Modeling collective action through media to promote social change and positive intergroup relations in violent conflicts ☆

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HIGHLIGHTS

- We test the effect of role modeling of collective action in two field experiments.
- We test effects of role modeling on collective efficacy and action in the DRC.
- Role modeling collective action increases collective efficacy.
- Role modeling collective action exacerbates negative intergroup attitudes.
- Role modeling collective action affects the content of group discussions.

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ABSTRACT

Does social influence exerted through role modeling of collective action impact social change in contexts that are not conducive to collective action, such as long-lasting violent conflicts? We examined this question in two field experiments in the Eastern Democratic Republic of Congo. We created two versions of an episode of an existing media intervention (a show aiming to promote positive social change), in which fictional characters either planned collective action (role modeling condition), or did not plan action (control condition) to address grievances. In Study 1, role modeling affected individual-level outcomes: it increased perceived collective efficacy and willingness to take action, but exacerbated intergroup attitudes and reduced tolerance. Study 2 tested the influence of role modeling on a group-level outcome (group discussions). Discussions following the role modeling show focused less on grievances, and included more positive lessons of the show, as well as more statements about collective efficacy and collective action. The findings highlight the influence of role modeling of collective action through media on efficacy and action for social change, but caution against unintended consequences on intergroup attitudes.

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1. Introduction

In 1989, people all over Europe watched on television as East Germans brought down the Berlin Wall. Very quickly mass action spread across Eastern Europe, resulting in the fall of the region's communist regimes. In 2010, protests in Tunisia that were globally disseminated through social media (e.g., McGarty, Thomas, Lala, Smith, & Bliuc, 2014) sparked demonstrations across the Middle East and North Africa, commencing the so-called Arab Spring. In both cases, watching others in similar circumstances engage in efficacious collective action seems to have encouraged people to use similar actions and tactics in their own communities. Social cognitive theory (Bandura, 1986) may help explain the spillover of these mass movements, as it suggests that observing others engage in effective action increases perceived efficacy to impact change. This, in turn, increases motivation to engage in collective action. These observations raise important questions regarding the role of social influence in collective action. Specifically, can social influence through modeling of collective action encourage action for positive social change, even in contexts where many psychological and practical obstacles to such action exist?

Role modeling, especially through media, has been used extensively to promote behavioral change in a wide variety of domains—including gender equity, family planning, AIDS prevention, sex education, and literacy (Singhal, Cody, Rogers, & Sabido, 2004). However, despite the burgeoning literature on collective action (e.g., Becker, 2012; van Zomeren & Iyer, 2009; for reviews, see Simon & Klandermans, 2001; van Zomeren, 2015; van Zomeren, Postmes, & Spears, 2008), and

some scarce social psychological research on the role of media in collective action (McGarty et al., 2014; Thomas et al., 2015), we found no research assessing the potential of role modeling through media to shape collective action and social change. This is surprising considering the large literature showing the impact of role models in media and elsewhere on aggressive (e.g., Anderson, Carnagey, & Eubanks, 2003) and prosocial behavior more generally (e.g., Greitemeyer, 2011).

In this paper, we integrate insights from the literature on social modeling, collective action, and intergroup conflict to examine social influence through role modeling of collective action in media in contexts where there are barriers to engaging in social change. We assessed the impact of role modeling of *prosocial* and *inclusive* collective action for social change—i.e., members of different groups working together for social change that benefits the community as a whole, rather than just the (ethnic) ingroup, and that is not violent in nature—in a context of longstanding violent conflict in the Eastern Democratic Republic of Congo (DRC). While Study 1 examined whether role modeling of inclusive collective action can influence individual-level outcomes (perceived efficacy, collective action tendency, and intergroup attitudes), Study 2 examined the influence of role modeling on group-level outcomes, specifically on group discussions. Increasing the external validity, we used a popular media intervention to test our research questions among diverse community samples in the Eastern DRC.

1.1. Role modeling collective action to foster positive social change in violence-affected contexts

The social psychological literature on collective action has identified several key predictors of collective action, including collective identification (Simon & Klandermans, 2001), perceived injustice (Ellemers & Barreto, 2009), efficacy beliefs (van Zomeren et al., 2008), group-based emotions (Tausch et al., 2011), ideology (van Stekelenburg, Klandermans, & van Dijk, 2009), and moral conviction (van Zomeren, Postmes, Spears, & Bettache, 2011). As evident from this brief list, the literature has examined individual-level perceptions, attitudes, and emotions as drivers of collective action. Considering the collective nature of collective action, the role of social influence (e.g., group norms: Drury & Reicher, 2009; Smith & Postmes, 2011; Thomas & McGarty, 2009) and group level processes (e.g., dynamics of group interactions: Smith, Thomas, & McGarty, 2015) in enabling collective action have received remarkably limited attention. In addition, collective action research has focused mainly on people who are already engaged in collective action, or on contexts where social change is in progress (van Zomeren, 2015). We know little about effective ways of encouraging collective action to impact non-violent social change in conflict settings (Cohen-Chen, Halperin, Saguy, & van Zomeren, 2014; Tabri & Conway, 2011) or when structural conditions constrain collective action (Klandermans, 1997). Many psychological and structural barriers unique to these contexts (e.g., ongoing violence, repressive regimes) impede efforts toward positive social change (see Hameiri, Bar-Tal, & Halperin, 2014). Opportunities to participate in collective action might be limited, and such action might not be common (i.e., normative), or might not be perceived as a viable option for addressing collective grievances. Moreover, conflict-supporting social norms (Paluck & Green, 2009) and silencing of dissident voices present important barriers to participation (Klandermans & Oegema, 1987). Modeling collective action for positive social change might help overcome these barriers, as it can help transform social norms and open new behavioral channels, especially in settings where violent collective action is widespread.

Bandura's (1986) influential work on social modeling suggests that people can learn by observing others' behaviors. These new, observed behaviors will be adopted if people believe they possess self-efficacy to enact them, which can also increase by observing similar others perform a behavior (Bandura, 1997). Therefore, modeling collective action has the potential to increase self- and collective efficacy for impacting social change, and willingness to engage in collective action. We focus

on collective action that would contribute to reducing conflict, such as speaking up against derogation or mistreatment of outgroups (Staub, 1989), engaging in intergroup cooperation rather than competition, and working together to solve community problems (e.g., Sherif, 1966). These ideas are in line with research on opinion-based collective action, in which people form groups (including across pre-existing social categories) based on common beliefs regarding an issue of common interest (McGarty, Bliuc, Thomas, & Bongiorno, 2009). Building on these ideas, we focus on modeling *inclusive* collective action, where members of different groups are shown to work together to address shared grievances. This has the potential not only to increase collective efficacy for change, but also to improve intergroup attitudes through vicarious or imagined intergroup contact (i.e., encouraging observers to imagine participating in such interactions themselves: e.g., Miles & Crisp, 2014).

1.2. Role modeling collective action through media

Vicarious learning through role modeling is at the core of education-entertainment, which is a media genre used to bring about social change (Bandura, 1986; Singhal & Rogers, 1999; Singhal et al., 2004), including conflict reduction and reconciliation (Bilali & Vollhardt, 2013; Paluck, 2009; Paluck & Green, 2009). Entertainment-education communicates educational messages typically through the popular format of a serial drama on television or radio. Entertainment-education dramas promoting prejudice reduction and reconciliation, for example, portray positive role models who engage in prosocial actions, speak up against authorities and hate speech, and have positive intergroup interactions, thereby influencing social norms about desirable behaviors. These programs are particularly effective when the audience identifies with the positive role models and takes their perspectives, allowing participants to vicariously live through the characters' experiences (Belliveau, 2005). For instance, Paluck (2009) showed that a reconciliation radio drama in Rwanda had a positive influence on listeners' perceived social norms and behaviors related to intergroup outcomes such as social distance and prosocial orientation, and Bilali, Vollhardt, and Rarick (2016) replicated some of these findings for a similar media intervention in Burundi. Notably, although these studies revealed positive media effects, the effect of role modeling was not directly assessed. We therefore tested (Study 1) whether models of non-violent action increase individual-level collective efficacy and intentions to engage in similar action. Because the modeled behaviors portray cooperation between members of different groups, we also examined the impact of the role modeling on audience members' intergroup attitudes.

While early research on mass media focused on its direct impact on the audience (i.e., on individual level outcomes; Harris, 2009), later this research expanded to incorporate underlying mechanisms of influence such as effects on discussions and dialogue among audience members (Katz & Lazarsfeld, 1955). For instance, in India, research on Pune Radio Farm Forum project showed how a radio drama spurred discussions that unified villagers around joint action for social change, such as digging wells or establishing enrichment centers for children (as cited in Papa & Singhal, 2009). In Rwanda, discussions among listeners of a reconciliation radio drama helped facilitate its positive effects on perceived conflict norms and behaviors (Paluck & Green, 2009). Considering the importance of group discussions as an underlying mechanism of mass media's influence, as well as for collective action, in the present research we also examined the effect of role modeling of positive collective action on group-level outcomes (Study 2). Specifically, we tested whether role modeling of positive collective action can steer group discussions in ways that facilitate positive social change.

2. Overview and context of the present research

In the present research we assessed the effects of modeling inclusive collective action on perceived collective efficacy and willingness to engage in collective action. We also examined the effects on intergroup

attitudes. As a context well-suited for examining these questions we chose the Eastern DRC, a nearly failed state where there is ongoing violent conflict. Over the past two decades, the Eastern DRC has been one of the most violent and volatile regions in the world. From 1998 to 2003, more than 5 million people were killed in what was called "Africa's World War" (Prunier, 2009). The violence has continued on a large scale after the official end of the war, as multiple rebel groups fighting for power and resources in the region have engaged in mass violence against the local populations, including widespread sexual violence (Freedman, 2011). The infrastructure in the region is destroyed, the state institutions are malfunctioning, and corruption is endemic (Autesserre, 2011). Although the conflict is not clearly ethnic in nature, rebel groups are often aligned along ethnic lines, feeding into intergroup stereotypes and hostilities between the many different ethnic groups in the region.

We collaborated with one of the many non-governmental organizations operating in the Eastern DRC, the NGO Radio La Benevolencija that produces the education-entertainment radio drama *Kumbuko Kesho (Remember Tomorrow)* with the goal of promoting positive social change and positive intergroup relations (see Bilali & Vollhardt, 2015; Paluck, 2010). The drama portrays a conflict between fictional ethnic groups that reflects the nature of the grievances in the DRC. It raises issues about power and resource inequalities between groups, conflicts over land, corrupt leaders, injustice and impunity, and weak institutions, among other issues. The drama draws on social cognitive theory (Bandura, 1986) to promote behaviors conducive to positive social change and positive intergroup relations through observation and imitation of role models. Role models enact desirable behaviors, such as getting organized to counteract social processes that exacerbate conflict, and taking non-violent action to address their communities' grievances. The drama also raises awareness about the factors that incite and escalate intergroup conflict (Staub, 1989), providing models of actions that might help inhibit the escalation of violent conflict (e.g., positive intergroup contact, speaking up against outgroup derogation; Staub, 2011).

We used this radio drama to examine our research questions regarding the impact of social influence through role modeling on collective action. To experimentally manipulate and isolate the effects of role modeling from other potential mechanisms of change and predictors of collective action that are commonly studied, we created two versions of a prototypical episode of the drama. In one version (role-modeling condition), the characters—belonging to different (fictional) ethnic groups—discussed community grievances and planned peaceful collective action to address them. The other version (control condition) used the same plots, except that the fictional characters did not plan actions to address the grievances. Based on our theorizing that role modeling through media should influence individuals' beliefs and actions as well as social interactions among listeners, we examined these two distinct types of outcomes, assessing first individual-level (Study 1) and then group-level outcomes (i.e., discussions, Study 2) related to collective efficacy, collective action tendencies, and intergroup attitudes.

The present research contributes to the literature in several ways: First, we examined whether social influence through role modeling can increase collective efficacy to engage in collective action even in contexts that are not conducive to collective action, such as the ongoing violence in Eastern DRC. Second, in addition to testing individual-level outcomes (Study 1), we also examined group-level outcomes (Study 2) that are crucial but understudied aspects of social mobilization (e.g., Smith et al., 2015). The present research adds to the handful of studies on collective action in non-Western settings (e.g., Cakal, Hewstone, Schwär, & Heath, 2011; Saab, Tausch, Spears, & Cheung, 2015), and the few studies addressing collective action in contexts of ongoing conflict (Cohen-Chen et al., 2014; Tabri & Conway, 2011).

3. Study 1

The goal of Study 1 was to test whether role modeling inclusive collective action would increase perceived collective efficacy and willingness to engage in collective action, as well as intergroup attitudes. Showing how members of different groups work together to address shared grievances and take action for social change should make salient two important aspects of positive intergroup contact—cooperation and shared goals (Sherif, 1966)—and therefore should not only improve intergroup attitudes more generally, but also increase willingness to work with outgroup members. However, in contexts of ongoing violence, portrayals of shared goals and intergroup cooperation may be perceived as unrealistic, and fail to have an effect. Therefore, examining these questions in such contexts provides a conservative test of our hypotheses.

3.1. Method

3.1.1. Participants

Participants included 276 Congolese (148 men, $M_{age} = 30.5$, $SD = 11.37$). The sample size was determined by an a priori power analysis.[1] Two participants were dropped from the analyses because they reported not being familiar with the radio drama, leaving a final sample of 274 participants. The study was conducted in 36 small groups (3 per community across 12 communities), each composed of 6 to 8 participants. All groups were mixed with regard to gender: On average, 53% of participants in each group were male (the number of males and females per group ranged from 2 to 6). Most groups were ethnically diverse, reflecting the diversity of each community. The overall sample represented members of 22 different ethnicities, the largest being Shi, Nande, Havu, and Rega.

Participants' education levels were varied: About 22% had completed some years in primary school or had no schooling; the rest of the participants had completed some secondary education or professional training in secondary school; no participant had attended university. About 38% of the sample were occasional listeners and 62% were frequent listeners (i.e., listened at least 2–3 times a month) of *Kumbuka Kesho*. On a checklist of 10 victimization experiences (e.g., injuries, threats, displacement, having been arrested, family member killed), participants reported having experienced on average 4.87 ($SD = 2.42$) of these events.

3.1.2. Experimental manipulation of role modeling of inclusive collective action

Our experimental manipulation of role modeling of inclusive collective action, embedded in an episode of the fictional show with four scenes, was as follows: In the experimental condition (role-modeling show), three or four characters belonging to different (fictional) ethnic groups discussed community grievances (e.g., corruption, poverty, exploitation and child labor, scapegoating of outgroups) and together planned collective action to address them. Collective action plans included writing petitions and organizing a protest march against corrupted leaders, organizing a micro-loan to start a collective women's business to address poverty, appealing to a multi-national company's CEO to reduce child labor, and helping a poor family from one of the stigmatized groups. The discussions of the planned collective actions were consensual. In the control show condition, the characters discussed the same grievances, but did not plan collective action. Instead, they continued to discuss the severity of those shared grievances for their community. The show was digitally recorded and lasted 20 min.

3.1.3. Experimental design and procedure

We used a group-randomized experimental design to test the effects of role modeling on perceived efficacy to achieve social change, willingness to engage in collective action, and on intergroup attitudes.

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[1] Power analyses using Gpower indicate that a total sample of 246 participants is needed for a one-factorial experimental design with 3 levels to detect medium-sized effects of d = 0.2 with 80% power, using an F-test with two-tail alpha at 0.05.

Participants from 12 communities in South and North Kivu in the DRC were randomly assigned to either the role-modeling show (experimental condition; $n = 88$), the control show (no role modeling of action; $n = 94$), or to a no show control condition ($n = 92$). Groups were randomly assigned to experimental conditions a priori, by randomizing the order of administering the three experimental conditions in each community (all three conditions were administered in each community on the same day). Participants in the experimental and control show conditions listened to the respective episodes in a group setting, and then each participant completed a questionnaire individually. Because we expected low levels of literacy in the sample, the researcher read the items out loud to participants. Participants indicated their responses on 4-point pictorial scales denoting strong or moderate agreement and disagreement (as in Bilali & Vollhardt, 2013, 2015; Bilali et al., 2016; Vollhardt & Bilali, 2015). Although the questionnaires were completed in group settings, caution was taken to ensure that participants had privacy while completing them and that nobody could view their responses. Participants in the no show condition only completed the questionnaire. Demographic information was collected in face to face interviews at the end of the study, and then matched with the response sheets from the questionnaire through a numerical code.

Two local, male researchers visited the communities and identified potential participants either with the assistance of local partner organizations, or by approaching community members in public areas and inviting them to participate. To ensure that participants understood the show, only people who reported to listen at least occasionally to the radio drama *Kumbuka Kesho* were eligible to participate, and were given the location and time of the study. Participants received the equivalent of $5 for their time and travel costs.

3.2. Measures

All outcome measures were assessed on 4-point pictorial scales (big thumb down = strongly disagree; small thumb down = disagree; small thumb up = agree; big thumb up = strongly agree).

3.2.1. Equivalence of the experimental and control shows

Entertainment-education programming influences its audience through narrative transportation (i.e., mentally transporting listeners to the fictional story), by relating to the audience's daily life (i.e., perceived relevance), and by increasing listeners' ability to take others' perspectives (Papa & Singhal, 2009). To rule out potential confounds, we tested whether the experimental and the control show were equivalent in these dimensions. Two items (adapted from Green & Brock, 2000) assessed narrative transportation, "While I was listening to this show, I could easily picture the events in that scene taking place" ($M = 3.16$, $SD = 1.07$), and self-relevance of the show, "The events in the show are relevant to my everyday life" ($M = 3.16$, $SD = 1.00$). Two items (adapted from Paluck, 2010) examined perspective taking: "Even if I disagree with other people, I try to think of reasons why they take a different point of view" ($M = 2.95$, $SD = 0.84$), and "I try to understand other people by imagining their feelings, suffering, or thoughts, even if I don't like them" ($M = 2.88$, $SD = 0.79$) ($\rho = 0.32$).

3.2.2. Outcome measures[2]

3.2.2.1. Collective efficacy.
We assessed collective efficacy and action with two items each, adapted from Tausch et al. (2011) and van Zomeren, Saguy, and Schellhaas (2012): "As a community, I think we can change the difficult conditions we face here," ($M = 3.52$, $SD = 0.78$) and "I think that we, as a community, are able to improve our situation" ($M = 3.43$,

$SD = 0.70$). Because the correlation between the two items was low ($\rho = 0.21$), these items were analyzed separately (as in Bilali & Vollhardt, 2013, 2015; Paluck, 2009, 2010; Vollhardt & Bilali, 2015).

3.2.2.2. Collective action.
Two items assessed willingness to engage in collective action: "I am ready to participate in a protest to resolve the difficulties my community faces" ($M = 3.63$, $SD = 0.81$), and "I am ready to come together with other members of my community to resolve the difficulties we face" ($M = 3.84$, $SD = 0.53$). The latter item was dropped because of lacking variation of responses in some groups, resulting in unstable standard errors and unreliable results.

3.2.2.3. Tolerance and openness.
One item adopted from Paluck (2010) assessed openness to diverse opinions, "If people have different points of view, they should be able to express these views" ($M = 3.72$, $SD = 0.56$). One item adopted from Bilali and Vollhardt (2015) examined openness to discussing grievances with outgroup members: "If people from different ethnic or political groups get together to discuss the problems in our community, it will only makes things worse" (reverse-coded) ($M = 3.09$, $SD = 0.95$).

3.2.2.4. Negative intergroup attitudes.
Negative intergroup attitudes were examined with measures used in prior research in similar settings (Paluck, 2009, 2010). Two items were: "I advise my children (or the ones that I will have in the future) that they should only marry people from the same regional, religious or ethnic group as our own" and "There are some tribal or political groups that do not deserve to benefit from our country's resources." In addition, as in Paluck (2010), participants were asked to think about the group they liked least when responding to the following items: "I would prefer not to have members from that group as colleagues or neighbors;" "I would prefer not to be part of an association that a member of that group belongs to;" "It is naïve to trust members of that group;" and "There will never be peace in Congo if that group stays here". These six items were averaged to create a measure of negative intergroup attitudes ($\alpha = 0.67$; $M = 2.19$, $SD = 0.68$). Because many participants could not read or write and it would have been too sensitive in this setting to ask in a face-to-face interview to reveal which group they thought about when completing these measures, we did not collect this information.

3.3. Results

3.3.1. Data analytic procedure

We conducted probit and linear regressions using STATA's robust cluster option to account for the correlated standard errors within each group.[3] The experimental manipulations were entered into the regression as two dummy coded variables to compare the role modeling condition with the control show and no show conditions (*dummy code 1*: role modeling show = 0, control show = 1, no show = 0; *dummy code 2*: role modeling show = 0, control show = 0, no show = 1). We controlled for gender, age, education level, number of victimization experiences, frequency of listening to the show, community in which the study was conducted, and ethnic composition of the group (we assessed each participant's exposure to ethnic diversity in the group by dividing the number of participants sharing the participant's ethnicity by the total number of group members).[4] In addition, to assess whether the control show alone impacted the outcomes, we re-ran the same regression analyses with a new pair of dummy codes, with the control show as the referent category (dummy code 1:

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[2] The questionnaire contained additional items related to the program content and other research goals unrelated to the goals of the experimental study, therefore they are not reported here. We have however reported conducted the same analyses on these items, and included them in the Online Supplemental Materials, Appendix B.

[3] We also ran multilevel analyses (rather than correcting for the correlated standard errors) to take into account the nested nature of the data. We have reported the results using multi-level regression models in Appendix A in the Online Supplemental Materials.

[4] We report the results using covariates to increase the precision of the estimates of the experimental effects (e.g., Maxwell & Harold, 2004). The results of probit regression analyses excluding covariates are consistent with the reported results.

control show = 0, role modeling show = 1, no show = 0; dummy code 2: control show = 0, role modeling = 0, no show = 1).

3.3.2. Equivalence of the experimental and control shows

Listening to the experimental show (compared to the control show) did not influence narrative transportation, $b = -.06$, $SE = 0.20$, $p = 0.78$, 95%CI [−0.453; 0.339], or perceived relevance of the show to participants' daily lives, $b = 0.29$, $SE = 0.19$, $p = 0.14$, 95%CI [−0.089; 0.664]. There were also no differences in perspective taking between the role modeling and the control show ($b = 0.08$, $SE = 0.11$, $p = 0.48$, 95%CI: [−0.14; 0.30], and $b = -0.12$, $SE = 0.16$, $p = 0.45$, 95%CI: [−1.06; −0.30]), but both shows evoked higher perspective taking than the no show condition (role modeling show compared to no show condition: $b = 0.37$, $SE = 0.12$, $p = 0.003$, 95%CI: [0.13; 0.61], and $b = 0.56$, $SE = 0.19$, $p = 0.003$, 95%CI: [0.19; 0.93]; control show compared to no show condition: $b = 0.29$, $SE = 0.16$, $p = 0.06$, 95%CI: [−0.02; 0.59], and $b = 0.68$, $SE = 0.19$, $p = 0.000$, 95%CI: [0.30; 1.06]).

3.3.3. The effects of role modeling on dependent measures

Correlations among outcome measures are shown in Table 1. Means and standard deviations for all outcome measures and the effects of the experimental show from the regression analyses are shown in Table 2.

3.3.3.1. Collective efficacy.
Participants who listened to the role-modeling show expressed higher perceived collective efficacy on one item (We are able to improve the situation in our community). In addition, they reported higher collective efficacy than participants in the no show condition. As expected, there were no differences in collective efficacy between the control show and the no show condition ($b = 0.17$, $SE = 0.18$, $p = 0.34$, 95%CI: [−0.18; 0.51], and $b = -0.06$, $SE = 0.15$, $p = 0.68$, 95%CI: [−0.35; 0.22]).

3.3.3.2. Collective action.
Participants who listened to the role-modeling show expressed higher willingness to participate in collective action than participants listening to the control show. There was no difference in collective action between the control show and the no show condition ($b = -0.22$, $SE = 0.20$, $p = 0.27$, 95%CI: [−0.62; 0.17]).

3.3.3.3. Tolerance and openness.
Surprisingly, the role-modeling show reduced tolerance toward diverse opinions and openness to intergroup cooperation. Compared to participants in the control show and no show conditions, participants in the role modeling condition were more likely to believe that discussions among different ethnic and political groups make things worse. In addition, they were less likely than participants in the control show to report that people should be allowed to express different opinions. A separate regression comparing the control show condition with the no show condition indicated that tolerance increased in the control show condition compared to the no show condition ($b = 0.73$, $SE = 0.17$, $p < 0.000$, 96%CI: [0.39; 1.07]), but there was no difference between groups in openness to intergroup cooperation ($b = 0.01$, $SE = 0.12$, $p < 0.94$, 96%CI: [−0.22; 0.24]).

3.3.3.4. Negative intergroup attitudes.
Listening to the role modeling show increased expression of negative intergroup attitudes as compared to both the no show and control show conditions. However, the control show did not influence intergroup attitudes compared to the no show condition ($b = 0.08$, $SE = 0.06$, $p = 0.16$, 95%CI: [−0.03; 0.19]).

3.4. Discussion

As expected, social influence through role modeling of inclusive collective action to resolve community grievances increased collective efficacy. However, unexpectedly, it also had a negative impact on intergroup attitudes and reduced the belief in the potential to work together effectively with outgroup members. Our experimental design gives us confidence that the observed results are caused by role modeling of collective action. The experimental and control shows were equivalent with regard to other mechanisms through which dramas influence the audience (i.e., the show's perceived realism, the degree to which they elicited narrative transportation and perspective taking). Additionally, except for one item (tolerance for diverse opinions), we did not find differences between the control show and no show conditions. Lastly, it is unlikely that these results are driven by experimental demand, considering that participants across conditions were all listeners of the show and therefore aware of its peace-oriented goals.

The differential effects of role modeling of collective action on efficacy for change and intergroup attitudes resonate with the recent debates regarding collective action versus prejudice reduction as avenues to social change (e.g., Dixon, Levine, Reicher, & Durrheim, 2012). Some research suggests that strategies to reduce prejudice and increase liking of the outgroup (e.g., intergroup contact or establishing a common ingroup identity) can reduce the propensity to engage in collective action benefitting the disadvantaged ingroup (Glasford & Calcagno, 2012; Saguy, Tausch, Dovidio, & Pratto, 2009). Our research provides initial evidence of a potentially complementary effect, suggesting that encouraging collective action through role modeling might worsen intergroup attitudes. We discuss this point in more detail in the general discussion.

A troubling result is that portrayals of inclusive collective action reduced the belief that working with other groups helps resolve community problems. One explanation is that the role modeling show did not reveal whether the planned actions were effective. Social cognitive theory posits that outcome expectancy (i.e., positive or negative reinforcement of the modeled behaviors) is crucial for affecting change (Bandura, 1994). A delay in revealing the outcomes of action, or letting participants infer the outcomes (e.g., based on their prior experiences), might reduce the intervention's effectiveness and even backlash (Pajares, Prestin, Chen, & Nabi, 2009).

Individual attitudes toward collective action are important in shaping whether or not people will engage in action. However, considering the *collective* nature of collective action, it is also crucial to examine the impact of role modeling on group-level outcomes such as group discussions (Smith et al., 2015). Group discussions are not only important for creating collective efficacy and coordinating collective action, but can also influence intergroup attitudes (Paluck, 2010). Therefore,

Table 1
Spearman correlations among outcome measures for Study 1 and Study 2.

	1	2	3	4	5	6
1. We can change the difficult conditions we face (Collective efficacy 1)	–	30 (0.0001)	0.23 (0.002)	−0.07 (0.38)	−0.02 (0.77)	−0.13 (0.09)
2. We are able to improve our situation (Collective efficacy 2)	0.21 (0.001)	–	0.07 (0.34)	0.08 (0.30)	−0.14 (0.06)	0.05 (0.53)
3. I am ready to participate in a protest (Collective action)	0.15 (0.02)	0.10 (0.08)	–	−0.01 (0.94)	0.01 (0.90)	−0.09 (0.22)
4. Discussions btw different groups make things better (Tolerance 1)	0.15 (0.01)	−0.02 (0.73)	0.17 (0.005)	–	−0.02 (0.85)	−0.13 (0.08)
5. People should be able to express their different views (Tolerance 2)	0.21 (0.001)	0.10 (0.09)	−0.09 (0.12)	0.03 (0.60)	–	−0.24 (0.002)
6. Negative intergroup attitudes index	−0.07 (0.01)	−0.004 (0.94)	0.04 (0.49)	−0.30 (0.000)	−0.12 (0.05)	–

Notes: Correlations among outcomes of Study 1 are reported in the triangle below the diagonal, whereas correlations of Study 2 are reported in the upper triangle. Correlation coefficients are spearman's rho. P-values are shown in parentheses.

Table 2
Means and standard deviations of outcome measures across experimental conditions and experimental effects of the role modeling show on individual-level outcomes (Study 1).

| | Role modeling M (SD) | Control show M (SD) | No show M (SD) | Effects of the show | | | | | | | |
| | | | | Role modeling (vs. control show) | | | | Role modeling (vs. no show) | | | |
				b	(SE)	p	[95%CI]	b	(SE)	p	[95%CI]
Collective efficacy											
We can change the difficult conditions we face	3.65 (0.68)	3.51 (0.77)	3.41 (0.85)	0.28	(0.20)	0.17	[−0.12; 0.67]	0.44	(0.22)	0.04	[0.02; 0.87]
We are able to improve our situation	3.59 (0.60)	3.34 (0.73)	3.38 (0.75)	0.52	(0.18)	0.003	[0.17; 0.87]	0.44	(0.19)	0.02	[0.07; 0.81]
Collective action											
I am ready to participate in a protest	3.73 (0.69)	3.53 (0.94)	3.64 (0.78)	0.46	(0.20)	0.02	[0.06; 0.86]	0.24	(0.22)	0.30	[−0.21; 0.68]
Tolerance of diverse perspectives											
Discussions btw groups make things better	2.90 (0.96)	3.19 (0.90)	3.16 (0.99)	−0.34	(0.10)	0.001	[−0.54; −0.14]	−0.35	(0.12)	0.001	[0.12; 0.59]
People should be able to express different views	3.68 (0.62)	3.84 (0.45)	3.63 (0.59)	−0.52	(0.21)	0.01	[−0.93; −0.11]	0.21	(0.22)	0.25	[−0.21; 0.64]
Negative intergroup attitudes index	2.33 (0.79)	2.18 (0.62)	2.09 (0.61)	0.14	(0.08)	0.08	[−0.02; 0.29]	0.22	(0.08)	0.01	[0.05; 0.39]

Notes: Means are participants' responses on a 1 (strongly disagree) to 4 (strongly agree) scale. Coefficients (except for the negative intergroup attitude coefficient which is a linear regression estimate) are probit estimates in which role modeling condition was compared with the control show and no show conditions using two dummy coded predictors (dummy code 1: role modeling show = 0, control show = 1, no show = 0; dummy code 2: role modeling show = 0, control show = 0, no show = 1). For ease of interpretation, the signs of the coefficients in the table were adjusted so that the coefficients denote the effect of role modeling compared to the two control conditions. The estimates control for gender, age, level of education, sum of victimization experiences, frequency of listening (ordered dummy coded variable), exposure to ethnic diversity (ratio of number participants sharing the participant's ethnicity over total number of group members), and dummies for 12 communities.

Study 2 aimed to extend our findings from Study 1 to also assess how role modeling of inclusive collective action affects a group-level outcome, namely group discussions.

4. Study 2

While Study 1 assessed how role modeling of inclusive collective action addressing community grievances affects individual-level attitudes, Study 2 tested the effect of the same manipulations on group discussions. Group discussions can either facilitate or impede collective efficacy and action for social change (Thomas, McGarty, & Louis, 2014). Discussions can increase collective action tendencies when consensus is reached regarding shared grievances, collective efficacy, and actions necessary to drive change (Smith & Postmes, 2011). Providing positive models for collective action can steer discussions to focus on socially desirable behaviors, establishing new prosocial norms (Paluck, 2009) that might not be common in the participants' context. Through these processes, discussions can reinforce the collective action messages of the show, increasing the intervention's effects. Based on this we hypothesized that, compared to the control show, the role modeling show would increase the focus on efficacy and actions for social change (collective or personal change). However, if through participation in discussions, listeners realize that others in their community do not share the norms the role models are promoting (e.g., there is no consensus on the issues discussed), or if the prescribed behaviors and solutions are not perceived to be safe (Bandura, 1994; Bilali & Vollhardt, 2015), then endorsing the prescribed behaviors may be seen as difficult or unrealistic—which may reduce perceived collective efficacy (Smith & Postmes, 2011). This is especially likely in contexts of ongoing violence and conflict, corruption and impunity, lack of functioning institutions, and severe enduring grievances (see Bilali & Vollhardt, 2015). For instance, Paluck (2010) found that a talk show, which encouraged discussions among listeners following the conflict reduction radio drama in the Eastern DRC that we also examine here ('Kumbuka Kesho'), *decreased* tolerance and prosocial behavior toward outgroups. This was linked to the salience of grievances in discussions of the radio drama (Paluck, 2010). Importantly, discussions of grievances can either increase or reduce collective efficacy and action. Shared grievances are central to motivating collective action, and communication is necessary to raise awareness and coordinate with other group members (Simon & Klandermans, 2001). Discussing grievances can be empowering if people feel embedded in a social structure, which might increase the perceived efficacy to impact change (van Stekelenburg, 2013). However,

discussing grievances without discussing solutions and strategies to overcome them, or discussing the pointlessness of taking action, can increase helplessness and lack of agency (Thomas & Louis, 2013).

Building on these arguments, in the present study we examined the effect of role-modeling of collective action on the extent to which group discussions focused on grievances, collective efficacy and action, and lack of agency. We predicted that role modeling would steer group discussions away from a focus on grievances, to discussing strategies to address those grievances through the actions modeled in the show. In other words, it may strengthen a problem-focused (rather than emotion-focused) orientation toward coping with collective grievances, which predicts increased collective efficacy for action (van Zomeren, Spears, Fischer, & Leach, 2004). To examine whether the drama influences prosocial norms, and how these are discussed in group settings, we also examined the positive lessons that participants drew from the show, which we conceptualized as affirmations of the injunctive norms conveyed in the show (i.e., how participants believe they and others should behave in their context based on the drama); in addition to negative lessons that involved descriptive norms about their realities (i.e., how community members actually behave and what else is normative in this context).

A secondary and exploratory goal of Study 2 was to assess the effects of the role modeling show after discussions of the show on the same individual-level outcomes as in Study 1. Because discussions provide an additional source of social influence (beyond media influence) on individual attitudes, we did not necessarily expect the findings from Study 1 to replicate.

4.1. Method

4.1.1. Participants

Participants (N = 177; 85 males, M_{age} = 30.14, SD = 10.8) were recruited from the same 12 communities as in Study 1 (during the same visit, but on a different day; there was no overlap in the samples of the two studies).[5] Except for two participants who were dropped from the analyses, all others reported listening to the show occasionally (39.5%) or frequently (60.5%). About 15% of the sample had only 4 years of primary education or no formal schooling; the rest had completed some secondary school education or professional training in

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[5] Power analyses using Gpower indicate that a total sample of 200 participants is needed for a one-factorial experimental design with two levels to detect medium-sized effects of d = 0.2 with 80% power, using an F-test with two-tail alpha at 0.05.

secondary school. No participant had a university degree. Similar to Study 1, participants reported a substantial number of victimization experiences ($M = 4.81$, $SD = 2.39$). Participants represented 21 different ethnicities, the largest groups being Nande, Shi, Havu, Rega, and Fuliru.

4.1.2. Experimental design and procedure

The study was conducted in 24 groups, which were randomly assigned to listen to either the role modeling or the control show (12 groups per condition; $n_{\text{role modeling}} = 88$, $n_{\text{control}} = 89$). Because the focus was on discussions of the show, in this study, we did not include a no show condition. Then, each group discussed the show for 30 min in the presence of two local researchers, one of whom facilitated the discussion. The number of participants per group ranged from 5 (one group only) to 8 (14 out of the 24 groups). The groups were diverse in terms of gender (the average male/female ratio per group was .48, $SD = 0.09$) and ethnicity (only 6 out of the 24 groups were ethnically homogeneous).

The discussion facilitator was instructed to ask open-ended questions (such as "What do you think about the show you just listened to?"), to keep the discussion going and to encourage different group members to express their opinions, but not to influence the content of discussions. The discussions lasted between 16 and 37 min ($M = 24.43$, $SD = 5.09$). There were no differences in the duration of discussions between the two experimental conditions, $t(21) = -1.00$, $p = 0.33$. All group discussions were recorded, transcribed, and then translated from Swahili to English. After discussing, participants completed the same measures as in Study 1.

4.1.3. Equivalence of the discussion facilitation in the experimental and control show

To rule out the possibility of researcher bias, we examined whether the facilitator guided discussions similarly across the two conditions. We counted (1) the words and number of statements the facilitator made in each discussion; (2) how often he spoke; (3) how often he introduced a new point; (4) how often he paraphrased a participant's comment, and (5) how often the facilitator brought up themes related to collective efficacy and collective action.

4.1.4. Outcome measures

4.1.4.1. Group-level outcomes.
We conducted content analyses of all discussions in order to reduce the extensive open-ended data to the content that was of theoretical interest and test our hypotheses. Specifically, we developed five theoretically driven codes: grievances, collective efficacy and action, lack of agency, and positive and negative lessons. To examine the possibility that the role modeling show might be perceived as less relevant to participants' reality, we also assessed how often participants referred to similarities between their life and the show. Additionally, we developed inductive codes to capture other relevant themes that came up repeatedly. This included the different types of grievances discussed. We did not develop inductive codes for the forms of collective action or the types of positive and negative lessons that were discussed because these were too varied (i.e., with too small frequencies of each) to provide meaningful categories and comparisons. To develop the coding scheme, we used discussions of randomly selected episodes. Examples of participant quotes for each code are provided in Table 3. Two coders, blind to the experimental conditions and trained in the coding scheme, independently coded the remaining 12 group discussions using MAXQDA software (achieving 85% agreement). All disagreements were resolved through discussion.

4.1.4.2. Individual-level outcomes.
We assessed the same individual-level outcomes and experimental checks as well as control variables as in Study 1 (descriptive statistics of all outcome measures and manipulation checks for the two experimental conditions are shown in Table 5; inter-item correlations are shown in Table 1).

4.2. Results

4.2.1. Data analytic procedure

To assess the differences in the content of discussions across conditions, we used negative binomial regressions, appropriate for analyzing count data. Negative binomial regression is a form of Poisson regression without two of its restrictive assumptions that were violated in our data (the assumption of independence of observations, and that the variance is equal to the mean), that also corrects for overdispersion of the data (Sturman, 1999). To analyze the experimental effect (role modeling show vs. control show) on the individual-level outcomes following group discussions, we used the same procedure as in Study 1 (probit regression analyses, correcting for clustered standard errors in discussion groups). We used linear regression for the negative intergroup attitudes scale.

4.2.2. Equivalence of the facilitation of discussions in experimental and control shows

Table 4 reports the means and standard deviations of the content analysis of the facilitator's guidance of discussions, as well as differences across experimental conditions. There were no significant differences in the facilitation of discussion across the two conditions.

4.2.3. The effect of role modeling on group discussions

4.2.3.1. Grievances.
In each group, participants took turns to discuss the parts of the show they found most interesting, and made links between the fictional show and life in their community. The show prompted discussion of multiple grievances experienced in participants' communities: On average, 28.9% (measured by dividing the number of words discussing grievances over the total number of words in a discussion) of the discussions focused on grievances in participants' own communities. As shown in Table 3, grievances focused primarily on issues that were also addressed in the show, such as corruption and intimidation by leaders, but also poverty, lack of justice, gender inequality, unemployment, and child labor. While intergroup conflict and violence was also discussed, it did not dominate discussions.

As expected, group discussions following the role modeling show focused less on grievances than discussions after the control show (see Table 3). Overall, 24% of the discussions following the role modeling show focused on grievances as compared to 34% of the discussions following the control show, $t(22) = -3.42$, $p = 0.002$, 95%CI [0.485; 2.283]. Interestingly, the role modeling show evoked less discussion of grievances related to governance and leader corruption.

4.2.3.2. Perceived efficacy and actions for social change.
In addition to grievances, participants sometimes discussed solutions, including actions needed to address grievances effectively ($M = 2.6$, $SD = 2.78$). As expected, participants in the role modeling condition made more statements about efficacy and action for change. These actions focused on various issues that were discussed in the show, such as political and civic participation or creation of job opportunities. Efficacy and action for change discussions included fairly abstract statements about the importance of uniting to resolve problems (e.g., corruption, gender inequality, poverty) in the community (see also Table 3). Like the actions portrayed in the fictional show, they were all non-violent in nature.

Although less common, participants also expressed pessimism about the possibility of improving conditions in their communities (i.e., lack of agency). In these statements, typically participants suggested that any action would be in vain and fail, given the violence exerted by militia or by corrupted leaders. Notably, participants in the role modeling condition expressed less lack of agency regarding their ability to impact change in their community (see Table 3).

Table 3
Content of group discussions following the role modeling and control shows, and experimental effects of role modeling on content of discussions (Study 2).

Codes	Examples	Role modeling	Control show	b (SE)	p	[95%CI]
Grievances		126	201	0.41 (0.15)	0.006	[0.12; 0.70]
Intergroup conflict	Intergroup mistrust, tribalism, intergroup violence	14	26	0.62 (0.39)	0.11	[−0.15; 1.39]
Social issues	Lack of justice, issues related to children, inequality, gender gap, alcoholism	55	66	0.18 (0.19)	0.34	[−0.19; 0.56]
Poverty	Lack of means and infrastructure, unemployment, diseases, lack of humanitarian assistance, livelihood subsistence (problems with crops and animals)	30	45	0.41 (0.35)	0.25	[−0.28; 1.09]
Governance/Leaders	Bad and corrupted leaders, fear of leaders	44	78	0.55 (0.19)	0.003	[0.18; 0.92]
Lack of agency	"As for these Interahamwe [Hutu paramilitary] who disturb people on their way, whatever you do, there is no way to defeat them"; "Everyone is afraid of the authority […] if we stand up to him, surely all of us will die."	9	24	0.98 (0.39)	0.01	[0.22; 1.75]
Action and efficacy for social change	"People can create small jobs, and gather together to share ideas and enable their activities to thrive"; "we have to be united while doing anything, and struggle against tribalism"	44	19	−1.09 (0.51)	0.03	[−2.09; −0.11]
Positive lessons (positive injunctive social norms)	"They show us that people should not discriminate against one another" "[…] the way madam Mwele [the woman leader in the soap opera] has managed the population. I know that a woman could manage the country. […] She must also have a place among men."	84	49	−0.48 (0.21)	0.02	[−0.89; −0.07]
Negative lessons (negative descriptive norms)	"If we stand up to him [the leader] all of us will die […], so we all have to run away. Let us escape."	3	9	1.10 (0.67)	0.10	[−0.21; 2.41]
Similarities between drama and reality	"These episodes mostly emphasize our daily life, for we experience almost everything [in the show] in our daily life: misappropriation of funds, children's work, alcoholism"	65	83	0.24 (0.16)	0.14	[−0.08; 0.57]

Notes: Role modeling and control show columns include the total count of each code in each condition. Coefficients are negative binomial regression estimates in which the role modeling show (role modeling = 1; control show = 0) is the independent variable.

4.2.3.3. Positive and negative lessons. Participants discussed what they learned from the show. They drew a considerable number of positive lessons ($M = 5.87$, $SD = 3.23$) and very few negative lessons. Most lessons were statements about what participants thought the show suggested people *should* do (i.e., injunctive norms) and some statements of what participants thought the show teaches about reality (i.e., descriptive norms). Most positive lessons included injunctive norms about many different topics, including discrimination (e.g., 'discriminating members of other tribes is wrong', 'it is important to avoid conflict between tribes', 'people should avoid bullying', 'we should not hate others', 'we should work together to solve problems'), the importance of institutions (e.g., the justice system) for resolving disputes, civic engagement (e.g., we should participate in the development of our community), or lessons about personal growth (e.g., we should be kindhearted; we should drink alcohol in moderation). There were also some positive lessons indicating descriptive norms, such as about gender issues (e.g., it [the drama] shows that women can rule). By contrast, most negative lessons reflected descriptive norms (e.g., "I see that justice does not exist" or "they [the leaders] do not want people to develop").

Supporting our hypotheses, participants in the role modeling condition also drew more positive lessons from the show (such as on the importance of fighting against discrimination), and marginally fewer negative lessons (see Table 3).

4.2.3.4. Similarities between the fictional show and real life. Participants drew many similarities ($M = 6.17$, $SD = 2.33$) between the realities portrayed in the fictional show and their life (see Table 3). Although discussions of the role modeling show (compared to the control condition) included fewer statements reflecting similarities between the events in the show and participants' daily lives, as shown in Table 3, these differences were not significant.

4.2.4. The effects of role-modeling on individual-level outcomes after discussions

4.2.4.1. Equivalence of the experimental and control show. After discussing the show, participants in the role modeling condition were less likely to report that they can picture the events taking place in the show (narrative transportation), $b = -0.56$, $SE = 0.18$, $p = 0.002$, 95%CI: [−0.92; −0.21], but there was no difference in the degree to which they viewed the events as relevant to their daily lives, $b = -0.26$, $SE = 0.23$, $p = 0.25$, 95%CI: [−0.71; 0.19]. There were no differences between the role modeling and the control show in either perspective taking items ($b = 0.17$, $SE = 0.17$, $p = 0.32$, 95%CI: [−0.17; 0.52], and $b = -0.17$, $SE = 0.14$, $p = 0.21$, 95%CI: [−0.44; 0.10]).

4.2.4.2. Outcome measures. As shown in Table 5, different from the findings of Study 1, participants in the role modeling condition expressed lower collective efficacy on one item (belief that as a community they can improve their situation). While there were no other significant differences between the two experimental conditions, participants in the role modeling condition were marginally more likely to express negative attitudes and less likely to express tolerance ($p = 0.10$).

Table 4
Descriptive statistics of leader's guidance of role modeling and control shows, and differences across conditions (Study 2).

Content of facilitator's guidance	Role modeling	Control show	Role modeling effect		
	M (SD)	M (SD)	b (SE)	p	[95%CI]
Number of words per group	891.6 (298.2)	830.9 (143.5)	−0.07 (0.10)	0.50	[−0.28; 0.13]
Number of statements per group	48.8 (11.3)	44.2 (8.7)	−0.10 (0.08)	0.23	[−0.26; 0.06]
Intervenes in discussion	12.8 (7.9)	10.5 (4.6)	−0.20 (0.20)	0.33	[−0.60; 0.20]
Paraphrases participant's comment	11.4 (5.4)	8.5 (3.8)	−0.30 (0.18)	0.11	[−0.65; 0.06]
Introduces new point	3.08 (3.7)	2.2 (1.7)	−0.35 (0.41)	0.39	[−1.16; 0.45]
Brings up collective action theme	1.8 (2.6)	1.0 (1.5)	−0.61 (0.67)	0.37	[−0.81; 3.23]

Notes: Coefficients are binomial regression estimates in which the role modeling show (role modeling show = 1; control show = 0) is the independent variable.

4.3. Discussion

Role modeling of inclusive collective action steered group discussions in positive ways: Discussions following the role modeling show (compared to the control show) included more statements about collective action and efficacy for impacting social change, less fatalistic statements, and a lower focus on grievances. Participants also drew more positive lessons, reinforcing the positive social norms portrayed in the role modeling show.

Surprisingly, despite these effects of role modeling show on group discussions, the role modeling show did not influence individual level outcomes, and it reduced perceived collective efficacy for action on one item. One reason for these results is that after deliberation in group discussions, participants in the role modeling condition were less likely to report that they could imagine the role-modeled actions in the show taking place in their community. At least two characteristics of discussions of collective efficacy and action could account for the lack of effects on individual-level outcomes. First, the calls to action were typically abstract (e.g., "we should unite and organize") rather than concrete plans of action. Second, they focused on a large number of grievances (in line with the many grievances mentioned in discussions). Therefore, by the end of the discussions, there was no concrete plan to address any specific grievance, nor was there a consensus about or discussion of which grievance should be prioritized. Smith and Postmes (2011) argued that collective action tendencies increase through social interactions when consensus is reached regarding shared grievances, collective efficacy, and actions necessary to drive change. By contrast, the discussions in the present study seemed to make salient an overwhelming number of grievances, without discussing specific plans of action to change any of them. Discussions of multiple grievances and vague calls for change might be ineffective, and even disempowering, reducing perceived collective efficacy for impacting change.

Study 2 also did not reveal an effect of role modeling of inclusive collective action on intergroup attitudes, probably because intergroup relations and violence were not a main focus of group discussions. There are at least two reasons why this might have been the case. First, only one out of four scenes of the show focused explicitly on outgroup derogation and conflict. Second, participants might not have felt comfortable bringing up sensitive topics about conflict in the newly formed groups in the experiment, where trust had not yet been established (especially considering that 18 out of 24 discussion groups were ethnically diverse).

5. General discussion

The present research adds to the scarce literature on the role of social influence—particularly through media—in affecting collective action, social change, and intergroup relations. We found that modeling of inclusive collective action via media in the context of ongoing violence in the Eastern DRC increased individual-level collective efficacy and willingness to engage in action (Study 1), as well as a focus of group discussions on efficacy and collective action statements (Study 2). There were also two surprising findings. Role modeling of inclusive collective action resulted in more negative intergroup attitudes and less tolerance for different views and for discussing across group lines when these attitudes were assessed immediately after participants listened to the show. However, when followed by group discussions (Study 2), the role modeling show did not influence individual-level outcomes, probably because discussions provided an additional and more powerful source of influence. Overall, the present research highlights the role of social influence through fictional role models and group discussions on collective efficacy and action in difficult contexts. However, more research is needed to understand the interaction between the fictional role models and real life influences such as group discussions. Below, we discuss the implications of our findings for theory and future research.

5.1. Collective action and intergroup attitudes

Collective action and prejudice reduction are two main frameworks used by social psychologists who study social change (Dixon et al., 2012; Wright & Baray, 2012). While the goal of collective action is to achieve change often by highlighting intergroup boundaries and conflict (e.g., through raising awareness about the ingroup's disadvantage and emergence of emotions such as group-based anger), the goal of prejudice reduction is to bring about social change by improving intergroup attitudes and reducing conflict. These two routes have been discussed as conflicting pathways to social change, because interventions to improve intergroup attitudes can reduce willingness to engage in collective action among members of disadvantaged groups (Dixon et al., 2012). Our research shows a similar link in the reverse direction: Encouraging collective action, even if this action is inclusive (i.e., members of different groups working toward a shared goal), might have adverse effects on intergroup attitudes.

Why did role modeling of collective action increase collective efficacy, but exacerbate intergroup attitudes in Study 1? Collective efficacy items do not specify the forms of collective action participants felt empowered to engage in, therefore one explanation is that participants may have thought about violent forms of collective action that exclude other groups. However, this explanation is unlikely, given that collective efficacy was assessed after participants listened to role-modeling of positive and inclusive forms of collective action. Additionally, our analysis of group discussions in Study 2 did not reveal any focus on violent collective action or intentions to exclude other groups. To the contrary, the discussions mentioned only positive forms of collective action, similar to those discussed in the show.

Table 5

Experimental effects of role modeling scene on individual-level outcomes following group discussion (Study 2).

	Role modeling show	Control show	Effects of role modeling		
	M (SD)	M (SD)	b (SE)	p	95%CI
Collective efficacy					
We can change the difficult conditions we face	3.63 (0.61)	3.61 (0.61)	0.02 (0.20)	0.92	[−0.37; 0.41]
We are able to improve our situation	3.34 (0.80)	3.53 (0.66)	−0.28 (0.08)	0.001	[−0.44; −0.12]
Collective action					
I am ready to participate in a protest[a]	3.63 (0.87)	3.63 (0.81)	0.15 (0.20)	0.45	[−0.24; 0.55]
Tolerance of diverse perspectives					
Discussions btw different groups make things better	3.67 (0.56)	3.81 (0.45)	−0.12 (0.12)	0.32	[−0.35; 0.11]
People should be able to express their different views[a]	3.12 (1.03)	3.22 (1.07)	−0.44 (0.26)	0.10	[−0.95; 0.08]
Negative intergroup attitudes index ($\sigma = 0.65$)	2.24 (0.64)	2.11 (0.66)	0.16 (0.10)	0.10	[−0.03; 0.36]

Notes: Means are participants' responses on a 1 (strongly disagree) to 4 (strongly agree) scale. Spearman's rho (ρ) shows the correlation between items in each category. Coefficients (except negative intergroup attitudes) are probit estimates in which the role modeling show and the control show are the independent variables. The coefficient of negative intergroup attitudes is a linear regression estimate. Regression analyses control for gender, age, level of education, sum of victimization experiences, frequency of listening (ordered dummy coded variable), exposure to ethnic diversity (ratio of number participants sharing the participant's ethnicity over total number of group members), and dummies for 12 communities.

[a] We dropped community dummies in these regressions, as they make the results unstable due to lacking variance in responses in some groups.

A more plausible explanation for these results is that increasing perceived collective efficacy and collective action tendencies increases ingroup identification and reinforces ingroup boundaries (van Zomeren, Leach, & Spears, 2010). Such identity mobilization might, in turn, exacerbate negative intergroup attitudes. Portrayals of inclusive collective action might make salient social categories other than the ethnic groups in conflict, redefining group boundaries based on the new social norms and perspectives portrayed in the show. One limitation of the present research that constrains our ability to clarify these effects is that, due to the sensitivity of this question, we do not know which outgroups participants had in mind while completing the intergroup attitude questions. They were asked to think of their most disliked group, which could include an ethnic group, a violent militia group, or corrupted elites, among others.

Assessing potential moderators of role modeling might also help better understand the findings. For instance, role modeling might be more influential by opening new channels for action among participants who are already inclined toward social change. Future research could assess whether the presence or absence of other motivators of collective action, such as politicized collective identification or emotions, moderate the effect of role modeling. Similarly, participants' evaluation and identification with the show, including the perceived quality and intensity of vicarious contact with the fictional characters, or how much listeners identify with them, will likely influence the effectiveness of role modeling by these characters. Adding pretests and incorporating longitudinal designs could help assess the effectiveness of the intervention when taking into account such preexisting individual differences between participants.

5.2. Media, discussions, and collective action

Although discussions following the role modeling show were positive in all expected outcomes that we coded (Study 2), the show's influence on individual-level outcomes was reduced after discussions. There are several possible explanations for the lack of individual-level effects observed in Study 1. First, as noted earlier, discussions focused on abstract calls for action regarding a large number of grievances, which might have been counter-productive if participants felt overwhelmed by the number of actions that are needed to effect change. Therefore, the lack of guidance and goals for discussion might have fueled perceived disempowerment (see also Paluck, 2010). To remedy this issue, group discussions could be structured such that participants identify one grievance in their community, and work on a feasible strategy to create change regarding that specific grievance (Thomas & Louis, 2013).

Second, discussions of different grievances can make salient different collective identities (e.g., ethnic identity, class differences, gender) depending on each participant's prior disposition and experiences. McGarty et al. (2009) argued that new collective identities are formed when people share opinions and reach consensus within a group, which then becomes the basis for collective action. Considering that each participant prioritized different grievances, discussions might have inadvertently reduced perceived group homogeneity and solidarity, thereby undermining identity formation important for collective action (e.g., Simon & Klandermans, 2001). Therefore, future research should examine how group discussions affect collective identification, perceived group homogeneity and solidarity, which could mediate the observed effects on collective action intentions and intergroup attitudes.

Third, it is likely that different elements (e.g., grievances, lessons, change statements) of discussions might differentially influence individual-level outcomes, sometimes canceling each other out. For instance, in one direction, participants in the role modeling condition talked more about collective action and drew more positive lessons, which might have had a positive effect on individual-level outcomes. In the other direction, discussion of multiple grievances, lack of consensus, or failure to evoke a politicized collective identity might have undermined collective action. Unfortunately, in the present experiment we did not have the statistical power ($n = 12$ groups per condition) to assess the potentially mediating effects of the multiple dimensions of the discussion content on individual attitudes. Future research should examine this.

Lastly, collective action requires sustained social interaction and discussions. In the real world, thirty-minute discussions among strangers are not likely to lead to collective action. Therefore, it is possible that in our study we observed only the first phase of group discussions, in which people put all issues of interest on the table. Had we given participants the opportunity to discuss more in length, or continue these discussions over time, the discussions might have converged on a narrower set of issues and on concrete plans for collective action. This requires longitudinal studies that assess dynamics of social interactions over time.

6. Conclusion and implications

The present research contributes to theory and research on collective action and social change in contexts that are not conducive to collective action, such as long-lasting violence and lacking infrastructures and resources. The findings from both studies suggest that role modeling of collective action through media can increase perceived collective efficacy and action tendencies, even in a context of a failed state and continued violence. In addition, this research generated new questions regarding the relationship between role modeling of collective action and intergroup attitudes, and the effects of this role modeling on group discussions. One question that remains unaddressed is whether the findings in the present studies generalize to people who are not regular listeners of the program. It is possible that those who listen to the programs are more interested in the kinds of issues discussed in these programs, and it is possible that some of the effects we observed would not have been possible without prior, long-term exposure to the messages broadcast in the show that has been on air for almost a decade (e.g., Bilali et al., 2016). In addition, although the present research focused on contexts of violence, and conditions under which opportunities for social change are limited, the question of whether role modeling influences collective action in other (including non-violent) contexts is also important to investigate in future research.

The present studies also have important implications for practice. Practitioners often use social psychological principles and theories to inform interventions. Most interventions include a combination of mechanisms to maximize their impact. Sometimes the effect of different components might be additive, while other times they might be working at cross-purpose. For instance, in previous research in the DRC, Bilali and Vollhardt (2015) examined the impact of the same intervention measured at a different time point and with a different methodology, sample, and theoretical focus than in the present studies, revealing mixed effects on intergroup attitudes (including null, positive, and negative effects). Because media interventions might influence listeners through different pathways (e.g., raising awareness, vicarious contact, perspective taking, role modeling), previous research was unable to disentangle specific mechanisms. In the present research, we were able to isolate the effects of one specific component, namely role-modeling of social action.

Overall, the results offer a tale of caution to practitioners interested in engaging communities in social action as well as in increasing intergroup harmony in conflict contexts, and raise questions for scholars to address in further research. Collaborating with practitioners to design and assess theory-driven interventions provides the opportunity to test and extend theory in real world settings, as well as to make social psychology more relevant and applicable to practice.

Appendix A. Supplementary data

Supplementary data to this article can be found online at http://dx.doi.org/10.1016/j.jesp.2016.07.005.

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