

# Improving Intergroup Attitudes through Televised Vicarious Intergroup Contact: Social Cognitive Processing of Ingroup and Outgroup Information

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Nick Joyce<sup>1</sup> and Jake Harwood<sup>1</sup>

## Abstract

In an experiment, participants exposed to depictions of an intergroup interaction between a border patrolling U.S. citizen and an illegal immigrant demonstrated changed attitudes toward illegal immigrants depending on the valence of the portrayal. Negative effects were enhanced among people who identified more strongly with the U.S. citizen character, and positive effects were moderately, although nonsignificantly enhanced among those who viewed the illegal immigrant character as more typical of illegal immigrants in general. Liking of the illegal immigrant character was a significant mediator of the effects. The positive effects on attitudes toward illegal immigrants transferred to more positive attitudes toward other social groups as well. The study is framed in terms of a social cognitive theory approach to vicarious intergroup contact.

## Keywords

intergroup contact, media effects, prejudice reduction, secondary transfer, social cognitive theory

Narratives often present us with new information and a new lens through which to view our world. As such they have the potential to shape the way that we perceive and feel about other groups. Television presents a wide variety of intergroup interactions covering the full range from extremely positive to extremely negative. From a viewer's perspective these

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<sup>1</sup>University of Arizona, Tucson, AZ, USA

## Corresponding Author:

Nick Joyce, University of Arizona, Department of Communication, 1103 E. University Blvd., University of Arizona, PO Box 210025, Tucson, AZ 85721-0025, USA.

Email: [njoyce@email.arizona.edu](mailto:njoyce@email.arizona.edu)

narratives often provide an ingroup character with whom the audience can identify, a character from a different group who can be judged, and an interaction from which vicarious lessons and attitudes might be observed and learned. Given the ubiquitous nature of television it is important to understand how these intergroup depictions affect intergroup attitudes. In this study, we experimentally manipulated a televised narrative portraying an intergroup interaction in order to understand how valence of the interaction, ingroup identification, and outgroup liking moderate and mediate changes in intergroup attitudes. This article employs a social cognitive theory perspective of intergroup contact, demonstrating the ways in which this perspective helps synthesize previous research and makes concrete predictions concerning mediators and moderators of vicarious contact's effects.

### *Contexts of Intergroup Contact*

Previous research on the effects of televised intergroup contact stems from research on face-to-face intergroup contact. Starting as early as the 1940s, research on desegregation of the merchant marines (Brophy, 1946), housing projects (Deutsch & Collins, 1951), and police forces (Kephart, 1957) suggested that increased exposure to Blacks had positive effects on Whites' intergroup attitudes and desires for further integration. One of the earliest and most famous theoretical conceptualizations to come out of this research was the contact hypothesis, also known as intergroup contact theory (Allport, 1954). The theory proposed that individuals, lacking complete or accurate information about a group, could correct these beliefs and improve their attitudes toward these groups when given the chance for face-to-face communication. Allport suggested that contact would be successful when certain boundary conditions were met: equal status between the groups during contact, institutional support of contact, shared goals between the groups involved in contact, and cooperation between groups to meet those goals. A recent meta-analysis of the large body of empirical work on face-to-face intergroup contact demonstrated that experiences carefully structured to meet these conditions tended to produce more powerful results, but that even under nonideal circumstances contact had small but positive effects on attitudes (Pettigrew & Tropp, 2006).

In addition to the extensive research on face-to-face contact, the theory has been extended to other communication contexts (Harwood, 2010). For example, intergroup contact has positive effects through computer-mediated communication (Amichai-Hamburger & McKenna, 2006) and can be effective indirectly, through knowledge of friends' intergroup relationships (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997). Even noninteractive strategies such as imagining intergroup contact are effective (Turner, Crisp, & Lambert, 2007). Perhaps the least interactive method of having an individual come in contact with another group is to provide them with a narrative account of an outgroup member or an intergroup contact situation. Previous researchers have referred to this context of contact using a variety of terms including parasocial, vicarious, and mediated contact, each representing slightly different set of theoretical frameworks and findings. In this article we attempt to unite these findings under a single theoretical framework to explain the effects of exposure to an intergroup narrative. For the purposes of this article we use the term

*vicarious contact* as it lends itself nicely to the social cognitive processes we believe are at the heart of the phenomena. However, regardless of the terminology, previous researchers have found that intergroup contact through some form of narrative, whether that contact is via children's books (Cameron & Rutland, 2006), stand-up comedy routines (Schiappa, Gregg, & Hewes, 2005), or television portrayals (Fujioka, 1999; Mazziotta, Mummendey, & Wright, 2011; Ortiz & Harwood, 2007; Schiappa et al., 2005), can have a positive impact on intergroup attitudes.

This is not to say, however, that all intergroup narratives on television provide positive contact experiences. Minority groups are often represented in the media in marginalized and stereotypical ways, and these representations can lead to negative intergroup outcomes (Dixon & Linz, 2000; Mastro, 2009). In a rare examination of contact valence as a predictor variable, Fujioka (1999) showed that the valence of vicarious intergroup contact is related to intergroup attitudes in both directions: while a preponderance of negative exposures was linked to negative intergroup attitudes, viewers of mostly positive portrayals of specific groups had more positive attitudes toward those groups. Fujioka's findings were, however, based on cross-sectional survey data; hence one goal of our study was to examine similar questions using an experimental design.

### *A Social Cognitive Approach to Intergroup Contact*

While other research has focused on individual mechanisms such as parasocial liking or vicarious learning, we integrate and test the effects of vicarious intergroup contact within the larger framework of social cognitive theory (SCT: Bandura, 1986), expanding on similar approaches by other researchers (Fujioka, 1999; Mazziotta, et al., 2011; Ortiz & Harwood, 2007). Briefly, SCT suggests that individuals observe the actions and accompanying rewards or punishments of media characters (Bandura, 2001). If viewers are motivated, they will acquire new behaviors or attitudes as long as they can pay attention, retain the information, and feel confident in their ability to enact the behavior. Mazziotta et al. (2011) showed that watching positive intergroup interactions increased positive intergroup attitudes and desire for future contact *through* increasing self-efficacy and decreasing intergroup uncertainty, providing support for the idea that SCT processes underlie the effects of vicarious contact.

Based on Fujioka's (1999) findings and our SCT approach, exposure to a positive intergroup narrative should result in the audience perceiving intergroup contact as more rewarding and desirable, and as a result lead to the modeling of the attitudes and behaviors observed in the intergroup narrative. Therefore, we hypothesized that exposure to positive media representations of intergroup contact would result in more positive attitudes toward the target outgroup compared to a no-exposure control group or a less positive representation (H1a). Correspondingly, negative portrayals should lead to more negative attitudes in comparison to control groups (H1b). Beyond the basic effects of exposure, we also aimed to learn more about the specific mechanisms behind these effects, as well as the expansiveness of these effects, with a specific focus on the role of ingroup identification, outgroup liking, and the generalization of these effects to other instances.

*Ingroup identification.* From an SCT perspective, Ortiz and Harwood (2007) suggested that attention to and attitudinal effects of intergroup media are based on the extent to which the viewer identifies with the *ingroup* member in an intergroup interaction. Viewers identifying more strongly with the ingroup member are more likely to model that characters' symbolic representations of the world, including the attitudes portrayed in his/her intergroup interactions. While Ortiz and Harwood found some support for positive effects of exposure to intergroup contact in a show with relatively positive interactions, they did not find similar patterns for a show with mixed valence interactions. This supports the SCT perspective, suggesting that positive attitudes are only modeled from positive interactions, and that such modeling is facilitated by identification with the ingroup character. This leads us to hypothesize that the level of identification with an ingroup member will moderate the effects of exposure to positive or negative vicarious intergroup contact such that for highly identified individuals, the valence of the mediated intergroup contact will have a more powerful effect than for less identified individuals (H2). While this prediction mirrors Ortiz and Harwood's findings, their study neither manipulated nor explicitly measured contact valence, hence we aim to test the effect in a more systematic and direct manner.

*Outgroup liking.* Given our focus on observation of intergroup interaction, it is important to understand how audience members attend to *both* participants in the interaction. While social cognitive theory suggests identification with the ingroup member as a critical variable, likability of the outgroup member emerges as an additional sensible candidate in understanding processes that might explain the effects of contact on attitudes. The majority of the contact literature, and indeed the mass communication effects literature, treats valence of the outgroup member as a core variable. The media effects literature has repeatedly found that negative representations of social and ethnic groups can reinforce stereotypes, and be used in future judgments (e.g., Dixon, 2006). Conversely, exposure to positive outgroup exemplars can increase perceptions that the outgroup has been the victim of discrimination (Bodenhausen, Schwarz, Bless, & Wänke, 1995), increase external attributions of negative outgroup behavior (Power, Murphy, & Coover, 1996) and improve perceptions about outgroups more broadly (Covert & Dixon, 2008; Mastro & Tukachinsky, 2010).

Beyond single exposures to positive or negative exemplars, vicarious contact also provides for the possibility of developing longer term emotional attachments to outgroup characters. The face-to-face contact literature is fairly unified in concluding that liking for and friendship with an outgroup person is critical for positive attitudinal effects (Davies, Tropp, Aron, Pettigrew, & Wright, 2011). In the context of intergroup contact through television, Schiappa et al. (2005) studied "parasocial intergroup contact" using both longitudinal and experimental methods and found that exposure to intergroup media, involving in this case homosexuals and transvestites, resulted in more positive attitudes and beliefs about these groups. Independent lines of research suggest that these parasocial relationships parallel face-to-face relationships in many respects (Kanazawa, 2002). Such findings can be explained in terms of social cognitive theory (Bandura, 1986). If we see an intergroup interaction involving an outgroup member who we like or are attracted to, we will be more *motivated* to adopt positive intergroup attitudes. Presuming that liking for outgroup members is more likely to emerge from positive interactions, we hypothesize that the

relationship between positive vicarious intergroup exposure and positive intergroup attitudes will be mediated by liking for the outgroup character (H3a).

### *Generalization of Effects*

The previous discussion is premised on some degree of generalization from a specific intergroup interaction to more general group attitudes. In this final section of the introduction, we further explore this form of generalization, and introduce a further level of abstraction (generalization to attitudes about other groups). We suggest that these forms of generalization are comfortably accommodated within the SCT approach to vicarious contact.

*Generalization from individual to group.* Social cognitive theory's notion of abstract symbolic modeling makes clear that human beings generalize learning from one context to others that are similar (Bandura, 1986). In intergroup contact, generalization from an individual outgroup member to other outgroup members is hence a reasonable prediction. The intergroup contact literature contributes one critical variable that facilitates such generalization in ways consistent with SCT. Research on face-to-face contact shows that when outgroup members are seen as *representative* of their group, the effects of contact with an individual outgroup member are more likely to generalize to attitudes concerning the outgroup as a whole (Brown, Vivian & Hewstone, 1999; for review see Brown & Hewstone, 2005). In contrast, exposure to positive exemplars has little effect on intergroup attitudes or beliefs when those exemplars are seen as atypical (Bodenhausen et al., 1995). Framed in terms of social cognitive theory, this effect indicates that abstract modeling is directed toward *similar* situations, contexts, and people. Based on this, we hypothesize that the mediated relationship in H3a will be moderated by the extent to which the individual is seen to be representative of their group; generalization from feelings about a specific outgroup member to general outgroup attitudes will be stronger when that outgroup member is seen to be representative of the outgroup as a whole (H3b).

*Generalization to other groups.* Recent research on intergroup contact has demonstrated that the effects of contact can generalize not only to the outgroup as a whole, but also to *other* outgroups. Positive contact with a member of one outgroup can result in reduced prejudice toward other groups not involved in the contact. Pettigrew (1997) explained this "secondary transfer" effect as being the result of contact leading to a broader world-view, hence combating the ethnocentrism at the heart of intergroup prejudice. However, it could also be explained in terms of the same abstract modeling processes from social cognitive theory described above (Bandura, 1986). If true, abstract modeling would suggest that generalization from one group to another is not homogeneous, but rather that generalization would be stronger with groups that are more closely connected (similar) to the target outgroup. Experimental evidence from the U.S. Southwest supports this, showing that imagined contact with an illegal immigrant caused the strongest secondary transfer effect to outgroups that were conceptually related to illegal immigrants in the local context (e.g., Mexican Americans, legal immigrants: Harwood, Paolini, Joyce, Rubin, & Arroyo, 2011). Therefore, we hypothesize that exposure to positive vicarious intergroup contact with a target outgroup member will lead to more positive attitudes about other outgroups, and this

effect will be mediated by changes in attitudes toward the target outgroup. This effect will be most pronounced for groups conceptually related to the target group (H4).

## Method

**Participants and procedure.** A total of 177 participants were recruited from communication classes at a large Arizona university. They were exposed to a media portrayal of intergroup contact between a U.S. citizen and an illegal immigrant. Due to the topic of the narrative, we excluded participants who were non-U.S. citizens, as well as participants who had been previously exposed to the stimulus material or who were unable to recall basic plot elements from the stimulus. Of the remaining 147 participants, 29% were male and 71% were female (age range 18-28,  $M = 20.3$ ). Most participants were White (125; Black  $N = 3$ , Asian  $N = 4$ , Latino  $N = 8$ , Native American  $N = 2$ , unidentified  $N = 4$ ).

Participants were recruited to take part in an online study about "viewing scenarios," and were randomly assigned to view one of four experimentally constructed videos. Source video for three of these conditions was taken from a serial documentary entitled *30 Days*, in which a volunteer border-patrolman from the United States (Frank) is sent to live with a family of illegal immigrants for 30 days. In these three conditions we manipulated valence (positive/mixed/negative) of the portrayal of intergroup contact between Frank and Armida (the teenage daughter in the family of illegal immigrants). The fourth (control condition) video was created using footage from the nature documentary *Planet Earth*. After watching the videos participants were directed to another website where they filled out a questionnaire regarding the video and study variables.

**Video manipulation: Vicarious contact valence.** We drew material from the documentary *30 Days* because it portrayed a relevant and salient outgroup for our study population, and had a relatively even mix of positive and negative footage of intergroup interaction. Each scene from the documentary was labeled as positive or negative by the study authors. Scenes were labeled as positive when characters showed empathy, perspective taking, cooperation or affection. Scenes were labeled as negative when the characters were aggressive or were engaged in conflict. From this footage, videos composed of varying ratios of positive and negative interactions between the U.S. citizen and main illegal immigrant character were created. The positive condition contained approximately 80% positive and 20% negative interactions, the negative condition approximately 20% positive and 80% negative interactions, and the mixed condition an equal amount of positive and negative footage taken from the other conditions. Regardless of valence, all three conditions shared the common context and theme of an illegal immigrant family sharing their daily struggles, thoughts about civil rights, and personal histories with the volunteer border-patrolman. All conditions shared a common introduction, but was given a different written epilogue in which Frank, the volunteer border-patrolman, either sponsors the family to citizenship (positive condition), remains conflicted on the issue (mixed condition), or deports the family (negative condition). The epilogue was designed to strengthen the manipulation and provide closure to the narrative. While the positive and negative conditions were included to provide as clear a test of the role of valence as possible, we also felt it was important to include the

mixed condition as something that might be more realistically experienced in existing intergroup narratives. The mixed condition also allowed us to contrast the strength of effects of positive versus negative messages relative to some sensible midpoint.

A manipulation check had participants rate how well the two main characters got along on a 5-point scale: 1 (*very well*) to 5 (*very poorly*). A oneway ANOVA testing the effect of vicarious contact valence on this measure was significant,  $F(2, 108) = 134.93, p < .001, \eta^2 = .71$ . Post hoc Dunnett's T3 tests found that all conditions were significantly different from the others, with means reflecting the experimental design (positive condition  $M = 1.13 (SD = .34)$ ; mixed  $M = 2.36 (SD = .82)$ ; negative  $M = 3.74 (SD = .86)$ ; high scores indicate more negative.

In addition, a fourth condition was created with footage taken from the documentary *Planet Earth* (a nature documentary) carefully edited to include no mention of intergroup relations or conflict. This condition was designed to serve as a control condition for our experimental stimuli. All of the videos were slightly under 10 minutes in length.

**Measures.** All measures were on 1 to 7 scales unless stated otherwise. Our primary dependent variable was attitudes toward illegal immigrants, the target outgroup for our study. A five-item scale measured perceptions of illegal immigrants' warmth, competence, trustworthiness, morality, and respect ( $\alpha = .90$ ). Identical scales were constructed for several other groups, thematically organized as sociopolitical groups (Legal Immigrants  $\alpha = .90$ ; Homeless  $\alpha = .88$ ; Political Refugees  $\alpha = .93$ ), ethnic minority groups (Black  $\alpha = .91$ ; Asian  $\alpha = .88$ ; Latino  $\alpha = .92$ ), and two conceptually unrelated comparison groups (White  $\alpha = .92$ ; The Elderly  $\alpha = .86$ ). Identical scales were used to evaluate liking of the illegal immigrant character ( $\alpha = .89$ ). High scores on this variable indicate more positive attitudes toward the target.

To address H2 we measured identification with Frank using a four-item scale; participants rated the extent to which they felt they had an emotional connection with the character, identified with the character, felt similar to the character, and shared commonalities with the character ( $\alpha = .93$ ; scores ranged from 1 to 5, where higher scores indicated greater identification with the character). To address H3 we included a single item measure that asked participants how similar to Armida they would expect another illegal immigrant to be (high scores indicated less similarity). Participants in the nature documentary control condition did not complete scales concerning Frank and Armida. Neither moderator was significantly affected by condition.

## Results

**Hypothesis 1.** To test the first hypothesis that more positive intergroup interactions within the media clip would lead to more positive attitudes toward the target outgroup, we compared the four conditions with a oneway ANOVA on attitudes concerning illegal immigrants (see Table 1 for means). The omnibus test was significant,  $F(3, 142) = 5.99, p < .01, \eta^2 = .11$ . A post hoc Tukey's test showed that the positive condition resulted in more positive attitudes about illegal immigrants than the negative and the control conditions. This supported H1a but not H1b; thus, being exposed to a positive mediated intergroup interaction positively affects attitudes toward the outgroup. The lack of difference between the



**Table 1.** Means and Standard Deviations of Attitudes Toward Illegal Immigrants for Each of the Video Conditions.

	Condition			
	Positive	Mixed	Negative	Control
<i>n</i>	39	33	39	36
<i>M</i>	3.81	3.22	2.88	2.63
<i>SD</i>	1.32	1.33	1.24	1.22

Note: A post hoc test (Tukey's) reveals positive condition is significantly different from negative condition and control condition,  $p < .05$ . Higher numbers represent more positive attitudes about illegal immigrants (1-7 scale).

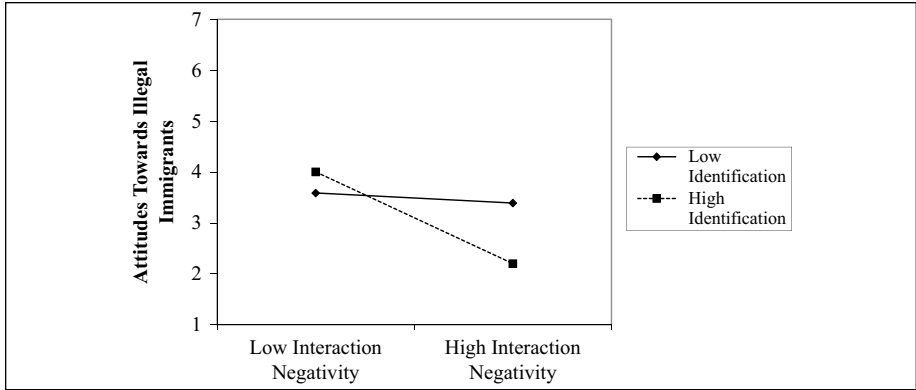
negative and mixed or control conditions will be addressed further in the discussion section. However, despite the insignificant difference between the negative condition and the control a linear trends analysis of the positive, mixed, and negative vicarious contact narratives was also significant,  $F(1, 108) = 10.01, p < .01$ , showing that the valence of the three experimental conditions had the predicted and consistent *relative* effect on intergroup attitudes. Hence, in most analyses below we use the three experimental conditions as a single predictor variable coded positive (1), mixed (2), and negative (3).

**Hypothesis 2.** To test whether identification with the U.S citizen moderated the effects of vicarious contact valence on positive attitudes toward illegal immigrants we used Hayes and Matthes (2009) MODPROBE SPSS macro. The overall model,  $F(3, 107) = 7.30, R^2 = .17, p < .001$ , retained a significant main effect of condition ( $B = -.50, t = -3.54, p < .001$ ), but showed no main effect of identification with Frank ( $B = -.16, t = -1.62, p = .11$ ). Most relevant to the hypothesis, the interaction between vicarious contact valence and identification with Frank was significant,  $B = -.34, t = -2.75, p < .01$ . Examination of the simple slopes revealed that when identification with Frank is higher, his negative interactions had a stronger impact on decreasing positive attitudes toward illegal immigrants than when identification was lower.

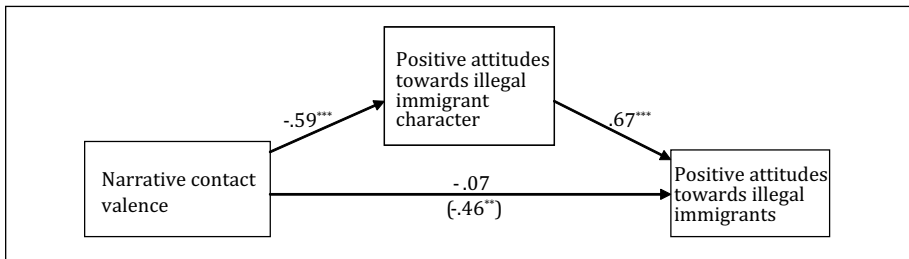
**Hypothesis 3.** We hypothesized that the effect of vicarious contact valence on positive attitudes about illegal immigrants would be mediated by the extent to which respondents positively evaluated the illegal immigrant character. In addition, we predicted that this mediating effect would be moderated along the path from the mediator to the DV by the extent to which this character was seen as representative of her group. To test this hypothesis we used Preacher, Rucker, and Hayes' (2007) SPSS MODMED macro (Model 3) to test for moderated mediation effects. Preacher and Hayes' (2008) INDIRECT macro was used to estimate the confidence interval for the unmoderated mediated pathway.

The findings partially supported our hypothesis. First, the relationship between vicarious contact valence and attitudes toward illegal immigrants was fully mediated by the audience members' attitudes toward the illegal immigrant character Armida (Bootstrap bias corrected and accelerated 95% CI for mediation:  $[-.61, -.21]$ ; see Figure 2). However, the moderation of the second pathway in Figure 2 by the extent to which Armida was seen





**Figure 1.** Simple slopes representing the moderating effect of ingroup member identification on the association between narrative contact valence and attitudes toward the outgroup. Note: On both dimensions, low and high indicate ISD below and above the mean, respectively.



**Figure 2.** The mediated relationship between narrative contact valence (for all three levels of valence; higher scores representing more negative conditions), positive attitudes toward Armida, and positive attitudes toward illegal immigrants. Note: Values are unstandardized regression coefficients derived from Preacher and Hayes' (2008) INDIRECT SPSS macro (\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ ). Group salience and its interaction with positive attitudes toward the illegal immigrant character were treated as control variables in this model for group salience. Without controls, there are no changes in the significance levels of any paths or the overall model.

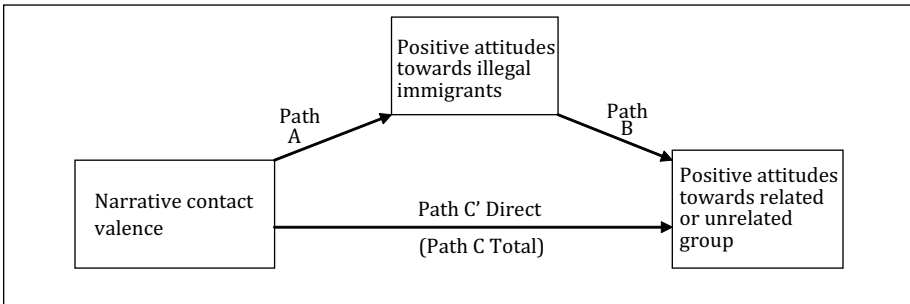
as representative of her group only approached significance,  $B = -.07, t = -1.82, p = .07$ . Nonetheless, the moderator effects were in the predicted direction, with the mediation strongest when Armida was seen as highly representative of illegal immigrants, and weakest (although still significant) when she was not seen as representative (see Table 2 for statistics).

**Hypothesis 4.** To test the hypothesis that attitudes about illegal immigrants fostered by vicarious contact valence would predict attitudes toward other related groups we constructed a series of mediational models using Preacher and Hayes' (2008) INDIRECT macro. Each model featured vicarious contact valence as the predictor, attitudes about

**Table 2.** Estimates of Mediated Pathway From Narrative Contact Valence (Positive, Mixed, Negative; Higher Scores Are More Negative) Through Attitudes About Illegal Immigrant Character, to Attitudes About Illegal Immigrants as a Group, as Moderated By Group Representativeness.

	Group Representativeness		
	High	Medium	Low
Bootstrapped point estimate	-.46	-.40	-.33
95% Bca CI	[-.76, -.23]	[-.61, -.20]	[-.57, -.17]

Note: High/medium/low levels of group representativeness indicate values one SD above the mean, at the mean, and one SD below the mean. High levels indicate that the character Armida was seen as similar to a typical illegal immigrant. Bca CI indicates bootstrapped estimate of 95% bias corrected and accelerated confidence interval; intervals not containing zero are significant at  $p < .05$ .



**Figure 3.** The effect of narrative contact valence mediated by attitudes toward illegal immigrants.

Note: Specific coefficients of the pathways for each group are listed in Table 3.

illegal immigrants as the mediator, and attitudes about a secondary outgroup as the dependent variable (see Figure 3). Our data demonstrated a mediating effect for groups that were related to illegal immigrants either as a sociopolitical group or as an ethnic minority group (Table 3). These effects were not found for unrelated groups (Whites and the Elderly). These results generally support the hypothesis and show that attitudes about illegal immigrants significantly mediate the relationship between condition and attitudes toward related groups, but not necessarily unrelated groups.

### Discussion

In this study, we used a 10-minute experimentally controlled stimulus that manipulated the valence of a media portrayal of intergroup interaction. Our findings replicate previous

**Table 3.** The Mediated Effect of Narrative Contact Valence Through Attitudes Toward Illegal Immigrants Onto Attitudes Toward Other Groups.

Dependent Variable (DV)	Condition (IV) → Attitude toward Illegal Immigrants (Path A)	Attitude toward Illegal Immigrants → DV (Path B)	Condition → DV Path C'; Direct (Path C; Total)	Point Estimate (SE)	95% CI
Attitudes toward sociopolitical groups:					
Legal Immigrants	-.46*	.65*	-.02 (-.33*)	-.30 (.10)	[-.51, -.12]*
Homeless	-.46*	.37*	.09 (-.08)	-.17 (.06)	[-.31, -.06]*
Political Refugees	-.46*	.68*	-.08 (-.39*)	-.31 (.11)	[-.57, -.12]*
Attitudes toward ethnic minority groups:					
Blacks	-.44*	.20*	-.10 (-.19)	-.09 (.05)	[-.25, -.01]*
Asians	-.44*	.28*	.04 (-.08)	-.12 (.06)	[-.28, -.03]*
Latinos	-.44*	.51*	.06 (-.17)	-.23 (.08)	[-.40, -.08]*
Attitudes toward unrelated groups:					
Whites	-.46*	-.04	.15 (.16)	.02 (.05)	[-.07, .13]
Elderly	-.46*	.16	-.02 (-.09)	-.07 (.05)	[-.20, .01]

Note: Table entries are path coefficients derived from Hayes' (2009) INDIRECT SPSS macro. Bias corrected and accelerated confidence intervals (CI) not including zero indicate that the indirect effect differs significantly from zero, and hence that there is statistically significant mediation. Path A shows variability in value due to missing data in some of the analyses ( $N$  varies between 109 and 110). Condition valence is coded with negative condition as a high score.

\* $p < .05$ .

research showing that exposure to positive media portrayals of outgroup members and intergroup contact can positively influence attitudes toward outgroups (e.g., Mastro & Tukachinsky, 2011). Our findings also extend that work by empirically demonstrating byproducts, mechanisms, and moderating factors of these effects, as uniformly predicted by a social cognitive theoretical framework. Below we discuss the positive effects of vicarious contact as well as the surprising lack of effects of negative portrayals. We also discuss how content about the ingroup and outgroup are processed using different social cognitive mechanisms, as well as the ways in which the effects of vicarious contact generalize.

Our experimental design allowed us to directly gauge the effects of valence in the intergroup narrative. Our findings echoed past research suggesting that positive depictions of outgroup members promote favorable intergroup attitudes (Bodenhausen et al., 1995; Covert & Dixon, 2008; Mastro & Tukachinsky, 2011; Power et al., 1996). In addition to this basic effect, we also found generally that positive attitudes increased in proportion to the positivity of the narrative. However, we were surprised to find that our negative condition was not significantly different from our control condition in terms of effects on prejudicial attitudes. Based on SCT, we assumed that exposure to negative intergroup interactions

would lead to the modeling of negative intergroup attitudes. Finding this effect would have been in line with research on exposure to negative exemplars (e.g., Dixon, 2006). However, we are not the first study to find no difference between nonpositive exemplars and a control condition (Bodenhausen et al., 1995), and it is possible to explain this finding in several ways. First, the effect may be a product of the sociopolitical context of the study: illegal immigrants received extensive news media coverage in Arizona (and nationally) during our data collection period. The Arizona legislature had recently passed SB1070—a law that allowed police officers unprecedented authority to detain someone on the basis of suspected illegal immigrant status; coverage of this issue was predominantly negative. Hence, our negative interaction condition may have been no *more* negative than the baseline media environment. Combined with broader findings of minority groups being negatively represented in the media (Mastro, 2009), this may suggest that no new social learning is occurring because no new information is being presented.

Second, intergroup interactions represent more than just the presentation of an exemplar. As our data show, there are exposure effects due to both ingroup and outgroup factors. While we targeted specific ingroup- and outgroup-relevant factors, we did not capture audience members' *attributions* for the negativity or positivity of the interaction. Both characters' interaction styles were negative in the negative condition, but if audience members perceived Frank, the ingroup member, to be the source of the negativity that may have qualitatively changed how they interpreted the interaction. In order to account for this, future studies should measure not just the presence of conflict, but also its perceived origin.

In accordance with SCT we targeted ingroup identification as an important factor in the intergroup social learning process. Our data supported our hypothesis that identification with the *ingroup* member moderated the effect of vicarious contact valence on intergroup attitudes. Specifically we found that when the intergroup portrayal was more negative, identification with the ingroup member *decreased* positive attitudes toward the outgroup, but when the intergroup media was more positive there was less effect of identification with the ingroup member. This suggests that negative interactions led people to rely on ingroup information in their responses to the stimulus. It is therefore possible that people who are highly identified with an ingroup character will be more interested in finding negative information about the outgroup, and hence when it is present they will be more influenced by it. In addition this search for negative information will be aided by cognitive mechanisms that make outgroup membership and differences more salient when accompanied by negative representations (Paolini, Harwood, & Rubin, 2010) or conflict (Coover, 2001). Once again this fits neatly with the SCT framework, which would predict that ingroup identification should have its impact on the learning process through an increase in attention.

We also found support for our hypothesis that the likeability of the outgroup member would mediate the relationship between the positivity of the intergroup narrative and positive attitudes toward the outgroup. These findings can be explained by the role that liking might have on social learning motivations. If we like people from a specific group we will be motivated to model intergroup attitudes and behaviors that increase the likelihood of future interactions. In line with research on face-to-face contact that suggests the importance of intergroup friendships in fostering positive intergroup attitudes (Davies et al.,

2011), it seems probable that “parasocial” friendships formed with outgroup characters in intergroup narratives operate similarly, arguing for the importance of long term exposure to positive outgroup exemplars in television programs.

While the effect of outgroup member liking on attitudes toward the outgroup represents a type of attitude generalization, we were also interested in the mechanisms behind and extent of this generalization. SCT refers to a process of generalization called abstract modeling (Bandura, 1986). We theorized that this generalization would hinge heavily on perceptual and conceptual similarity. In line with other research on face-to-face contact (Brown & Hewstone, 2005), and media exemplars (Bodenhausen et al., 1995; Covert & Dixon, 2008; Mastro & Tukachinsky, 2011) we predicted that the individual liking would generalize to outgroup attitudes when the individual was seen as representative of their group. We only found partial support for this in our study. The relevant moderator effect only approached conventional levels of significance, and the mediational effect of liking was significant even at somewhat low levels of perceived group representativeness. This suggests that while representativeness may have a facilitating role in generalization, individual liking in and of itself is a driving force in the generalization the intergroup attitudes. It is also possible that even relatively low levels of group representativeness are sufficient to induce generalization, or that our study did not yield sufficiently low levels of that variable. In our analysis, the  $-1SD$  point represented a position only 1.23 points (on a 7-point scale) from the midpoint of the representativeness scale. The topic of the character’s illegal immigration status was central to the narrative we presented in all experimental conditions, so we may have used materials that precluded perceiving the character as independent of her group membership.

Taken at face value, however, these findings illustrate a potentially important distinction between outgroup prototype and exemplar presentation. Research has suggested that either type of presentation can have a positive impact on intergroup attitudes (Mastro & Tukachinsky, 2011), and represent linked but different concepts. Whereas prototypes represent a specific set of abstract traits conceptually associated with outgroup members, exemplars are concrete conceptualizations of individuals from that group. In our study we were interested in whether our exemplar was in fact seen as prototypical. In past studies, prototypical group members were seen as more attractive and likeable (Mastro, Tamborini, & Hullet, 2005). In our study, these concepts were also linked in an attempt to explain how positive attitudes about an outgroup exemplar would generalize to the entire group. While our results marginally supported this relationship, the take home message remains that it is apparently possible to be a nonprototypical, and yet still fairly obvious outgroup exemplar who is still likeable, and whom exposure to can have a positive impact on attitudes toward the specific outgroup they represent.

We also predicted that attitudes at the intergroup level might generalize to other groups. Our data support this hypothesis. However, while positive attitudes about illegal immigrants mediated the relationship between intergroup narrative positivity and attitudes toward several other groups, the strength and significance of the relationship was not uniform. Once again conceptual similarity seems to be at the heart of this abstract modeling process. The effects were strongest for conceptually related groups (e.g., legal immigrants,

political refugees), but were insignificant for conceptually unrelated groups (e.g., the elderly). This pattern is consistent with Harwood et al. (2011) and may be illustrative of the cognitive structure of prejudice: attitudes toward groups are related, but prejudice is not unitary and shifts in attitudes about one group need not transfer to attitudes about other groups. This finding has powerful implications for the targeted production of prointergroup media. People's core prejudices are often heavily defended behind a screen of arguments and selective exposure, and so with these findings in mind it might be more beneficial to improve their attitudes about related groups for which they have weaker defenses, rather than a specific focal outgroup. Future research on the nature of these secondary transfer effects should focus on the cognitive relationships between groups and also the extent to which these effects can generalize to groups with longer standing and sometimes "intractable" conflicts.

This article explains the varied findings of previous and current work under the unified theoretical framework of social cognitive theory. We advocate increased attention to the ways in which intergroup effects of contact, including through media exposure, can be explained within this overlaying framework; SCT suggests new directions for research on contact including examining motivational processes surrounding exposure to media, self-efficacy in modeling attitudes, and interactions between media and other sources in facilitating or resisting attitude change.

Beyond contributions to theory, our findings also have several practical applications. First, this and other studies demonstrate the viability of exposure to intergroup narratives as a prejudice reduction strategy. While this study does not directly compare interactive and noninteractive forms of contact, it may be that each can be most appropriately leveraged in specific instances. It may, for example, be easier to organize and distribute intergroup narratives than to organize face-to-face contact, and the ubiquity and approachability of media may make this form of intergroup contact more palatable for some individuals. Regardless, we suggest that more research needs to be done on the relative efficacy of these approaches.

Second, the mechanisms examined in this article may be translated to tools for media producers who wish to create prosocial narratives. This article highlights the importance of creating shows in which groups actually *interact* with one another, rather than shows just featuring the outgroup. Indeed, independent lines of research suggest that including ingroup and outgroup members is important just to get ingroup members to even watch the show in the first place (Harwood, 1999). In addition, while it may be useful to have ingroup characters with whom the audience can identify involved in positive intergroup interactions, it is especially important *not* to have those ingroup members involved in negative interactions. Lastly, it is important to present outgroup members who are likeable, but who are also seen as representative of their group. Outgroup members who are perceived as *atypical* of their group theoretically reduces the likelihood of generalizing from feelings about those characters to feelings about the group. Balancing likeability and representativeness may be difficult for groups characterized by negative stereotypes, but this study shows that this balance can be achieved. By creating media that fits these criteria, the media industry would have a powerful tool at their disposal to reduce prejudice against certain groups, as well as (via abstract modeling) reducing prejudice in general.

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### Author Biographies

**Nick Joyce** (MS, University of Massachusetts) is a doctoral candidate in the communication department at the University of Arizona. His publications have appeared in the *British Journal of Social Psychology* and *Basic and Applied Social Psychology*.

**Jake Harwood** (PhD, University of California, Santa Barbara) is a professor of communication at the University of Arizona. His research interests focus on intergroup communication, particularly in the area of contact theory. He is the author of *Understanding Communication and Aging* (SAGE) and coeditor of *The Dynamics of Intergroup Communication* (Peter Lang). He was previously editor of *Human Communication Research*.