
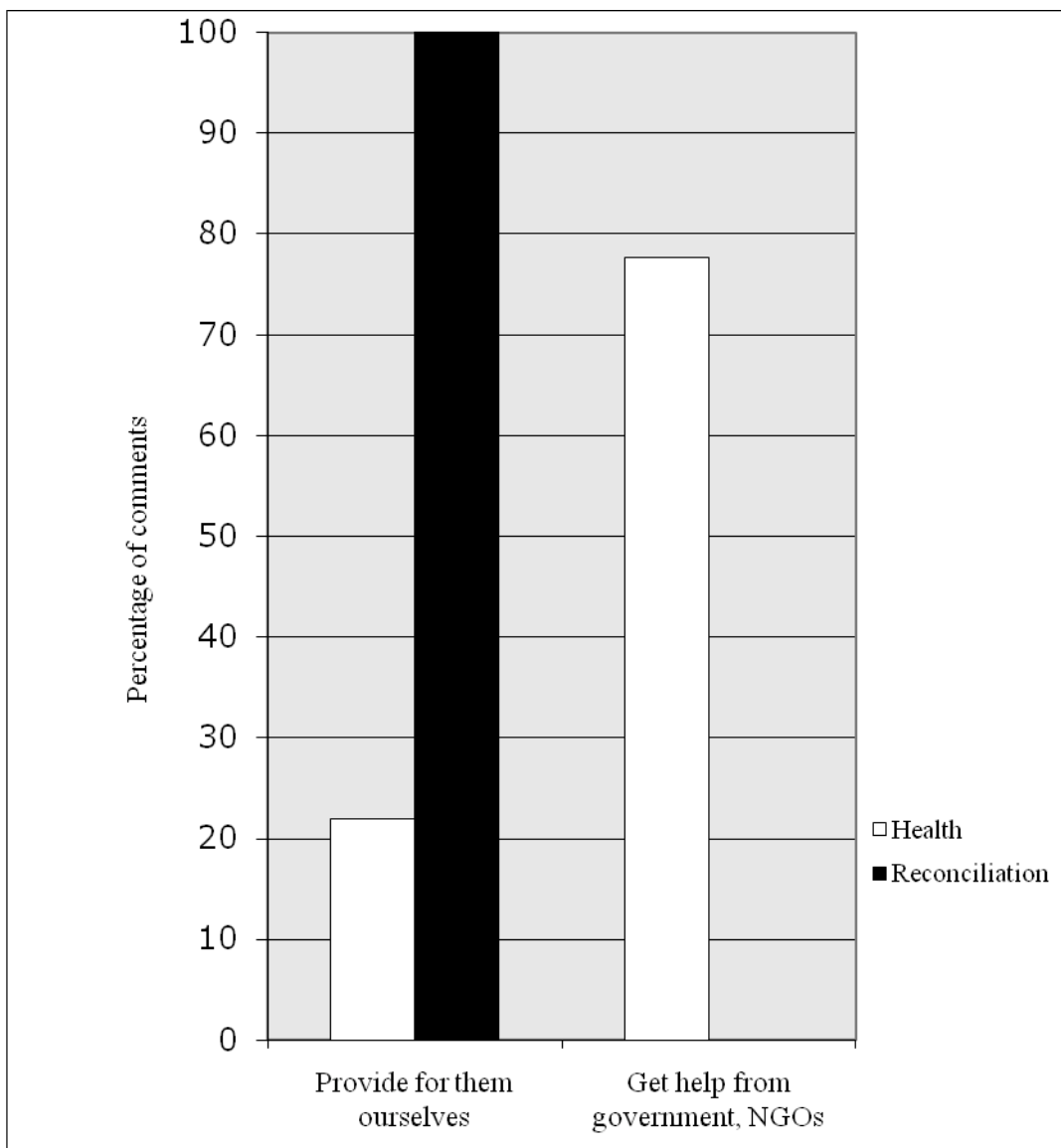
Percentages were calculated by dividing the number of scenes that were resolved in a given way by the total number of scenes enacted, across all communities in the Health and Reconciliation conditions.

Appendix I: Procedural and ethical protocol details of the experiment

To conduct this experiment we worked in close collaboration with the non-governmental organization (NGO), LaBenevolencija, a Dutch-based NGO that works in the Great Lakes region of Africa (specifically Rwanda, DRC, and Burundi). The NGO began work in Rwanda in 2003, with funding from international government donors. The direct research costs of this study were funded by budget lines the NGO's donors reserved for an evaluation as well asfundsthe authors raised in academic grants awarded specifically for this project and in funds for field experimentation conducted out of the Institution for Social and Policy Studies at Yale.

Our collaboration with the NGO began when the first author contacted the NGOin 2003, after learning through a website about its aims to create a radio soap opera. The NGO's stated purpose in their words was to create more "active bystanders" in the population, to encourage citizens to speak out against discrimination and violence, and to educate people about the evolution of violence. The NGO had solicited the help of two social psychologists to provide the Rwandan scriptwriters with theoretically informed messages about dissent and about the progression of violence.

The first author spent one month conducting qualitative research in Rwanda for the NGO, directing focus groups with rural Rwandans about media and the topics of the prospective soap opera. After this research, the authors presented the NGO with a methodological design for measuring the impact of the radio soap opera. The NGO contracted us to conduct their impact evaluation as pro-bono consultants; their two stipulations were that the study test acceptance of specific messages written by the

consulting psychologists, and that it sample from the Twa, genocide survivor, and prison subpopulations as well as the general population (to reflect their wide target population as well as the sample used in background research on the soap opera plot conducted by Suzanne Fisher and Solange Ayanone; see Fisher 2004).

We sought ethics reviews for the proposed study protocol in Rwanda and in the United States from Yale's institutional review board (IRB). Because there was no official IRB in Rwanda at the time, we reviewed our design with several Rwandan academics, with international researchers who had experience conducting surveys or program evaluations in Rwanda, and with advocacy and human rights groups in Rwanda including prison advocacy groups. Yale University's institutional review board reviewed and approved the entire research design, including the unobtrusive behavioral measurement.

The final research protocol, developed under the supervision of the Yale IRB, included a protocol for participant informed consent. This verbal consent informed participants that they could opt to drop out of the study at any time or refuse to answer any questions posed to them. It warned them about the possibility that some questions might be emotionally evocative and underscored their right to free psychological treatment for emotional disturbance. The University IRB required that we pay for any necessary trauma counseling subsequent to the interview. In addition, our research team traveled with a trained Rwandan psychologist whose services were used only once, for a woman who became upset after speaking about her experience during the genocide in her individual interview. Participants were also informed about the protection and confidentiality of their data. Each participant discussed the verbal informed consent twice: once when agreeing to participate in the study, and the second time at the end of

the year prior to participation in the outcome measurement. The IRB did not require us to debrief participants after the unobtrusive behavioral measurement procedure. Widely adopted ethical standards for IRBs state that recording behaviors anonymously (without recording the names of people enacting the behavior) does not require informed consent or debriefing.

When this report was drafted, the first author was at Harvard, where we re-applied to the Harvard IRB for permission to use the data collected with the prison population. The prison data technically belonged to the NGO. We collected these data at the request of the NGO, at the same time and using the same protocol described above. However, we had not obtained permission to work with this population *as academics* through the Yale IRB, because the board was concerned that the prison authorities had reserved the right to exclude some prisoners from participation. (Their judgment ran contrary to our local Rwandan review, where a local prison advocacy group and several Rwandan academics reviewed and approved the protocol.) As requested by the NGO, we proceeded with the data collection in the two prisons, but as stipulated by US IRB procedures, we did so as consultants and did not use prison data in academic presentations or writing. In the prisons, we worked closely with prison authorities to determine whether any prisoner was forced to comply with our request to join the study. It turned out that our study was of no particular concern to prison authorities, who did not attend the radio listening gatherings and limited their communication with us after ensuring that high security prisoners were ineligible for participation in our study. Given that the project was locally endorsed and we observed no interference from prison authorities, we applied to the Harvard IRB to use the prisoner's data in the analyses for the current paper. The Harvard IRB reviewed

the case and granted our request. We believed that the data were important to include, as they demonstrate how the media affects different populations.

Appendix II: Individual Questionnaire

Introduction (after informed consent): this interview contains many statements and opinions given by other people in Rwanda. We'd like to know whether you agree or disagree with them, and if you agree or disagree somewhat or a lot (four-point scale is repeated after each statement where appropriate)

1. I am helpless to prevent violence in my community. (*Program content question*)

2. If my colleagues endorse a bad ideology, I cannot change their mind by speaking out against it. (*Program content question*)

**Empathy scale: I'm going to ask you if you ever try to imagine the thoughts or feelings of other people who you don't know in Rwanda.

3. Do you ever try to imagine the thoughts or feelings of other people **who are prisoners** in Rwanda? (*When asking this question in the prisons, researchers explained that they should respond as though they were speaking about prisoners in other prisons, not themselves or their fellow prisoners.*)

4. Do you ever try to imagine the thoughts or feelings of other people **who are survivors** in Rwanda? (*When asking this question in the survivor communities, researchers explained that they should respond as though they were speaking about survivors in other communities, not themselves or their neighbors.*)

5. Do you ever try to imagine the thoughts or feelings of other people **who are poor** in Rwanda? [control question]

6. Do you ever try to imagine the thoughts or feelings of other people **who are leaders** in Rwanda?

7. When people marry each other from different (regions, religions, ethnicities, etc) this contributes to the peace.

8. People who cannot meet their physical and psychological needs are more likely to blame someone else for their problems.

9. One group of people (this is referring to regions, religions, ethnicity, etc) is often blamed for troubles experienced by the whole country.
[Note: *This question was not used for analysis because it was mistranslated in the questionnaire. It was intended to read as "one group of people is often responsible for troubles experienced by the whole country.*]

10. What if a member of your family dies suddenly, and you hear that that person had a meal at the neighbor's house right before he/she died and they poisoned his/her food. (*Program content question*)

- What would you think when you heard this story?
- What would you do after you heard the story?

11. Violence like the violence that happened in Rwanda in 1994 comes about suddenly.

12. Mass violence comes out of small actions, like spreading negative ideas about a group of people, or stealing from them.

13. Think back to the years of 1993, 94, and 95. Did you know anyone during that time who did or said things that you admire?

> IF YES: why did you think so?
> [Note: This question was not used for analysis because researchers experienced difficulties in posing the question to participants.]

14. If I stand by while others commit evil actions, I am also responsible (*Program content question*)

15. If I disagree with something that someone is doing or saying, I should keep quiet.

In Rwanda's history, there has been much violence, but many people from each group (again I'm referring to regions, religions, and ethnicity) have not participated in that violence.
[Note: This question was not used for analysis because researchers experienced difficulties in posing the question to participants.]

16. **Social distance scale: Think about a person from a different religion, region, or ethnicity who has done harm to a person from your group in the past: would you be willing to:
    1. Greet this person on the street?
    2. Work with this person?
    3. Share a beer (question for males) share food (question for females) with this person?
    4. Allow your child to marry one of his or her children?

17. I advise my children (or the ones I will have in the future) to only marry people from the same group (regions, religions, ethnicities) as theirs.

18. Traumatized people are "mad" (*crazy*)

19. Traumatized people can recover.

20. Bad memories and grief can make people seek violent revenge.

21. It is better for my mental health to never talk about the experiences that have caused me great pain and suffering.

22. I have told someone, like a friend or a family member, about my experiences that have caused me great pain and suffering. (yes / no) (*Program content question)*

   • IF NO: I want to tell someone about my memories that caused me great pain and suffering.

23. Perpetrators of violence can also be traumatized by their own actions.

24. Someone has talked to me about their experiences that have caused them great pain and suffering

25. Recovering from grief (intimba) and from trauma (ihungabana) may take a very long time

26. There is mistrust (ukutizerana) in my village

27. It is naïve to trust people

28. A pregnant woman who has AIDS can be given a chance to have a healthy baby

29. You can share something with someone who has AIDS.

30. It's necessary that every woman who is pregnant go to the health center to be tested.

Appendix III: Unfinished radio scene used for role-play

NARRATOR: We are in the village of MAHINYUZA at the border. Some of the villagers of Mahinyuza have started to discuss the rumor they have heard that the villagers of MAKOBA in the neighboring country are going to migrate from their village, fleeing a rampant famine that is going to kill them. KANDONYI, MUKAMA AND CACANA are discussing this news, but there are other people around. [For women's version: After the conversation between the three men is over, I would like to ask the women present here to give comments on the scene, and after, to take a role and finish the story.]

KANDONYI: Mukama, Do you know why I have come to see you? Although I know that this rampant famine didn't spare you either, please do your best and find me one thousand francs to lend me, to buy beans for my children. They didn't eat last night!

MUKAMA: Even me, I'm so poor and hungry that when I sneeze, my teeth fall out. But let me give you the last two hundred that I have. (*Starts to check in his pockets*) My father Rwabuzisoni gave me a cow! Where is the money that I had from that?

KANDONYI: Do you mean you can't find it? Please check well so that can I go and save my children before hunger kills them.

MUKAMA: Where is it? When I left Makoba I had it! Maybe it's the people of Makoba who stole it! I don't trust them.

CACANA:(*Runs up to them, out of breath*) You, people at Mukama's place!

MUKAMA: (*Surprised*) Cacana, what happened to make you run so fast you cut through trees and stones?

KANDONYI: Cacana, is the situation peaceful ?

CACANA: I have passed here to tell you what I have heard in the pub so that we can consider what we can do.

MUKAMA:(* worriedly*) what's that you have heard in the pub?

KANDONYI: Let it be of sweat and not of blood!

CACANA: (*Fearfully*) I have heard that our neighbors of Makoba have packed all their things to come settle here, because in their village it takes five men to close a door (*a Kinyarwanda proverb meaning they're weak and hungry*).

MUKAMA: (Shocked) My goodness! They want to migrate here! Do they think that we were spared from the famine! Even us, we're so hungry that when the flies buzz around our eyes we try to kill them and eat them. They have to look for somewhere else instead of coming here to finish the little we have!

CACANA: I have come to tell you the measures we have already taken with the people who have told me that. We have decided to go to the border and stop them from coming to Mahinyuza. Because you know the problem we have here.

KANDONYI: Yah, babababababa. (exclamation) Why do you think like that? Instead of looking at how to receive and welcome them warmly as neighbors, you are setting up tricks to stop them!

MUKAMA: Can you believe what this man is saying! While we are crying, you are singing! If we let them come, what will you eat? You were saying that your children are suffering from hunger, and you are borrowing money! They can't put their feet on this soil, they have to go elsewhere!

CACANA: You are delaying! And if we delay, they will be here in a very short time.

KANDONYI: Let's welcome them warmly and share the little we have. They may save us in the future, you never know. What if you stop them and they fight you?

CACANA: Fighting us! Are they stronger than we? Mukama and I are resolved to arm ourselves with our traditional weapons, so that if they try to force entry into our village, we'll make them tremble with our threats.

KANDONYI: What you want to do is not good. That's violence.

MUKAMA:*(Talks as he leaves)* Caca, let me get my sword from its girdle and chase them away. (*His voice becomes more distant as he leaves)* Maybe it's they who took my money, as I was saying! It's possible it's them! They were all made from the same hammer. Leave alone Kandonyi who is talking nonsense!