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## Report

# Increasing positive intergroup contact

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#### ABSTRACT

We tested an intervention designed to correct negative expectations about inter-racial interactions, increase the positivity of those interactions, and increase inter-racial friendships. In Study 1 (n = 58) White college students watched videotapes depicting an inter-racial friendship and either did or did not write about a similar experience. Participants who wrote about a similar experience expected and actually had a more positive inter-racial interaction. In Study 2 (n = 99) White college students watched videotapes depicting an inter-racial or same-race friendship and either did or did not write about a similar experience. Those who saw the inter-racial video and wrote about a similar experience had a more positive inter-racial interaction and initiated more inter-racial friendships in the following weeks than participants in the other conditions.

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# Introduction

Although racial prejudice has decreased in the United States, skin color still matters. When students arrived at school in Jena, Louisiana, in August of 2006, they were greeted by three nooses hanging from the sole tree standing in the school yard. The day before, a Black student had dared to question why only White students gathered under the shade of the tree during recess. In July of 2009 a swim club in suburban Philadelphia rescinded an agreement to let Black and Hispanic kids from a city day camp use the pool, after parents complained. The director of the pool was quoted as saying, "There is a lot of concern that a lot of kids would change the complexion ... and the atmosphere of the pool" (John-Hall, 2009). The United States Department of Housing and Urban Development found, as recently as 2000, that Whites were given favorable treatment over Blacks and Hispanics in the housing market (Turner, Ross, Galster, & Yinger, 2002). Race continues to divide Americans, and it is thus imperative to find ways of reducing

One of the most effective prejudice reduction techniques is to increase contact between the races under favorable conditions, such as equal status and opportunities for informal interactions (Allport, 1954; Page-Gould, Mendoza-Denton, & Tropp, 2008; Pettigrew & Tropp, 2000; Tropp & Pettigrew, 2005). As effective as increased contact can be, however, there is a barrier to it in everyday life: people are reluctant to interact with members of other races because they fear that they will be rejected or that the interactions

will go poorly (Plant & Devine, 2003; Shelton & Richeson, 2006; Stephan & Stephan, 1985; Vorauer, 2006). People thus avoid opportunities to develop inter-racial friendships — the very kind of contact that leads to increased tolerance and reduced prejudice.

Ironically, people's anxiety about inter-racial interactions is often unfounded. We recently demonstrated an *intergroup forecasting error*, whereby White participants underestimated how positive their interactions with a Black participant would be, because they focused too much on the Black person's race and too little on what they would have in common with him or her. When we asked White students to think about what they had in common with a Black student their expectations were more accurate. That is, they raised their expectations about how well an interaction with the student would go, and it did go well (Mallett, Wilson, & Gilbert, 2008).

Our goal in the present studies was more ambitious. We tested an intervention that was designed not only to improve expectations about an inter-racial interaction, but also to improve the quality of that interaction by making people less nervous about how it would go. Most importantly, we hypothesized that having one unexpectedly positive interaction with a Black person would make Whites more willing to seek out and form friendships with minorities in their everyday lives.

The intervention had two parts. First, because research has found that observing a positive interaction between an in-group and out-group member can improve attitudes toward the out-group (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997), we showed White college students videotaped interviews of two students at their university — one White, one Black — who had become friends despite having low expectations about the friendship to begin

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with. Seeing the interviews might not be sufficient to change people's expectations about their own interactions, however, because they might conclude that the other students were an exception to the more general rule that inter-racial friendships are difficult (Kunda & Oleson, 1995). The second part of the intervention was designed to get participants to connect the interviews to their own experiences, by asking them to write about a time they formed an unexpected friendship. We hypothesized that the combination of seeing the interviews depicting an inter-racial friendship and writing about an unexpected friendship of their own would raise White students' expectations about an inter-racial interaction, make them less nervous during this interaction. and make them more open to inter-racial friendships. In Study 1 we tested the importance of the second part of the intervention by showing all participants the videotaped interviews and manipulating whether they wrote about a similar experience in their own lives (we tested both parts of the intervention in Study 2).

#### Study 1

#### Methods

#### **Participants**

Fifty-eight Whites (46 females, 12 males) participated for course credit.<sup>1</sup>

## Materials and procedure

The study was conducted by one of three Black experimenters. Ostensibly as part of a survey of the first-year college experience, participants watched four videos of other students discussing their college experiences.

Videos. To reduce suspicion that the study was about race, the first two videos depicted White students talking about their first-year experiences (e.g., favorite class, toughest part of the transition to college) and friendships. The next two videos depicted one Black and one White student who were described as good friends. Both students mentioned they did not expect to become friends and did not think they had much in common at first. For example, the White student said, "I wasn't sure how much we would have in common. ... he didn't really seem like any of my old friends from home". Both students also said that to their surprise, they discovered that they had things in common, such as the same taste in books and similar senses of humor. The gender of the students in each video matched the gender of the participant. The experimenter left the room while the videos played and was kept unaware of the video content.

Writing instructions. Participants in the "better than expected" condition were randomly assigned to write about "a time when you didn't think that you could become friends with a person, but you were wrong for some reason". We expected these participants to benefit the most from seeing the videotaped interviews by connecting them to their experiences. The other participants were randomly assigned to one of two control conditions. Participants in the "just as expected" condition wrote about a time they "didn't think they could become friends with someone and were correct". To avoid suspicion we did not instruct people to focus on inter-racial friendships, though we did ask them to think about the last two videos they had seen and describe a similar experience. Participants in the control condition did not write anything. The experimenters were unaware of participants' writing condition.

Videotaped interview. The experimenter interviewed participants about their first-year at college using a standard set of questions and responses. The interviews were videotaped (with participants' knowledge and consent) and three coders who were unaware of condition independently watched the tapes and rated agreement with the statements, "the participant was nervous", "the interview went well", and "the participant liked the interviewer", on scales ranging from 0 = strongly disagree to 4 = strongly agree. Coder reliability was acceptable ( $\alpha = .78$ , 82, and .74 for nervous, went well, liked interviewer, respectively). We averaged the latter two ratings to create a positivity scale ( $\alpha = .87$ ).

*Self-reports.* Participants then rated how nervous they had been ("I was nervous during the interview") and the extent to which their expectations had been overly negative ("The interview wasn't as bad as I thought it would be"), both on scales from 1 = not at all to 11 = verv much.

Cognitive depletion. The experimenter administered the Wechsler Digit Span Task — Forward (Wechsler, 1997) by reading a series of number strings and asking the participant to recite them back in the correct order. Participants received one point for correctly recalling each of the 16 number strings (higher scores indicate less cognitive depletion). By virtue of having more positive expectations about their conversation and feeling more relaxed, we expected participants who connected the videotapes to their own experiences to have more cognitive resources and to thus do better on the depletion task (Richeson & Trawalter, 2005).

Finally, the experimenter conducted a funnel debriefing to probe for suspicion. No participants guessed the hypotheses.

# Results and discussion

As seen in Table 1 the predictions were confirmed. Participants in the "better than expected" condition, relative to participants in the "just as expected" and no writing conditions, reported the least

**Table 1**Study 1: the effects of writing condition after watching videos of inter-racial friends.

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Dependent variable	Condition		
	"Better than expected" $n = 19$	Control n = 18	"Just as expected" $n = 21$
Participant reports			
Participants' expecta	tions <sup>b</sup>		
M	7.68	8.11	9.24
SD	1.77	2.11	1.48
I was nervous <sup>a</sup>			
M	3.11	4.67	5.52
SD	1.88	3.09	2.68
Video-tape coding			
Positivity scale <sup>c</sup>			
M	3.38	2.64	2.79
SD	0.41	0.79	0.56
Nervousness <sup>a</sup>			
M	1.14	2.03	1.77
SD	0.68	0.94	0.71
Cognitive depletion <sup>d</sup>			
M	12.72	11.29	11.24
SD	1.74	1.72	1.95

<sup>&</sup>lt;sup>a</sup> Higher numbers reflect greater nervousness.

 $<sup>^{\,1}</sup>$  There were no significant effects of gender on the dependent measures in either study.

<sup>&</sup>lt;sup>b</sup> How much participants thought their expectations about the interview had been "overly negative", with high numbers reflected greater agreement.

<sup>&</sup>lt;sup>c</sup> Higher numbers reflect higher coder ratings of how well the interview went and how much participants liked the interviewer.

<sup>&</sup>lt;sup>d</sup> Higher numbers reflect less cognitive depletion (greater recall of number strings).

negative expectations about the interview and the least nervousness during the interview. They also responded the most positively during the interview with the Black experimenter and exhibited the least nervousness (as rated by video coders who were unaware of participants' condition), and performed the best on the cognitive depletion task. A one-way analysis of variance (ANOVA) revealed a significant effect of condition on all of these measures, Fs(2, 57) > 3.94, ps < .05. Planned comparisons showed the "better than expected" (weighted +2) condition differed from the average of the control and "just as expected" conditions (both weighted -1) on all measures, ts(55) > 1.98,  $ps \le .05$ . The latter two conditions did not differ from each other on any measure, t(55) < 1.03, ns, with one exception. Participants in the no writing condition reported marginally less negative expectations about the interview than did participants in the "just as expected" condition, t(55) = 1.96, p = .06.

Study 1, which focused on the writing component of our intervention, found promising results. Study 2 used a more complete 2 (inter-racial, same-race videos)  $\times$  2 ("better than expected", no writing) design to test our hypothesis that it is necessary for people to receive both parts of the intervention. Specifically, in Study 2 we added a manipulation of the race of friends in the videotapes. Half of the participants saw the same four videos used in Study 1, whereas the others saw videos in which the interviewees followed the same script but the second pair of friends were both White. We predicted that only people who saw the videos depicting an interracial friendship, and wrote about a similar personal experience, would have a more positive interaction with a Black experimenter.

We also added a new dependent measure to investigate whether these effects would carry over outside of the experimental context, namely by increasing participants' willingness to form inter-racial friendships in their everyday lives. Previous research has shown that even small, one-time interventions can have long-term behavioral effects by changing people's expectations, beliefs, and attributions (Aronson, Fried, & Good, 2002; Cohen, Garcia, Apfel, & Master, 2006; Good, Aronson, & Inzlicht, 2003; Wilson & Linville, 1982). We hypothesized that seeing inter-racial friendship videos and writing about similar personal experiences would increase the number of inter-racial friendships formed in weeks after the experiment.

## Study 2

## Methods

#### Particinants

Ninety-nine White, first-year college students (77 females, 22 males) at a different university participated in exchange for course credit or \$8. We conducted the study during in the first 2 weeks of the fall semester, when students are likely to be open to forming new friendships.

# Procedure and materials

We replicated Study 1 exactly except for these changes: a White experimenter showed the videos, followed by an interview with a Black experimenter who was unaware of participants' condition. After watching the first video of two White students discussing their first-year college experiences, participants were randomly assigned to watch either the videos used in Study 1 (of an inter-racial friendship) or the videos of a same-race friendship. In the latter, same-race friends condition, two White students followed the same script as in the inter-racial videos of Study 1. The writing manipulation was identical to Study 1 except that we dropped the "just as expected condition". We predicted that the intervention would work only with participants who saw the videotape

of inter-racial friends and wrote about a similar experience in their lives (the "better than expected" condition).

Three coders of various races independently evaluated the videotaped interviews as in Study 1, except we altered the wording of one item slightly (from "the participant liked the interviewer" to "the participant was friendly to the interviewer"). Coders were unaware of condition and coder reliability was acceptable ( $\alpha$  = .79;  $\alpha$  = .79, nervous, went well, friendly, respectively). We averaged the latter two ratings to create a positivity scale ( $\alpha$  = .76).

The dependent measures were the same as Study 1, except we dropped the measure of short-term consequences (i.e., cognitive depletion) in favor of examining the long-term consequences for friendship formation. We added two measures of friendship formation. One week after the experimental session we emailed participants a link to an internet survey on which they were asked, "Have you met anyone in the past week that you think will become a friend?" If participants responded "yes" they were asked to provide the initials of up to four friends and report the friends' race. We divided the number of new minority friends by the total number of new friends, such that higher numbers reflected a greater proportion of new minority friends.

We also included a measure of friendship formation that did not rely on participants' self-reports. Although we tried to keep the participants unaware of our predictions, some might have guessed the purpose and strategically reported initiating more inter-racial friendships because they thought we wanted them to do so. To account for this possibility, we asked participants for permission to access their Facebook profiles.<sup>2</sup> Facebook is a social networking internet site used by many college students to display personal information (e.g., hobbies, favorite music) and communicate with friends. Approximately 2 weeks after the experimental session, a research assistant who was unaware of participants' condition accessed their Facebook profiles (with participants' permission) and counted the number of White and non-White friends who shared the participants' university affiliation.<sup>3</sup> We assumed that since students had only been enrolled at the university for a few weeks, most friends with the same university affiliation would reflect new friendships. Adding a friend on Facebook automatically adds a picture of the new friend to the students' profile and we used these pictures to categorize each new friend as White or non-White.

# Results and discussion

We predicted that the intervention would work only with participants who saw the videotape of inter-racial friends and wrote about a similar experience in their lives (the "better than expected" condition). As seen in Table 2, this prediction was largely confirmed. Participants in the inter-racial video/"better than expected" condition reported the least negative expectations and they exhibited the least nervousness and most positivity during the interview. A  $2 \times 2$  ANOVA revealed a significant or nearly significant interaction for expectations, video-tape coding of nervousness, and video-taped coding of positivity during the interview, Fs(1,97) > 3.35, ps < .07. A focused contrast that compared the in-

<sup>&</sup>lt;sup>2</sup> Twelve of the 99 participants did not have Facebook accounts, but the number of participants without Facebook accounts did not significantly differ across condition. We checked the initials of the new potential friends to see whether participants listed the Black experimenter as a potential friend. None of the initials provided matched those of our two experimenters.

 $<sup>^3</sup>$  Two research assistants independently assessed each profile for the total number of friends (intra-class correlation coefficient = 1.00, p < .001) and the number of non-White friends (intra-class correlation coefficient = .97, p < .001). We averaged their counts for our analysis of Facebook friends. Coders were instructed that, if in doubt, they were to categorize the friend as White. This should provide a more conservative estimate of the total number of inter-racial Facebook friends.

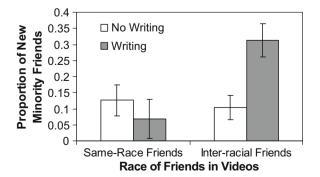
**Table 2**Study 2: the effects of seeing inter-racial or same-race videos and writing condition.

Dependent variable	Condition		
	"Better than expected"	Control	
Participant reports			
Participants' expectations <sup>a</sup>			
Same-race friends			
M	9.73	8.96	
SD	1.27	1.51	
n	11	26	
Inter-racial friends			
M	8.00	8.85	
SD	1.79	1.78	
n	21	41	
Video-tape coding			
Nervousness <sup>b</sup>			
Same-race friends			
M	3.73	3.57	
SD	1.27	1.48	
Inter-racial friends			
M	2.19	3.21	
SD	0.69	0.91	
Positivity scale <sup>c</sup>			
Same-race friends			
M	7.89	7.97	
SD	0.62	1.10	
Inter-racial friends			
M	8.81	8.11	
SD	0.64	1.03	

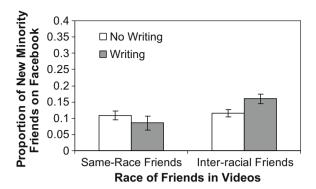
<sup>&</sup>lt;sup>a</sup> How much participants thought their expectations about the interview had been "overly negative", with high numbers reflected greater agreement.

ter-racial video/"better than expected" condition (weighted +3) to the average of the other three (each weighted -1) was significant in all three cases, ts(94) > 2.77, ps < .05. There were no significant differences among the other three conditions on any measure, ts(94) < 1.54, ns. Unlike in Study 1, however, there were no significant differences between conditions in self-reported nervousness, t(94) < 1.

Next we tested whether these effects carried over outside of the experimental context by increasing participants' willingness to form inter-racial friendships. As predicted, participants in the inter-racial video/"better than expected" condition reported that they had formed a higher proportion of inter-racial friendships in the ensuing week than did participants in the other three conditions (see Fig. 1). Almost a third of new friendships formed in this



**Fig. 1.** The effects of the intervention on reported friendships. One week after Study 2, people who had seen the inter-racial video, and had written about a time a friendship went better than expected, reported having formed more inter-racial friendships.



**Fig. 2.** The effects of the intervention on Facebook friends. Approximately 2 weeks after the intervention, people who had seen the inter-racial video, and had written about a time a friendship went better than expected, had a higher proportion of minority friends on Facebook.

condition were with minority group members, a percentage more than three times higher than the average of the other three conditions. Participants reported forming friendships with students from a variety of backgrounds including Asian, Hispanic, American Indian, and "other". A  $2 \times 2$  ANOVA revealed the predicted interaction, F(1,99) = 6.26, p = .01. A focused contrast that assigned a weight of +3 to the inter-racial video/"better than expected" condition and -1 to each of the other three conditions was also significant, t(95) = 3.60, p = .001. Simple effects tests confirmed that in the inter-racial video condition, participants reported a higher proportion of inter-racial friendships when they wrote about a personal experience than did participants who did not write, t(95) = 3.34, p = .001. As predicted, writing did not affect friendship formation in the same-race video condition, t(95) < 1, ns. Moreover participants who wrote about a personal experience reported more inter-racial friendships after watching the inter-racial friend videos than the same-race friend videos, t(95) = 2.79, p = .006. When participants did not write, friendship formation did not differ depending on the race of the friends depicted in the videos, t(95) < 1, ns.

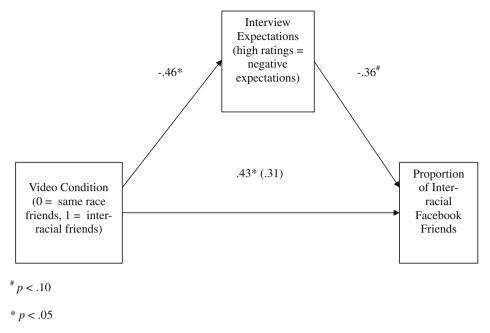
The measure of Facebook friendship was positively correlated with the self-reported friendship measure, r = .21, p < .05, and showed the same pattern of results (see Fig. 2). A 2 × 2 ANOVA revealed the predicted interaction, F(1, 87) = 4.08, p < .05, and the same focused contrast as performed on the previous friendship measure was significant, t(83) = 3.04, p = .003. Simple effects tests revealed that in the inter-racial condition, the proportion of new minority friends was greater when participants were in the "better than expected" writing condition than in the no writing condition, t(84) = 2.18, p = .03. As predicted, this difference was not significant in the same-race condition, t(84) < 1, ns. Also, within the writing condition, the proportion of minority friends was greater in the inter-racial than in the same-race video condition, t(84) = 2.71, p = .008, whereas as predicted this difference as not significant in the no writing condition, t(84) < 1, ns.

Following Baron and Kenny (1986) steps for testing mediation, we also obtained evidence that the effects of the intervention on inter-racial Facebook friends was partially mediated by participants' improved expectations about the inter-racial interaction in the lab (Fig. 3). There was no evidence for mediation by expectations in the control condition, which is consistent with our hypothesis that both components of our intervention are necessary: seeing the inter-racial videos and writing about how one experienced a similar surprising friendship.<sup>4</sup>

<sup>&</sup>lt;sup>b</sup> Higher numbers reflect coder ratings of greater nervousness.

<sup>&</sup>lt;sup>c</sup> Higher numbers reflect higher coder ratings of how well the interview went and how friendly the participant was to the interviewer.

<sup>&</sup>lt;sup>4</sup> We also tested whether the effects of the intervention on self-reported interracial Facebook friends was mediated by participants' improved expectations about the inter-racial interaction in the lab. We found similar results to those reported here, though they were not as strong (Sobel test p = .15).



**Fig. 3.** Mediation analyses in the "better than expected" condition of Study 2. More positive expectations about the inter-racial interview partially mediated the effect of video condition on the proportion of inter-racial Facebook friends. A Sobel test was not significant, z = 1.57, p = .11, suggesting that expectations partially but not fully mediated the effects of the intervention on Facebook friends.

## **General discussion**

A simple intervention increased the positivity of White college students' interactions with a Black student they had never met and dramatically increased the number of inter-racial friendships they formed in the ensuing weeks. The critical ingredients of this intervention were: (a) learning that a Black and White student at their university thought it would be hard to become friends, but overcame this barrier and formed a long-term friendship; and (b) writing about a similar experience in their own life.

In Study 1 the intervention increased participants' expectations about how an immediate interaction with a Black experimenter would go, made them less nervous, and freed cognitive capacity. As a result, the interaction with the Black experimenter went better. In Study 2 the intervention again increased participants' expectations, which partially mediated its impact on inter-racial friendships. These findings support our hypothesis that correcting people's intergroup forecasting errors can make them more willing to initiate inter-racial interactions and make those interactions go better. The results of the Facebook measure were particularly notable, given how "noisy" this measure was. It is likely, for example, that some of the Facebook friendships were formed in the first week or two of the semester, before participants were in our study. Given this fact, it is all the more remarkable that we found significant differences between our conditions on this measure. The only viable explanation of this finding, other than that our manipulations increased inter-racial friendships, is a failure of random assignment. This seems unlikely, given that the Facebook friendship measure correlated significantly with the self-report measure of friends formed after the study, and that the effects of the manipulations on inter-racial Facebook friends were mediated by participants' improved expectations about the inter-racial interaction in the lab (see Fig. 3).

The success of our manipulation might have depended on a few key features of our studies. First, participants were at a point in their lives where they were open to new friendships — their first semester of college. Second, most participants were probably open to establishing friendships with students of other races (Plant &

Devine, 1998). Thus, they may have been especially receptive to an intervention designed to alleviate their fears about such interactions. It is unclear whether the intervention would have similar effects on people whose patterns of friendship were more stable or who were less interested in relationships with members of other races. On the other hand new friendship opportunities are not unusual, such as when people meet a new colleague at work or a new neighbor, and future research should explore whether our intervention influences people's willingness to pursue inter-racial friendships in contexts such as these.

In sum, the present studies demonstrated a simple way of correcting Whites' negative expectations about inter-racial interactions and increasing the positivity of those interactions. Most importantly, the intervention helped overcome the "contact barrier" of inter-racial friendships in a college student population. These findings fill an important gap in the literature on inter-racial contact. We know that contact (under the right conditions) decreases prejudice, but little research has examined how to increase people's willingness to establish contact and to have positive interactions with members of other races. One way to get people to overcome the "contact barrier" of inter-racial friendships is to change their overly negative expectations about how inter-racial interactions will go.

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