Reducing Intergroup Prejudice and Conflict Using the Media: A Field Experiment in Rwanda

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Can the media reduce intergroup prejudice and conflict? Despite the high stakes of this question, understanding of the mass media's role in shaping prejudiced beliefs, norms, and behavior is limited. A yearlong field experiment in Rwanda tested the impact of a radio soap opera featuring messages about reducing intergroup prejudice, violence, and trauma in 2 fictional Rwandan communities. Compared with a control group who listened to a health radio soap opera, listeners' perceptions of social norms and their behaviors changed with respect to intermarriage, open dissent, trust, empathy, cooperation, and trauma healing. However, the radio program did little to change listeners' personal beliefs. Group discussion and emotion were implicated in the process of media influence. Taken together, the results point to an integrated model of behavioral prejudice and conflict reduction that prioritizes the communication of social norms over changes in personal beliefs.

Keywords: media, prejudice, conflict, field experiment, social norms

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For nearly a century, psychological research has tackled the societal problems of prejudice and intergroup conflict. Few topics have attracted a greater range of theoretical perspectives (Banaji, 2001b; Gaertner & Dovidio, 2000; Hovland & Sears, 1940; Sears & Henry, 2005; Sidanius & Pratto, 1999; Tajfel & Turner, 1979). Although this literature has generated some promising theoretical and empirical leads, scholars do not currently have a clear answer to the question, "What interventions have been shown to reduce prejudice and conflict in real-world settings?" (Paluck & Green, in press).

Understanding of the mass media's role in shaping beliefs and behaviors, especially prejudiced beliefs and behaviors, is even more limited. Spurred by widespread use of propaganda in the first and second world wars (Hovland, Lumsdaine, & Sheffield, 1949;

Lewin, 1952), early psychological research explored how the media could play a role in fomenting (Doob, 1935; Lasswell, 1928) and reducing (Cooper & Jahoda, 1947; Flowerman, 1949; Peterson & Thurstone, 1933) prejudice and conflict. This research began the work of identifying important theoretical issues, but eventually psychologists drifted away from the study of media effects.

The research presented here is an attempt to fill gaps in both literatures. The setting for this study is the Central African country of Rwanda, where radio played a key role in a war and genocide that resulted in the deaths of more than 10% of the population and 75% of the Tutsi ethnic minority population over the course of 3 months in 1994. This study reports the results of a randomized field experiment conducted with the nongovernmental organization LaBenevolencija, which 10 years after the genocide produced a yearlong "education entertainment" radio soap opera designed to promote reconciliation in Rwanda.

I test three questions within this experiment: Do the mass media have the capacity to affect (a) personal beliefs (here, regarding the soap opera's messages about prejudice, violence, and trauma), (b) perceptions of social norms (depicted by fictional soap opera characters), and (c) behavior (open communication and cooperation)? Typically these different components of prejudice and conflict are studied separately and to the exclusion of factors prominent in real-world environments like emotion and peer discussion. I use real-world evidence to suggest what a more integrated theory of prejudice reduction might look like—specifically, one that is based on an understanding of the functional interdependence of

prejudiced beliefs, norms, and behaviors. Such a theoretical advance would have significant practical ramifications—most importantly, it could point interventions toward those factors most reliably related to prejudiced behavior.

I address these theoretical issues with evidence from the first randomized field experiment of its kind to measure the impact of mass media on prejudice and conflict. Although the social psychological study of intergroup relations in Africa is not novel (Brewer & Campbell, 1976), Rwanda also tests the reach of psychological theories of prejudice, which are often used to discuss but are seldom tested in situations of extreme intergroup conflict and its aftermath (but see Bar-Siman-Tov, 2004).

As media outlets proliferate in all corners of the globe, finding out whether the media can contribute to the reduction of the world's prejudice and conflict falls under the longstanding call to "make psychology matter" (Campbell, 1969; G. Miller, 1969; Zimbardo, 2004). Moreover, I argue that rigorous research based in real-world settings will spark new theoretical developments on intergroup relations. The overall objective of this article is to progress toward these two goals.

Prejudice, Conflict, and Media: Theory and Evidence

In 1935, the father of modern psychological prejudice research, Gordon Allport, published *The Psychology of Radio* (Cantril & Allport, 1935), which explored among other things how people draw on stereotypes when listening to voices on the radio. Today, the joint agenda of media, prejudice, and conflict belongs to practitioners: on the one hand, those who use media to incite prejudice and conflict (including Rwanda's radio station RTLM [Radio Télévision Libre des Milles Collines], which encouraged anti-Tutsi discrimination and violence in 1994) and on the other, those who use media to reduce prejudice and conflict.

Each year governments and organizations around the world pour millions of dollars into antiprejudice public service announcements, print and internet publications, and television and radio programs (Howard, Rolt, van de Veen, & Verhoeven, 2003; Paluck, 2007b; Spurk, 2001). This includes children's programs like *Sesame Street* (Brenick et al., in press; Graves, 1999); antiprejudice television commercials (e.g., http://themoreyouknow-.com/Anti_Prejudice); billboards and bus posters (e.g., Horovitz, 1993; Vrij & Smith, 1999); information and advocacy Web sites (e.g., http://www.splcenter.org); and television, film, and radio dramas (e.g., Abdalla & Torrey, 1999; Ball-Rokeach, Grube, & Rokeach, 1981). Education entertainment is a genre of media used globally for social change campaigns, including antiprejudice and conflict reduction campaigns (Rosin, 2006; Singhal, Cody, Rogers, & Sabido, 2004). It weaves educational messages (e.g., about nonviolence or intergroup cooperation) into an entertaining radio or television show, typically a soap opera.

Theoretical Rationales

Those interested in media campaigns against prejudice find a bewildering array of theories at their disposal—theories of beliefs, norms, emotions, behaviors, and more. For the most part, these are distinct theoretical traditions that do not consider more than a few components of prejudice at a time (e.g., beliefs and behaviors), holding all other factors constant. As a result, those who design

interventions often target as many aspects of prejudice as possible (a strategy implied by some general models of behavior, which specify but do not rank in importance a long list of behavioral antecedents; see Ajzen, 2001, pp. 42–47).

A model that specifies the functional interdependence of social psychological components of prejudice and conflict would improve theoretical understanding as well as practical intervention. Understanding the relationships among prejudiced beliefs, norms, and behaviors would enable such a model to identify which component(s) of prejudice should be targeted under various circumstances and to predict the extent to which a change in one might influence change in the others. For example, if perceived norms change, how does this affect beliefs and behaviors? The theoretical literature is still far away from such a systemic understanding, but with an eye toward this goal, I review various perspectives on prejudice and conflict reduction, both in general and with respect to the media.

Early scholarship on prejudice identified beliefs (defined as understandings of self and environment; Bem, 1970) as important components of prejudice (Allport, 1954, p. 13), and this remains one of social psychology's most active areas of inquiry (e.g., Devine, 1989; Jost & Burgess, 2000). Although some psychologists claim that beliefs are extremely resistant to change (Bem, 1970), theories of media persuasion claim that beliefs are influenced by media cultures and programs (Ball-Rokeach et al., 1981; Hovland et al., 1949; McClosky & Zaller, 1984). Social cognition scholars claim that an individual's explicit beliefs about a group of people might change but that societal stereotypes about groups endure (Devine & Elliot, 1995) and seep into individuals' unconscious, where their operation is routinized and automatic (Banaji, 2001a; Dovidio et al., 1997).

Some psychologists theorize that social norms (socially shared definitions of the way people do behave or should behave; D. T. Miller, Monin, & Prentice, 2000) have powerful effects on prejudice and conflict (Crandall & Stangor, 2005; Sherif, 1936). Others argue that under normative pressure people will veil rather than transform negative affect toward outgroups (Katz & Hass, 1988; McConahay, 1986). Media theories propose that mass communication is very successful at conveying what other people are doing or thinking (i.e., a descriptive norm; Mutz, 1998; Noelle-Neumann, 1973), although the focus theory of norms predicts that the media are most influential when broadcasting prescriptive (should behave) norms (Cialdini, Kallgren, & Reno, 1991; Kallgren, Reno, & Cialdini, 2000; also Bandura, 1986, 2004). Media might communicate normative messages directly, or audiences may infer norms from the behavior of real or fictional media personalities (who often elicit the same responses as do actual peers; Rubin & Perse, 1987; Shapiro & Chock, 2003).

Perspectives on the emotional and communicative aspects of prejudice and conflict have reemerged since the height of psychology's cognitive revolution, particularly regarding empathy and discussion (Mendelberg, 2002; Stephan & Finlay, 1999). The fact that empathy—the experience of emotion congruent with another person's situation—is linked with decreased prejudice (Batson et al., 1997; Schecter & Salomon, 2005) is notable because media programs can inspire empathy with real and fictional characters (Zillman, 2006). Intergroup relations theories might predict that empathy for individual media characters would generalize to the character's real-world group (see Andersen, Downey, & Tyler,

2005; Pettigrew, 1998), perhaps because audiences experience the program as vicarious contact with a member of that group (Cameron & Rutland, 2006).

Group discussion has been linked to positive outcomes like cooperation, political tolerance, and more inclusive group identities (Mendelberg, 2002; Mutz, 2006). However, small group research also cautions that discussion can simply exaggerate a group's initial attitudes, prejudiced or tolerant (Moscovici & Zavalloni, 1969; Myers & Bishop, 1970). In general accounts of media influence, Lazarsfeld and others have argued that personal discussions about media messages are the necessary link for converting personal opinions (Bandura, 2001; Katz & Lazarsfeld, 1955; Rojas et al., 2005).

The relationships among these various components of prejudice and with prejudiced behavior are often subject to contentious theoretical debates. Although many investigators find the link between beliefs and behaviors to be unreliable (Greenwald, Poehlman, Uhlmann, & Banaji, 2007; Wicker, 1969), a large literature on implicit stereotypes shows that behaviors consistent with those beliefs can be subtly activated (Bargh, Chen, & Burrows, 1996; Kawakami, Young, & Dovidio, 2002). A rich theoretical tradition on prejudice, conformity, and social consensus suggests that both prescriptive and descriptive social norms powerfully predict behavior (Allport, 1954; Asch, 1958; Cialdini et al., 1991; Crandall & Stangor, 2005; Sherif, 1936). Individuals may value knowledge of a social norm more than their own personal beliefs (Kuran, 1995; Miller et al., 2000; Stangor, Sechrist, & Jost, 2001; Van Boven, 2000) but not, others argue, in the common case when individuals overestimate the number of people who share their beliefs (Monin & Norton, 2003; Ross, Greene, & House, 1977). Emotion and social interaction are infrequently integrated into these theoretical perspectives (cf. Smith, 1993).

Evidence

Unfortunately, the existing evidence on media influence and prejudice reduction cannot adjudicate among these various theoretical perspectives. W. G. McGuire's (1986) "The Myth of Massive Media Impact" critique applies well: Field studies suffer from (a) poor measures of exposure to the media program, (b) poor measures of outcomes, and (c) no clear identification of a causal relationship between media program and outcomes. Laboratory experiments, in contrast, measure short-term effects of simplified and often fictitious media communications in an artificial environment. The artificiality of media laboratory studies is concerning, given empirical evidence that real-world conditions associated with media consumption play a nontrivial role in its impact: for example, simultaneous activities that impact the persuasiveness of, memory for, and interest in a communication (Janis, Kaye, & Kirschner, 1965); real or imagined social company that affects emotional and behavioral reactions (Ruiz-Belda, Fernandez-Dols, Carrera, & Barchard, 2003); peer discussions that can eliminate media framing effects (Druckman & Nelson, 2003); and repetition and sustained exposure that lead to boredom and annoyance (W. J. McGuire, 1985, p. 274) or to loyalty and emotional attachment (Zajonc, 1968). In the entire literature, only 10 field experiments have been conducted on media's impact on prejudice—all involving television programs played in classroom settings for North American children.

In response, this research departs from common practice. I test whether the media can reduce prejudice and conflict in a challenging real-world setting. In doing so, I take a grounded approach to theory building by measuring media impact on different components of prejudice and conflict. I argue that without empirically identifying the functional interdependence of these components, prejudice reduction theories will remain fragmented and one step removed from practical application. That is to say, should prejudice reduction efforts target beliefs, norms, or behavior (and under which circumstances)? Is change in one likely to spark change in another? How are factors like empathy and discussion implicated in prejudice reduction? Progress on this complex issue will stagnate without rigorous field research to restart the discussion.

The Present Research: Radio in Rwanda

Radio is the most important form of mass media in Rwanda, where, like most of the developing world, people gather to listen to the radio in groups (Bourgault, 1995; Hendy, 2000). Rwanda is slightly smaller than the state of Maryland; at the time of data collection in 2004–2005, it was home to 8.4 million people (approximately 84% of whom identify ethnically as Hutu, 15% as Tutsi, and 1% as Twa) and was ranked among the least developed countries in the world at 158 of 177 (United Nations Development Program, 2004).

Anti-Tutsi discrimination and violence that erupted in 1959 during the colonially sponsored Hutu Revolution widened small fissures in Rwandan society. Historically, Hutus and Tutsis lived side by side, spoke the same language, worshiped together, and intermarried. Ethnic identity was often contested and reconstructed by individuals who faked ethnic identity cards (first issued by colonial authorities) or who had physical features that enabled them to pass as a member of the other ethnic group. However, in the 1990s, as the country fell into economic crisis, political factionalism, and civil war, ethnic groupings crystallized into organizing categories of Rwandan politics and, to a certain extent, ordinary social life. Extremist Hutu politicians lumped Tutsi civilians together with Tutsi rebels threatening the country's peace and encouraged anti-Tutsi sentiment using tools of policy, law, and media (Des Forges, 1999; Mamdani, 2001; Newbury, 1988; Straus, 2006).

The case for the radio's culpability in Rwanda's 1994 genocide is well documented (e.g., Broadcasting Genocide, 1996; Chrétien, Dupaquier, Kabanda, Ngarambe, & Reporters Sans Frontières, 1995; Li, 2004; Straus, 2007; Thompson, 2007). RTLM was launched in 1993 as a talk radio station and progressively worked in anti-Tutsi jokes and commentary until it was considered an arm of the extremist Hutu government. In a landmark case, the International Criminal Tribunal for Rwanda convicted the radio station's founders for crimes of genocide, arguing that radio "set the stage" for genocide (*Prosecutor v. Nahimana, Barayagwiza, & Ngeze*, 2003, p. 29).

Today, Rwandans face a monumental crisis of trust in their communities, as survivors, returned refugees, and accused killers are obliged to live side by side in their old communities. Rwandans on all sides harbor resentment, are affected differently by the new Tutsi government regime, and have poor access to psychological treatment for trauma (Stover & Weinstein, 2004). Moreover, open discussion of ethnicity or of Rwandan history that strays from the

official government version is effectively prohibited (Longman & Rutagengwa, 2004).

Rwandan Reconciliation Radio: New Dawn

Musekeweya (moo-say-kay-way-ah), or *New Dawn*, is an education entertainment radio soap opera designed to address the mistrust, lack of communication and interaction, and trauma left by the genocide. The show's fictional story of two Rwandan communities parallels the history of cohabitation and conflict between Tutsis and Hutus, with each community representing one ethnic group (direct mention of ethnicity would be censored). Tensions arise from a land shortage, government favors granted to one community and not the other; intercommunity relations crumble, and the more prosperous community is attacked. The result is casualties, traumatization, and refugees—a situation paralleling, without directly referring to, the lead up to and aftermath of the 1994 genocide. However, some characters band together across community lines, communicate with one another, and speak out against the powerful leaders who advocate violence (LaBenevolencija, 2004).

Educational messages. The program's Rwandan scriptwriters weave into the storyline educational messages that are aimed at influencing listeners' beliefs about the roots and prevention of prejudice and violence and the symptoms of trauma and paths to healing (Staub, Pearlman, Weiss, & Hoek, 2007). These messages teach that the roots of prejudice and violence are located in the frustration of basic psychological needs (e.g., for security, a positive identity, and belongingness) and that violence is the accumulation of a number of factors, including a lack of critical thinking, of open dissent, of active bystanders, and of meaningful intergroup connections (Staub, 2006). Messages about trauma emphasize that its symptoms can be understood, trauma is not "madness," and traumatized people can heal by talking with confidantes (Pearlman, 2001). The program's characters deliver these messages didactically to other characters—for example, a wise man who talks to community leaders about the sources of violence and a healer who teaches a traumatized character about her symptoms.

Depiction of social norms. By portraying the characters as typical, realistic Rwandans, the show is also positioned to change perceptions of social norms—that is, to demonstrate to listeners what their peers do (descriptive norms) and should do (prescriptive norms) in situations that many real Rwandans face. The characters use popular proverbs and traditional songs and follow the routines of rural life (92% of Rwandans live in rural areas). Their key behaviors are revealed as they wrestle with problems known to all Rwandans, such as cross-group friendships, overbearing leaders, poverty, and memories of violence. For instance, scriptwriters portray positive behaviors through two Romeo-and-Juliet-like characters—a boy and a girl from different communities who pursue their love in the face of community disapproval. Instead of succumbing to a tragic end, the pair start a youth coalition for peace and cooperation, in defiance of the warmongering authorities.

Study Hypotheses

I do not test the validity of the program's messages, but rather the two strategies of influence—one aimed at changing beliefs and the other at changing perceived social norms—and the program's impact on its ultimate goal of changed behavior.

Influence personal beliefs. The explicit goal of the radio program was to promote understanding of and belief in its messages, similar to a public education campaign (Staub et al., 2007). Thus, the first hypothesis is that the program will change listeners' beliefs with respect to program messages about prejudice, violence, and trauma.

Influence perceived norms. By portraying people and situations found in listeners' own lives, the reconciliation program should influence listeners' perceptions of descriptive norms regarding how Rwandans do behave and prescriptive norms regarding how Rwandans should behave in situations related to prejudice, conflict, and trauma.

Influence behavior. The third hypothesis is that behavior will change in the direction encouraged by the program—that people will be more willing to speak and even dissent about sensitive topics (e.g., community relationships and trauma) and to cooperate with one another, even across group lines. This behavioral change may be observed in conjunction with belief change, norm change, or neither of the two.

Empathy and discussion. Because neither empathy nor discussion was experimentally manipulated in the present study, documenting emotional and conversational reactions to the radio program can point to possible processes of change for future investigation. The literature reviewed above might predict that emotional and empathic reactions to radio characters and discussion will amplify media effects, although the predictions for discussion are less clear.

Method

The study was designed to identify the causal impact of the radio program in the most naturalistic manner possible, within a stratified sample of the population, and along theoretically meaningful outcomes (beliefs, norms, and behaviors) and possible processes of change (emotion and discussion), using various measurement tools.

Sampling Listeners and Communities

Because Rwandans typically listen to the radio in groups, I used a group-randomized design in which communities were randomly assigned to the treatment (the reconciliation radio program) or control condition (a different radio soap opera about health). The communities were sampled from categories representing salient political, regional, and ethnic breakdowns of present-day Rwanda: eight general population communities from four different regions, two genocide-survivor communities and two Twa communities (see Appendix A in the online supplementary material).

I randomly assigned communities from each category to listen to the reconciliation or health program using a matched randomization procedure. Each community was first matched to the most similar community from the same category (general population, survivor, or Twa) according to a number of observable characteristics, such as gender ratio, quality of dwellings, and education level. Then, one community in each pair was randomly assigned to the reconciliation program and the other to the health program.

This stratification of sites helped to balance and minimize observable differences between the communities ex ante.

Finally, I randomly selected 40 adults from official lists of all individuals living in each selected community, balancing for sex, age (half aged 18–30 years, half above 30 years), and family (no more than one person from an immediate family). Four Rwandan research assistants who represented Hutu and Tutsi ethnic backgrounds visited each community with me and located these individuals to explain the study. Our purpose—"to understand Rwandans' opinions about radio programs produced by the organization (LaBenevolencija)"—was defined broadly to avoid creating particular expectations.

Pretest

When an individual agreed to participate, the researcher obtained informed consent and posed a series of demographic questions and questions about radio listening habits and experiences of the genocide. The total participant sample ($N = 480$) ranged from age 18 to 87 years ($M = 38.5$). Seventy-nine percent of participants were farmers; 73% of men and 63% of women had some primary schooling. Catholics made up 64% of the sample, followed by Protestants (14%). Only 53% of participants actually owned a radio; 83% of those without a radio reported listening in groups with family and neighbors.

Ninety-nine percent of the participants were in Rwanda at the start of the genocide, and approximately 50% were displaced by the violence for a time of 1 week to a few years. Sixty-nine percent of the sample claimed one or more relatives were killed in 1994. Twenty-eight percent of the general population participants had a relative in prison, compared with 7% of survivor and 57% of Twa participants. As expected, random assignment balanced covariates between the reconciliation and health program groups on all measured characteristics (see Appendix B in the online supplementary material).

Experimental Procedure

Over the course of 1 year, the same Rwandan research assistants visited each community to play that month's four 20-min episodes on a portable stereo for the group. 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 nonresearch occasions to listen to the radio. Control groups listened to an education entertainment radio soap opera that aims to change beliefs, norms, and behaviors about reproductive health and AIDS: *Urunana* (*Hand in Hand*; hereafter "health program"). Thus, program content was the only difference between the two conditions—the listening protocol and outcome measurements were the same.

The monthly field visits guaranteed 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 research assistants never provoked or guided discussion.

Research assistants filled out observation sheets (see Appendix C in the online supplementary material) after they left the site to record attendance and rate the groups' levels of observable enthusiasm, attentiveness, confusion, emotional expressions, and amount and type of discussion during and after the program. They recorded how often participants discussed program themes like intergroup prejudice, violence, or trauma.

Keeping the Control Group Untreated

I took extra steps to ensure the control group remained untreated by the reconciliation program, which was broadcast nationally during the evaluation period. I asked the health program groups to refrain from listening to the reconciliation program for 1 year; as an incentive to comply, I promised a portable stereo and 14 cassette tapes containing the year's worth of reconciliation program episodes at the end of the year (also promised to the reconciliation groups). Thus, health participants understood their promise as a postponement and not a sacrifice.

There are several reasons to believe that health participants did not listen to the reconciliation program. There was no existing loyalty to the program because it was new, and there were three alternative programs on other stations during *Musekeweya*'s broadcast. When research assistants made casual comments to health participants about the reconciliation program halfway through the year, participants indicated that they were not listening. Doubtless some health participants did listen to the reconciliation program one or more times. However, if significant numbers of participants crossed over, findings would underestimate the true effect of the reconciliation program, pointing toward a false negative (Type II) error rather than a more troubling Type I false positive error. The true unbiased difference between the reconciliation and health groups would be larger, making my analyses a conservative estimate of program impact.

Data Collection

At the end of 1 year, a team of 15 Rwandan researchers accompanied the regular research assistants and myself to each community for 3 days. We conducted individual interviews, focus groups, and behavioral observation with all 40 participants.

Individual interviews. Researchers read each participant a series of statements, and 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*.

Nine statements measured participants' beliefs with respect to the program's educational messages, and six statements measured perceptions of descriptive ("that is the way things are") and prescriptive ("that is the way things should be") norms portrayed in the program (see Table 1). Questions about the health program tested the discriminant validity of the intervention, specifically whether the pattern of treatment effects reversed in favor of the control group on questions about health. Researchers measured participants' empathy for other Rwandans with four statements probing whether participants "imagine the thoughts or feelings of" Rwandan prisoners, genocide survivors, poor people, and political leaders.

Focus groups. Participants organized into single-sex groups of 10 discussed four topics: intermarriage, violence prevention,

Table 1
Interview Items Regarding Personal Beliefs and Perceptions of Social Norms

Category	Item
Personal belief	Mass violence grows out of a series of small acts like spreading rumors and stealing
	Mass violence comes about suddenly[*]
	If I stand by while others commit evil actions, I am also responsible
	When people marry each other from different regions, religions, or "ethnicities," this contributes to the peace
	Traumatized people are "crazy"[*]
	Perpetrators of violence can also be traumatized
	Recovery from trauma is possible
	A pregnant woman who has AIDS can be given a chance to have a healthy baby (Health)
	You can safely share something with someone who has AIDS (Health)
Social norm	I advise my children (or the ones I will have in the future) that they should only marry people from the same regional, religious, or ethnic group as our own[*]
	It is naive to trust[*]
	There is mistrust in my community
	If we disagree with something that someone is doing or saying, we should keep quiet[*]
	For the sake of my mental health, I should never talk about the experiences that have caused me great pain and suffering[*]
	It's necessary that every woman who is pregnant goes to the health center to be tested (Health)

Note. Social norms include both descriptive and prescriptive norms. Asterisks signify items that are reverse coded.

trauma, and trust. As with the individual interviews, the goal was to assess personal beliefs and perceptions of social norms. Researchers also repeated questions from the individual interviews in the focus group to test whether individuals would voice the same opinions in front of their peers as they did privately.

Behavioral observation. Researchers recorded group deliberations about how to share and supply batteries for the portable stereo and set of 14 cassette tapes of the radio program presented to each community at the end of the data collection. Given the monetary and entertainment 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 the record"—their discussions took place during the goodbye party when the research team gathered with the participants to share drinks and socialize.

To launch the discussion, one research assistant presented the stereo to the group and suggested that because they were all present they could decide how to share and supply it with batteries before parting ways. Two researchers sat discreetly in the back of the group and recorded the participants' ensuing discussion by hand.

Results

I used a nested statistical model to estimate the reconciliation program effect on individuals, using dummy variables for the blocks within which randomization occurred ($S_{i1}...S_{i5}$; the matched communities) and preintervention covariates ($Z_{i1}...Z_{iK}$; sex, birthplace, radio listening habits) from the pretest. A probit regression, which does not impose an arbitrary metric on the dependent variable, is preferable in this case to hierarchical linear modeling (Raudenbush & Bryk, 2002), which is a linear model that presupposes a metric-dependent variable. The model is as follows: $Y_i = \alpha + \beta X_i + \gamma_1 S_{i1} + \gamma_2 S_{i2} + \gamma_3 S_{i3} + \gamma_4 S_{i4} + \gamma_5 S_{i5} +$

$\delta_{i1}Z_{i1} +...+ \delta_{iK}Z_{iK} + u_i$, where the dependent variable for individual i is Y_i; the treatment is X_i; the error term is u_i; and the parameters are γ for the fixed effects, δ for the covariates, and β for the effect of the reconciliation radio program. The covariates help to improve the precision with which the program's effect is estimated but do not change the results. STATA's (Version 9.2; Stata Corporation, 1985) robust cluster option accounted for the fact that errors are dependent within each cluster (community), allowing me to estimate coefficients for individuals rather than groups and increasing the effective N from 12 to 480. This adjustment generated errors that scarcely differed from conventional standard errors because of low intracluster correlation. For dependent variables expressed as ordered categories, I used ordered probit (Greene, 2000).

To analyze the qualitative data, I translated and typed all focus group transcripts into a database where they were matched with identifying codes for site, composition of the group (e.g., sex, average age), and experimental condition. Using an a priori coding system devised by myself and the radio program staff on the basis of desired and expected responses, an independent judge and I coded (blind to condition) every spoken turn. Each turn received from 0 to k codes, k being the total number of codes pertaining to the comment. Coding agreement was acceptable ($\alpha = .71$), and disagreements were resolved through discussion. I submitted the codes to probit regressions using the same model presented above.

Manipulation Check

Between 35 and 40 participants attended each month's listening sessions at each site, with no difference in attendance between conditions. During the listening sessions, there were no differences between reconciliation (M_R) and health (M_H) groups' interest ($M_R = 4.0$, $SD = .75$; $M_H = 4.2$, $SD = .83$), enthusiasm ($M_R = 3.3$, $SD = .96$; $M_H = 3.6$, $SD = .90$),

distraction (M_R = 1.9, SD = .90; M_H = 1.7, SD = .78), or confusion (M_R = 1.5, SD = .60; M_H = 1.5, SD = .78; using a scale from 1 = *least* to 5 = *most*).

Below, I present results from individual interviews alongside results from focus groups to evaluate the first two hypotheses of belief and perceived norm change. Because I found no differences among different types of communities (general population, survivor, Twa), I collapse these data and present individual-level results only. Next I present individual- and group-level data gathered on potential processes of change like empathy and discussion and then group-level data testing the third hypothesis of behavioral impact.

Survey and Focus Group Results: Personal Beliefs

Mass violence. There was no difference between reconciliation and health groups' endorsement of the message that violence gradually builds along a continuum (M = 3.62, SD = .05); there was also no difference between the groups' middling endorsement of the idea that violence comes suddenly (M_R = 2.78, SD = .09; M_H = 2.81, SD = .09). See Table 2. In focus groups, participants from reconciliation and health conditions discussed their beliefs about how violence escalates. Their collective insights, illustrated with caveats from their own personal lives, included all of the factors presented in the reconciliation program's messages about violence escalation. One participant volunteered,

> There is poverty, and this makes even small differences great between one person and his neighbor, like the poor and the rich. Then there are bad leaders, who privilege some to the detriment of others, and this kind of ethnic tension leads to contempt of someone who is of a different ethnicity, in conversations and then in public speeches in which the other ethnicity is despised.

These beliefs about violence cannot be attributed to the radio program because the control group was just as likely and in a few instances more likely, to point out factors communicated by the reconciliation program. Even worse for the hypothesis of belief change, the reconciliation group was significantly more likely to mention that "evil people" cause violence (17.4% vs. 4.9%)—a view disputed by a reconciliation program message, which emphasized that average people become violent through ordinary psychological processes.

Intergroup relations. Participants' beliefs did not change regarding a bystander's responsibility to intervene when others are promoting violence or intergroup conflict. Reconciliation (M = 3.11, SD = .08) and health groups (M = 3.21, SD = .07) agreed somewhat that bystanders share responsibility. Notably, nearly a quarter of all participants did not believe that passive bystanders are partly responsible for unjust acts they witness and do not try to prevent. Participants who disagreed often recounted a time during the genocide in which they were unarmed or otherwise helpless to stop a group of armed people from killing.

The intermarriage item probed whether participants believed that marriage among people from different ethnic, regional, and religious groups contributes to the peace. The reconciliation program had a modest but not statistically significant effect in the opposite direction than predicted, in which reconciliation listeners were less likely to believe in peace coming from intermarriage (M_R = 3.59, SD = .05; M_H = 3.65, SD = .04).

Trauma. To the exact same degree (M = 1.51, SD = .07), reconciliation and health groups disagreed that traumatized people are "mad." Both groups believed perpetrators of violence could be traumatized (M_R = 3.29, SD = .06; M_H = 3.45, SD = .05) and that traumatized people can recover (M_R = 3.29, SD = .06; M_H = 3.49, SD = .05). However, contrary to

Table 2
Reconciliation Program Effects on Beliefs, Social Norms, and Empathy

Category	Predicted direction	Reconciliation radio	SE	p
Belief				
Violence is a continuum	+	0.04	0.05	.85
Violence comes suddenly	−	−0.004	0.06	.92
Bystanders to violence are responsible	+	−0.010	0.11	.38
Intermarriage brings peace	+	−0.12	0.11	.47
Traumatized are "crazy"	−	−0.004	0.06	.99
Perpetrators can be traumatized	+	0.08	0.09	.62
Trauma recovery is possible	+	−0.15	0.08	.05
Pregnant women with AIDS can have healthy babies	−	0.06	0.05	.87
I can share with AIDS patients	−	0.10	0.16	.77
Social norm				
Intermarriage should be allowed in my family	+	0.28	0.04	.01
It is not naive to trust	+	0.14	0.07	.04
There is mistrust	−	−0.1	0.07	.52
I should dissent	+	0.29	0.07	.01
I should talk about trauma	+	0.22	0.03	.04
Pregnant women should be tested for AIDS	−	−0.56	0.18	.002
Empathy for other Rwandans	+	0.17	0.08	.04

Note. Each line is a separate ordered probit regression that analyzes individual-level data and accounts for clustering at the listener group level. The reconciliation radio program is scored as 1 (vs. health program = 0) in each regression, thus predictions for health messages are in the reverse direction. Social norms include both prescriptive and descriptive norms. Refer to the text for the full item wording.

the aim of the reconciliation program, reconciliation listeners were significantly less likely to believe that traumatized people can recover.

Researchers probed participants' beliefs about trauma symptoms in focus groups. With one exception (discussed in the next section), no differences emerged: Both reconciliation and health groups listed symptoms like shortness of breath, social isolation, sudden outbursts, and hallucinations, which parallel the reconciliation program's list of symptoms. As treatment, participants suggested social support from the community ("visit him many times, make him a good friend of yours;" 33% of comments) and material support, such as sending firewood or a child to help around the house (10% of comments).

Health. The great majority of all participants correctly reported a belief that pregnant women with AIDS "can be given the chance" to have a healthy baby (75% of reconciliation and 85% of health, nonsignificant). Participants in both conditions also believed correctly that it is safe to share objects with a person who has AIDS (92% of reconciliation and 93% of health, nonsignificant).

Survey and Focus Group Results: Perceived Social Norms

Intermarriage. Participants reported whether they tell (or would tell) their children that they must marry within their own regional, religious, or ethnic group. Here, the treatment effect is large and significant. Those exposed to the reconciliation program were between .25 and .28 probits more likely to reject prescriptions of ingroup marriage. Expressed in percentage point terms, this implies that a person who would otherwise have a 50% likelihood of advising ingroup marriage would have a roughly 40% likelihood if assigned to the reconciliation condition.

The focus group data are consistent with individual responses about prescriptions for marriage. The majority of focus groups agreed that in some cases intermarriage can be a positive force for peace. Nearly every group recounted the same Kinyarwanda proverb: *Aho ugishe igisalo ntuhatera ihuye*, or "Don't throw stones in a place where you keep a treasure," meaning you must treat your in-laws well because your son or daughter resides with them. However, important differences emerged when participants elaborated reasons for why intermarriage brings peace. Reconciliation focus groups stated more frequently that intermarriage sets an example or creates a new social norm about relationships between ethnic groups that alters attitudes in the family and community (27% vs. 5.7%; $\beta = .21$, $SE = .08$, $p < .01$); for example,

> Sometimes the two fiancés overcome the hate, even when the parents have not. But then the [marriage] ceremonies come, and they bring a change of perspective, for all those who have been invited to come see them unify . . . the guests see, and are inspired to reconcile with one another.

By contrast, 11% of health group comments (vs. no comments in the reconciliation group) described intermarriage as a private choice that changes individuals rather than a decision that would involve and potentially transform their social and familial environment. Both reconciliation and health groups placed conditions on the positive effects of intermarriage, lending credibility and realism to their otherwise positive discussions. Many cautioned that positive effects depend on the "gravity of the [political or social] situation," citing stories like, "You can remember one of our leaders who forced his daughter to have an abortion when she was pregnant with a Tutsi's baby."

Trust. All participants agreed with the statement, "There is mistrust in my community," a 3 out of 4 on the rating scale ($M_R = 3.0$, $SD = .07$; $M_H = 3.1$, $SD = .07$). However, reconciliation listeners were significantly more likely to deny that it is naive to trust people ($M_R = 1.81$, $SD = .07$; $M_H = 2.01$, $SD = .08$; $\beta = -.20$, $SE = .10$, $p < .05$).

In focus groups, some responses shifted when researchers asked participants to report the level of community trust in front of fellow community members. Notably, it was health group participants who were most likely to modify their private stance. In front of community members, 39% of the health groups' comments turned into unqualified denials of mistrust in their community, compared with 7% in the reconciliation groups, $\chi^2(2, N = 33) = 4.21$, $p < .05$. 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.

Open dissent. Individual responses to the statement, "If we disagree with something that someone is doing or saying, we should keep quiet," revealed one of the strongest treatment effects associated with the reconciliation program. Consistent with their willingness to speak out about mistrust in focus groups, reconciliation listeners were .26 to .29 probits more likely than health listeners to indicate that they should speak up.

Discussing personal trauma. Reconciliation listeners were much more likely to agree that people should talk about traumatic experiences, an effect of .22 probits. This normative position did not correlate with a higher rate of self-reported talking because 83% of people in both groups reported that they had already talked with someone about their traumatic experiences.

In the focus group discussions of trauma healing, reconciliation listeners more often than health group listeners mentioned the importance of talking about trauma and listening to other people (39% vs. 23%; $\beta = .15$, $SE = .07$, $p < .05$): for example, "You should accept his condition and let him express his mind" and "The most important thing is to accept all that she is. After that, approach her and listen to her attentively without wounding or rushing her."

Health. Although overall agreement was extremely high (95%), health groups were more likely to agree that all pregnant women should be tested for AIDS, a statistically significant difference. Predicting outcomes using the .56 probit coefficient shows that listening to the health program made individuals 1% more likely to agree.

Emotions and Empathy

According to the monthly field notes, participants' emotional reactions to both soap operas were visible, audible, and frequent. In every listening session, researchers documented various emotional reactions, for example, crying out in pain when a character from the prosperous community was beaten, laughing and clapping during a reunion of the star-crossed lovers, and calling out in encouragement to the girl when the relationship was foiled again—"*ihangane sha*" ("hold on dear"). Such reactions seem to reflect

what psychologists would label sympathy (feeling sorry for a character) and empathy (feeling an emotion parallel to the character's).

In the individual interviews, reconciliation listeners expressed more empathy for real-life Rwandan prisoners, genocide survivors, poor people, and political leaders. An additive index of these empathic responses indicated a moderate and significant effect of the reconciliation program ($M_R = 3.52$, $SD = .04$; $M_H = 3.41$, $SD = .04$). This effect holds when responses of genocide survivors are taken out of the analysis (on the grounds that their empathy for other survivors would be especially acute, but this was not the case).

Group Discussion

Monthly field notes revealed, on average, the same amount of spontaneous participant discussion in response to either program during and after the broadcast. On a scale from 1 (*completely silent*) to 5 (*constant commentary*), discussion was, on average, 3.09 ($SD = 1.08$; $M_R = 2.9$ and $M_H = 3.3$) during the broadcast. Afterward, researchers reported that participants spent an average of 63% of their time discussing the program (as opposed to other topics) before leaving ($SD = 25.0$; $M_R = 62\%$ and $M_H = 65\%$).

Field notes illustrate how participants kept up a running commentary on the actions and conversations of the radio characters as they listened. Listeners echoed, supported, and predicted characters' words and actions; whistles and exclamations ("eh!" and "yoo!") punctuated the broadcast. Local proverbs used by characters inspired participants to trade their own likeminded proverbs. Discussions centered on the overarching messages of the program, not solely on plot developments and jokes. For example, one episode of the reconciliation program ended with a character's comment that tolerance and respect for one another's ideas are necessary, to which a male participant called out, "We should repeat those words!" thereby sparking a dialogue. Health soap opera listeners were similarly engaged and active.

Behavior

During the health groups' deliberations about the portable stereo and cassettes, I 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 one 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. I counted the number of dissenting propositions that followed the initial proposal to assess the extent and openness of the deliberation session. This indicator revealed that

Table 3
Behaviors During Discussion of Community Resource

Behavior and sample	Pair	Health	Reconciliation
No. of dissenting opinions raised			
General population	A	1	1
	B	0	0
	C	0	2
	D	0	1
Twa	E	0	2
Survivor	F	0	1
No. 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

Note. Letters A–F represent each pair of communities, one assigned to the health program and the other to the reconciliation program. Transcripts from community discussions were awarded 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. The joint probability of finding these differences was $p = .02$.

reconciliation groups proposed and debated a significantly greater number views on how to share the communal stereo compared with health groups (using a Wilcoxon matched pair signed-rank test, $z = 2.3$, $p = .05$). Table 3 illustrates how reconciliation groups' deliberations represent a stark divergence from health groups' deliberations, where the modal number of dissenting opinions is zero. The number of positive comments made about group cooperation was also more frequent in reconciliation groups ($z = 2.3$, $p = .05$; joint significance of the two codes, $p = .02$). Like the absolute number of dissenting comments, comments about cooperation in reconciliation groups represent a 100% increase in this kind of speech compared with health groups. Of importance, these results were the same for ethnically homogenous Twa and survivor communities and for ethnically heterogeneous communities in the general population.

Discussion

The present research provides some of the first clear evidence of the media's impact on intergroup prejudice and conflict in the world. The reconciliation radio program did not change listeners' personal beliefs but did substantially influence listeners' perceptions of social norms. Normative perceptions were not empty abstractions but were realized by actual measured behavior, such as active negotiation, open expression about sensitive topics, and cooperation. This modulated pattern of effects, which was mirrored in the comparison radio condition, increases confidence that the results are not artifacts of experimental demand. Of more importance, this pattern carries a provocative implication for theoretical models of prejudice reduction: namely, that to change prejudiced behavior it may be more fruitful to target social norms than personal beliefs.

Though it follows a long and distinguished line of theorizing about prejudiced beliefs, norms, and behaviors, this empirically derived insight strikes a different chord. For some time, psychological theories have specialized in distinct realms of cognitive,

affective, normative, or behavioral prejudice to the neglect of more systemic theories that explain how the parts connect to produce or potentially alter the sum. This finding suggests how a fuller understanding of the functional interdependence of these components of prejudice could usefully structure a practical model of prejudice reduction.

The findings also emerged out of the distractions, social interactions, and emotional reactions of a real-world setting. Rather than noise that might have occluded weaker media effects, factors like discussion and emotional reactions can be considered potentially necessary conditions for the change process and should be placed at the center of future investigations. Below, I discuss how the present findings are in some ways supportive and other ways at odds with the current literature on prejudice and conflict. I outline possible bounds on my claim for the predominance of social perceptions over personal convictions and describe future research that could contribute to an integrated model of prejudice and conflict reduction.

Functional Interdependence

That listeners' perceptions of social norms and their behavior changed without a corresponding change in their personal beliefs supports a classic and recently reinvigorated literature emphasizing the key role of social norms in the production of prejudice and conflict (Allport, 1954; Blanchard, Crandall, Brigham, & Vaughn, 1994; Crandall & Stangor, 2005; Sechrist, Stangor, & Killen, 2005; Sherif, 1936). Indeed, in some instances, reconciliation listeners endorsed norms in opposition to their stated beliefs—for example, they rejected proscriptions for intergroup marriage even though they believed that marriage between groups often causes tension. These results also support the pessimistic view that beliefs are difficult to change (Bem, 1970; W. G. McGuire, 1986; Wood, 2000) and that media do not effectively tell people what to think but instead communicate social norms, or what other people think (Kinder, 1998; Mutz, 1998). In contrast, these findings go against psychology's current inclination to examine prejudice via cognition rather than via social influence. Specifically, modern-day psychology emphasizes individual beliefs and attitudes, a focus these findings challenge by underlining the importance of social norm perception and even of social interaction (discussed below).

However, given their prominence in psychological research, it is important to ask why beliefs did not change—eight questionnaire items produced null results, and the two significant instances of change were in the opposite direction of that predicted by the intervention. These findings may reflect a particular resistance to messages aimed at beliefs grounded in important personal experiences. All of the messages in the reconciliation program addressed issues with which participants had a surfeit of personal experience, and many participants cited personal examples when discussing their responses.

Research demonstrates resistance to persuasive messages when people's personal values or their egos are involved (Johnson & Eagly, 1989; Sherif & Hovland, 1961). Other investigations have demonstrated that people are less likely to be influenced by fictional stories when the stories overlap substantially with their real lives because they process the stories much more critically (Prentice, Gerrig, & Bailis, 1997). For example, one reconciliation program message stated that violence does not come suddenly.

Many participants protested that although there was a buildup of tension, the genocidal violence was a surprise. As one participant stated, "when the violence began, it fell upon us like a sudden rain."

It is interesting to note that the present evidence for disparities between private beliefs and public behaviors parallels findings from studies of ethnic violence, including the Rwandan genocide. Scholars emphasize that violence often did not reflect the killers' personal prejudices (Fujii, in press; Straus, 2006) but that along with other factors, their authorities, peers, and the media made killing seem socially appropriate and necessary (this conclusion was echoed in Rwanda's media trial; *Prosecutor v. Nahimana, Barayagwiza, & Ngeze*, 2003). Norms writ large may not significantly impact behavior unless they are made salient in a particular situation—by a neighbor, a policeman, or a radio broadcast (Kallgren et al., 2000; Latané & Darley, 1970). The nuanced and sobering suggestion raised by these analyses is that normative pressure—applied in a targeted manner through the media and other sources—can promote or restrain ethnic violence.

Potential Limitations

Age and culture represent two possible bounds on the present claims. For one, some evidence suggests that beliefs are more flexible at younger ages (Krosnick & Alwin, 1989) and that antiprejudice media could shape younger listeners (see Paluck, 2007b, for a review). One could also conjecture that Rwanda's cultural context amplified certain effects of the reconciliation program relative to others. One interpretation of the strong effects on norms regarding dissent and intergroup relations is that campaigns to shift norms are most successful when they give force to ideas with preexisting momentum in a society's culture (see also the Zeitgeist phenomenon; Paicheler, 1976). Relevant ideas about dissent, intermarriage, and group cooperation have particular resonance in Rwandan culture. There exists a prominent imperative against dissent in Rwanda's hierarchical society, illustrated by proverbs like, "When you are in a weak position, rest calmly and cross your arms." In contrast, intergroup cooperation and intermarriage are celebrated aspects of customary society. Rwandans noted with pride various neighborly imperatives to share beer from the same straw or to carry one corner of an *ingobyi* (stretcher) down the mountainside when a neighbor is ill (Paluck, Green, & Nzamukwereka, 2004). Scenes featuring radio characters speaking their minds may have inspired listeners dissatisfied with proscriptions on dissent, whereas the program's love story may have reminded listeners of the formerly positive status of intermarriage or its occasionally lifesaving effects during the genocide.

More longitudinal study of interventions can help to sort out puzzles regarding the durability and sequencing of effects. Specifically, will normative shifts endure over time, and what social, political, or individual processes could sustain the perception of these social norms? On an intrapersonal level, various types of psychological balance theories might predict that beliefs would eventually align with new behaviors produced by (and which in turn produce) perceived social norms (e.g., Bem, 1972). On an interpersonal level, I discovered that research participants discussed the radio program with other members of the community outside of the experiment (Paluck, 2006). This discussion outside of the group suggests a social influence model in which perceived

norms change in small, dedicated listener groups who then spread their local norms to the broader community, making it more plausible that these changes will endure.

With respect to sequencing, I cannot specify whether listeners' behaviors changed in response to their shifted perceptions of norms or vice versa—nor do I believe that such a simplified model is realistic. The fact that participants listened in groups suggests a potential reverse direction model in which the radio program changed the group's behavior and this visible behavior changed perceptions of norms. Most likely, both directions of change are valid (Bandura, 2004).

Change Process

Combining my descriptive data with previous theory and research, one could infer that emotional and group processes were critical to the present findings. For one, the impact of the radio intervention is inseparable from the impact of listening to the program in a group. Alone, people become aware of ideas communicated in radio programs, but in groups they also become aware of other people's awareness of those ideas. When group members react positively, their endorsement creates another vector of social influence on each listener (Katz & Lazarsfeld, 1955; Lewin, 1952; Mendelberg, 2002), perhaps even encouraging group members to convince themselves of the idea (Petty & Cacioppo, 1986). Spontaneous group discussion of the radio soap opera certainly contributed further to this "socially shared cognition" (Fiske, 2005, p. 44), which is the basis of a social norm. The mechanism of peer discussion merits an experimental test; as a first step, I am conducting a field experiment in the Democratic Republic of Congo that uses random assignment of a radio talk show to gauge the effect of encouraging citizen discussion about antiviolence media programs (Paluck, 2007a).

Likewise, the dramatic narrative form of the radio program may have provoked emotional and imaginative processes critical to the changes observed. I documented many emotional reactions during the program; in addition, reconciliation listeners in several sites reported that they personally identified with the characters. Participants reported using characters' names to nickname people in their community—for example, naming pretty girls after the female star-crossed lover and accused killers after the story's villain.

Listeners' emotional empathic reactions to the soap opera characters may have transferred onto the real-life counterparts of the groups the characters represented (measured by the increased empathy for real-life Rwandans—prisoners, genocide survivors, the poor, and leaders). This explanation is consistent with claims made by the extended contact hypothesis (Wright, Aron, McLaughlin, & Ropp, 1997) that feelings from a vicarious relationship can generalize to the larger social group represented in that relationship. It also fits with other research showing that people do not draw a bright line between the fictional and the real world (Gerrig, 1993; Harris, 2004, pp. 49–51).

The power of narrative media, including humor and drama, may also lie in its ability to allow people to think through difficult issues or to experience intergroup contact in a vicarious and less threatening way (Allport, 1954, p. 488; Cameron & Rutland, 2006; Lustig, 2003). More research is needed to examine this proposition, although some has started by demonstrating the power of narratives to stimulate empathy (Slovic, 2007).

Limitations and Extensions

To paraphrase Kurt Lewin, to truly understand a system you must change it (Schein, 2002). Above I have outlined several ways to build on the insights from this experiment: for example, by examining downstream effects on beliefs, the duration of new norms, and the contribution of emotion, narrative, and peer discussion to prejudice reduction. Replication of the present findings using finer tuned instruments, such as multi-item measures for norms and beliefs, is also necessary. Replication using media interventions in different settings will address other questions stemming from the distinctiveness of this study's context and methods.

Although these data are from Rwanda, there is nothing uniquely Rwandan about the pattern of social norm perception and norm-consistent behavior they reveal. Moreover, the hundreds of media outlets found in more developed countries do not necessarily represent a diversity of informational and normative influence; their relative homogeneity makes it reasonable to question whether media programming has affected social norms, such as tolerance for violence and political torture (Anderson & Bushman, 2002; Lithwick, 2005). In the end, whether media's influence on prejudice and conflict translates to more developed or Western societies is an empirical question. However, direct translation to these countries is by no means the yardstick for measuring the utility of these findings. The slow and careful accumulation of evidence, with one eye to the realities of the context and the other to the generalities of theory, will help to build the integrated theory of prejudice reduction I hope to have stimulated with this work in Rwanda.

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