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Learning orientation as a predictor of positive intergroup contact

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Abstract

Adapting the goal orientation framework from the achievement motivation literature, the present research tests whether learning orientation, as compared to performance orientation, predicts greater comfort and interest in intergroup contact. These links are examined in a cross-sectional survey of European American and African American middle school students (Study 1), and in a longitudinal survey with European American high school students (Study 2). Both studies yielded converging evidence that while performance orientation generally had a negative association with comfort and interest, a stronger orientation toward learning predicted greater comfort and interest in intergroup contact. The links between the learning orientation and comfort and interest in intergroup contact were consistent across both racial groups in Study 1, and in longitudinal analyses in Study 2. Together, these findings point to learning orientation as a potentially important means for promoting positive intergroup contact.

Keywords

intergroup anxiety, intergroup contact, learning orientation, performance orientation

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Social psychological research offers ample evidence for the importance of intergroup contact in reducing prejudice and promoting positive intergroup relations (Allport, 1954; Brown & Hewstone, 2005; Pettigrew, 1997; Pettigrew & Tropp, 2006; Wagner, Van Dick, Pettigrew, & Christ, 2003). However, questions of why people seek out intergroup contact, and what can be done to encourage their interest in intergroup contact, are less well understood (see Gómez, Tropp, & Fernandez, 2011; Pettigrew & Tropp, 2011).

A growing number of studies suggest that people find navigation of intergroup contact challenging: Group members on both sides are concerned about confirming negative stereotypes (e.g., Goff, Davies, Steele, 2008; Shapiro, 2011), doubt their efficacy in meeting the demands of intergroup contexts (Butz & Plant, 2006), worry about being devalued and rejected, or presenting themselves in an unfavorable light (Crocker & Garcia, 2006; Shelton, Richeson, & Vorauer,

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2006; Vorauer, 2006; Vorauer & Kumhyr, 2001). Given the multiplicity of these concerns, it is no surprise that people experience discomfort and anxiety during intergroup contact (Devine, Evett, & Vasquez-Suson, 1996; Littleford, Wright, & Sayoc-Parial, 2005; Pearson et al., 2008), expend a lot of energy on ensuring they behave appropriately during contact (Leary & Atherton, 1986; Richeson & Shelton, 2007; Vorauer & Turpie, 2004), and, if given the opportunity, will attempt to avoid it (e.g., Butz & Plant, 2011; Plant, 2004; Plant & Butz, 2006).

However, people may feel more comfortable and begin to express greater interest in intergroup contact when their anxious concerns are alleviated (Gómez et al., 2011; Page-Gould, Mendoza-Denton, & Tropp, 2008). For example, when concerns about the self are reduced, people fare better in intergroup contexts (e.g., Walton & Cohen, 2011) and tend to respond more favorably toward outgroup members (Fein, Hoshino-Browne, Davies, & Spencer, 2003; Fein & Spencer, 1997). Additionally, other work suggests that people may come to value intergroup contact (Molina & Wittig, 2006; Tropp & Bianchi, 2006; Van Dicket al., 2004), as they are motivated to interact with members of other groups who can expose them to different viewpoints and provide them with opportunities to expand the self (Wright, Brody, & Aron, 2005). Considering these perspectives together, we propose that comfort and interest in intergroup contact may be enhanced to the extent that people are less preoccupied with concerns about how to navigate intergroup situations and are more focused on what might valuably be gained from them (see Crocker, Garcia, & Nuer, 2008; Migacheva, Tropp, & Crocker, 2011).

Exploring Goal Orientations in Intergroup Contact

More specifically, we propose that focusing on what one can learn from cross-group interactions may provide a pathway to positive relations between members of different status groups (Crocker & Garcia, 2006; Migacheva et al., 2011). In so doing, we refer to a well-established literature on goal orientations in the context of academic achievement (Dweck, 1986, Nicholls, 1984) and apply this work to the context of intergroup relations.

Prior research has identified two major categories of achievement goals: *Learning goals*, where an individual seeks to obtain new information and knowledge, and *performance goals*, where an individual seeks to certify one's own qualities and abilities (Dweck, 1986; Grant & Dweck, 2003). These two classes of goals have been linked to motivation and performance in a range of achievement situations. Learning goals reduce students' self-focused concerns and predict many positive outcomes—including sustained intrinsic motivation, interest in academic subjects, and planning and persistence in the face of failure–whereas performance goals typically reflect self-focused and evaluative concerns, and predict impaired motivation, poor outcomes, and increased anxiety (Grant & Dweck, 2003; Harakiewicz et al., 1997; Skaalvik, 1997).

We believe the learning-performance goal distinction described in the achievement literature offers a useful framework for exploring goal orientations in intergroup contact. In general, those who adopt a learning orientation view their experiences as valuable opportunities to increase their knowledge. In intergroup contact, a learning-oriented individual may focus on getting to know his or her outgroup partner and/or on gaining experience from intergroup contact. Just as learning orientation in the academic domain shifts students' focus from immediate outcomes and evaluation toward learning and gaining knowledge (Bouffard, Boisvet, Vezeau, & Larouche et al., 1995; Grant & Dweck, 2003), learning orientation in the intergroup domain may alleviate individuals' anxious concerns and enhance their interest in intergroup contact.

Further, the heightened concern with ensuring desirable outcomes typical of performance orientation (Skaalvik, 1997) may reveal itself in group members' focus on the image they wish to portray, or in how they appear to relate to members of other groups (Migacheva et al., 2011). Just as a

preoccupation with one's performance can lead to anxiety and impaired motivation in the academic domain (Ames, 1992; Ames & Archer, 1988; Skaalvik, 1997), a performance orientation in the intergroup domain may similarly be associated with increased discomfort and diminished interest intergroup contact (Migacheva et al., 2011; Murphy, Richeson, & Molden, 2011).

In line with this general approach, a study by Goff and colleagues (2008) showed that participants who were instructed to learn from an upcoming cross-group interaction maintained shorter physical distance with an outgroup partner than those who did not receive such instructions. Such reduction in physical distance suggests that a learning orientation may indeed be one way to diminish discomfort and promote interest in intergroup contact. The present research further explores this proposition and seeks to obtain additional support for the value of learning orientation in the domain of intergroup relations. Also, the present studies extend this work by examining how learning and performance orientations both relate to comfort and interest in intergroup contact, and whether these relationships persist over time.

Following the call for intergroup researchers to include minority group perspectives in the study of intergroup contact (Shelton, 2000; Tropp, 2006; Tropp & Pettigrew, 2005), the present research examines goal orientations among members of racial majority and minority groups. On the one hand, learning and performance orientations may function similarly for both groups. For example, focusing on learning from and about a different other may alleviate the immediate threats to the self people perceive in intergroup contexts, and facilitate positive intergroup contact outcomes regardless of one's group membership (Crocker & Garcia, 2006; Crocker, Garcia, & Nuer, 2008; Migacheva et al., 2011). Similarly, since evaluative concerns, desire to achieve positive outcomes, and effortful monitoring of one's behavior in intergroup contexts are not unique to one group only (Shelton & Richeson, 2005; Tropp, 2003), performance orientation might be related to discomfort and disinterest in intergroup contact among both minority and majority group members.

On the other hand, a growing body of research indicates that divergent social experiences among racial majority and minority group members may lead to different expectations for and experiences during intergroup contact (Doerr, Plant, Kunstman, & Buck, 2011; Gómez et al., 2011; Hyers & Swim, 1998; Shelton, 2003; Tropp, 2006). For example, by virtue of living in a society where outgroup members constitute a majority, members of a minority group may have more experience with intergroup contact, and thus be less prone to performance concerns, or be better equipped to cope with them (Doerr et al., 2011). With these considerations in mind, the current research explores whether the associations between goal orientations and comfort and interest in intergroup contact vary among majority and minority group members.

Furthermore, as the cross-group experiences people have early in life shape the intergroup attitudes and behaviors they carry into the future (see Aboud, Mendelson, & Purdy, 2003; Ellison & Powers, 1994; Killen, Henning, Crystal, & Ruck, 2007; Wood & Sonleitner, 1996), it is particularly important to understand how learning and performance orientations predict comfort and interest in contact among youth. For these reasons, we conducted two field studies with younger participants of school age: The first study involved a cross-sectional survey of European American and African American middle school students; and the second study was a longitudinal survey of European American high school students who participated in a community-based service learning program.

Overall, we expected that a stronger learning orientation would predict greater comfort and greater interest in intergroup contact, whereas a stronger performance orientation would predict less comfort and less interest in intergroup contact. Also, given that prior positive contact, particularly in the form of cross-group friendships, can promote greater comfort during intergroup contact (e.g., Pettigrew & Tropp, 2006; Stephan & Stephan, 2000), as well as interest in future

contact (e.g., Gómez et al., 2011; Page-Gould, Mendoza-Denton, & Tropp, 2008), we examine these links while controlling for group members' prior cross-group friendship experiences.

Study 1

Study 1 tested the hypothesized links in a cross-sectional survey of European American and African American students. Students were recruited for participation from two racially homogeneous middle schools on the island of Manhattan in New York City. Although these schools were located only several blocks apart, these groups of children had virtually no opportunities for cross-racial contact with peers during school day; as such, all European American children attended and were recruited from one school, and all African American children attended and were recruited from the other school. Research with children has shown that intergroup contact and diverse surroundings can foster an array of positive intergroup outcomes (e.g., Heinze & Horn, 2009; Killen, Kelly, Richardson, Crystal, & Ruck, 2010; McGlothlin & Killen, 2010; Vezzali, Giovannini, & Campozza, 2010), yet many children are immersed in racially homogeneous communities with scarce opportunities for intergroup contact (Levy & Killen, 2008). Understanding the factors that promote children's comfort and interest in intergroup contact may be particularly valuable in such contexts.

Method

Participants and procedure. After obtaining parental consent, a total of 179 European American students (85 boys and 93 girls), and 133 African American students (59 boys and 50 girls, 24 did not report their sex) completed a brief survey in a classroom setting. A total of 165 surveys from the European American participants (81 boys and 84 girls) and 75 surveys from African American participants (39 boys and 36 girls) contained no missing data, and we used the responses from these participants in the consequent analyses. Participants' ages ranged from 9 to 12 among European American students (M = 10.46 years, SD = .95) and from 9 to 13 among African American students (M = 10.43 years, SD = 1.09).

In each school, and with a school staff member of the same racial background as the students, a European American researcher explained to the students that the purpose of the survey was to understand their experiences with different kinds of people. Students were informed that they should include no personally identifying information on the survey, that there were no right or wrong answers to any questions in the survey, and that their survey responses would be anonymous and confidential. The researcher also explained to students the procedures for responding to survey questions, and demonstrated responses to an unrelated sample question, to ensure that students understood how to interpret the rating scales. Upon completion, students placed their questionnaires into an envelope along with other completed surveys, to ensure the confidentiality and anonymity of their responses.

Measures. The survey included measures to assess students' learning and performance orientations regarding cross-group interactions, as well as items assessing their comfort and interest in future intergroup contact. Survey items were pilot tested with students from other middle schools in the northeastern United States, and a readability test was conducted (Flesch-Kincaid Reading Grade Level: 3.1), to ensure that middle school students would readily understand the survey items. Unless noted otherwise, all the items were rated on a scale from 1 (*Not at all*) to 5 (*Very much*). The full list of items is presented in Appendix A.

Learning orientation was measured with three items (e.g., "When you meet people who have a different skin color than you, how much do you think about what you can learn from them?"). Performance orientation was also measured with three items (e.g., "When you meet people who have a different skin color than you, how much do you wonder how you should act around them?").

Due to the necessary brevity of the survey, single-item measures were used to assess the outcomes of interest. These items were inspired by

those used in prior research (see Plant & Butz, 2006; Stephan & Stephan, 1985; Tropp, 2003; Tropp & Bianchi, 2006) and were pilot tested to ensure their appropriateness for use with middle school students. *Comfort* in intergroup contact was measured with the item: "When you meet people who have a different skin color than you, how much do you feel comfortable around them?" *Interest* in intergroup contact was measured with the item: "In general, how much would you like to become friends with kids who are [White/Black]?" These items were moderately correlated in the combined sample ($r = .36$, $p < .001$) and among European American participants ($r = .35$, $p < .001$), but weakly correlated among African American participants ($r = .21$, $p < .05$); thus, they were treated as separate, single-item measures in the subsequent data analyses.

In addition, participants also reported their *racial group membership*, which we included as a potential moderator that may interact with learning and performance goal orientations in predicting these outcomes. Finally, to assess participants' prior cross-group friendship experience, we asked them to report how many of their friends belong to the other racial group (How many of your close friends are kids who are [White/Black]?). This item was included to statistically control for possible links between prior cross-group friendship experience and the dependent measures.

Results

Preliminary analyses revealed that European American students reported higher levels of comfort ($M = 4.08$, $SD = 1.08$) than African American students ($M = 3.27$, $SD = 1.28$), $F(1, 239) = 26.01$, $p < .001$. European American students also reported greater interest in intergroup contact ($M = 4.31$, $SD = .88$) than African American students ($M = 3.61$, $SD = 1.30$), $F(1, 239) = 23.49$, $p < .001$. At the same time, European American and African American students reported similar numbers of cross-group friends ($M = 2.74$, $SD = 1.16$ and $M = 2.71$, $SD = 1.46$, respectively), $F(1, 239) = 0.04$ $p > .05$.

Confirmatory factor analysis. To confirm the hypothesized structure of the variables (learning orientation, performance orientation), as well as their distinctiveness from the other variables in the model (cross-group friendships, comfort and interest in intergroup contact), we performed confirmatory factor analysis. In doing so, we tested a five-factor model, where all of the variables were distinct factors, and compared this model with alternative nested models. The five-factor model revealed a good fit to the data ($\chi^2(20) = 30.04$, $p > .05$, RMSEA = 0.043, CFI = 0.99, SRMR = .034).

Furthermore, a series of significant chi-square difference tests provided consistent evidence that the hypothesized five-factor model fit the data better than all other alternatives ($\Delta\chi^2(1)$ ranging between (–15.83) and (–118.03), ps > .050). In the final five-factor model all indicator items loaded at a value of .72 or higher on their respective factors, demonstrating convergent validity of the five factors. The correlations between factors ranged between $r = .06$ (cross-group friendships and performance orientation) to $r = .48$ (between learning orientation and performance orientation; see Table 1). While most of the associations between the latent variables were significant, the magnitude of the correlations, in combination with the superior fit of the five-factor model, suggest a reasonable degree of discriminant validity, with each latent factor measuring a unique construct.

Correlations. We further examined zero-order correlations between all the variables for all participants combined (see Table 1), and independently for European American and African American participants (see Table 2). For both European American and African American participants, a stronger learning orientation was associated with greater comfort and interest in intergroup contact. Among European American students, a stronger performance orientation related to significantly lower levels of comfort, but performance orientation was not significantly related to interest in contact. Among African American students, performance orientation was

Table 1. Correlations between latent variables (Study 1).

	1	2	3	4	5
1. Learning orientation	1.00	–	–	–	–
2. Performance orientation	.48***	1.00	–		–
3. Prior cross-group friendships	.28***	.06	1.00	–	–
4. Comfort	.20***	–.29***	.19***	1.00	–
5. Interest	.24***	–.21***	.32***	.36***	1.00

Note. *$p < .05$; **$p < .01$; ***$p < .001$.

Table 2. Correlations between latent variables among European American and African American participants (Study 1).

	1	2	3	4	5
1. Learning orientation	–	.51***	.27*	.36**	.49***
2. Performance orientation	.38***	–	.14	.06	–.03
3. Prior cross-group friendships	.30***	.05	–	.25*	.31***
4. Comfort	.26***	–.38***	.16	–	.21*
5. Interest	.21**	–.11	.35***	.35***	–

Note. Correlations for European Americans appear below the diagonal, and correlations for African Americans appear above the diagonal. *$p < .05$; **$p < .01$; ***$p < .001$.

not significantly associated with either comfort or interest in intergroup contact.

Structural equations analysis. We used structural equation modeling with LISREL to assess the hypothesized relationships. The model included paths from predictor variables (all centered: learning orientation, performance orientation, cross-group friendships) to the outcome variables (comfort in intergroup contact and interest in intergroup contact). Additionally, to test whether the relationships between learning orientation and performance orientation with the outcomes were moderated by participants' racial group membership, we included three additional predictors: race (dummy-coded: –.5 for White participants and .5 for Black participants), and the race × learning orientation and race × performance orientation interactions. The latent variables' interaction terms were included using procedures described in Ping (1996). The resulting model[1] revealed an adequate fit ($\chi^2(33) = 44.17$, $p > .05$, RMSEA = 0.035, CFI = 0.99, SRMR = .031). In line with our expectations, learning orientation was a positive predictor of both comfort ($\beta = .45$, $t = 5.08$, $p < .001$) and interest ($\beta = .48$, $t = 5.39$, $p < .001$), and performance orientation was a negative predictor of both comfort ($\beta = –.39$, $t = –4.54$, $p < .001$) and interest ($\beta = – .35$, $t = –4.15$, $p < .001$). Furthermore, in accordance with our earlier findings that European American participants reported greater comfort and greater interest in intergroup contact than African American participants, race was a significant predictor of both comfort ($\beta = –.32$, $t = –5.21$, $p < .001$) and interest ($\beta = –.32$, $t = –5.29$, $p < .001$). Additionally, the race × learning orientation interaction was significant in predicting interest ($\beta = .22$, $t = 3.36$, $p < .001$). The simple slopes analyses with latent interaction factors (Ping, 2002) revealed that while learning orientation positively predicted interest for both European American participants ($\beta = .43$, $t = 6.14$, $p < .001$) and African American participants ($\beta = .55$, $t = 10.05$, $p < .001$), this association is stronger among African American participants. Finally, the race × performance orientation interaction was significant in predicting comfort ($\beta = .17$, $t = 2.70$, $p < .01$). While performance

orientation negatively predicted comfort for both European American participants ($\beta = -.54$, $t = -4.81$, $p < .001$) and African American participants ($\beta = -.40$, $t = -3.83$, $p < .001$), this association is stronger among European American participants.

Discussion

Study 1 examined the links between learning and performance orientations with comfort and interest in intergroup contact among European American and African American middle-school students. Although both European American and African American children reported having similar numbers of cross-group friends, European American children reported higher ratings of comfort and interest in intergroup contact than African American children. It is possible that social desirability concerns are in part responsible for European American children's higher reports of comfort and interest in contact, given that European Americans tend to have more anxious concerns about appearing prejudiced (see Devine & Vasquez, 1998; Littleford et al., 2005; Plant & Devine, 1998). On the other hand, perceptions and experiences of racial prejudice and discrimination may also help to explain African American children's lower ratings of comfort and interest in intergroup contact, relative to their European American peers (Clark, Anderson, Clark, & Williams, 1999; Devine & Vasquez, 1998; Plant & Devine, 2003; Tropp, 2006).

Consistent with our hypotheses, we found that a greater orientation toward learning predicted greater comfort and greater interest in intergroup contact for both European American and African American children, and we observed this effect even when controlling for participants' cross-group friendship experience. However, the link between learning orientation and interest was somewhat less pronounced among European American children. It is possible, however, that the relatively high scores on and low variability of interest ratings among European American children might account for this finding. Indeed, as we have shown above, the mean for interest in intergroup contact was particularly high for European American children (over 4 on a 5-point scale) as compared to African American children, while the standard deviation is smaller for European American children as compared to African American children. Together these suggest that the relationship between the learning orientation and interest would be less pronounced among European American children due to a restricted range of their responses to the measure of interest in intergroup contact. Nonetheless, given that sources of concerns and reluctance to engage in intergroup contact often vary among minority and majority group members (Devine & Vasquez, 1998; Shelton, 2003), it is particularly encouraging to observe that learning orientation consistently predicts comfort and interest in intergroup contact among youth from both racial groups.

Also in line with our predictions, greater performance orientation predicted less comfort in intergroup contact, though this link was weaker for African American children. While we did not find differences in numbers of cross-group friends reported by European American and African American children, the representation of their groups in the larger society suggests that members of racial minority groups are likely to experience contact more frequently than members of racial majority groups (see, e.g., Sigelman & Welch, 1993). Such regular "practice" of intergroup contact by African Americans and lack thereof for European Americans might help explain why performance concerns may be a weaker predictor of comfort among African Americans (Doerr et al., 2011).

We also found evidence that stronger performance orientation predicted less interest in intergroup contact both for European American and African American children. It appears that regardless of one's group membership, concerns about engaging in cross-group interaction relate to lack of interest in getting to know people from other racial backgrounds.

Overall, Study 1 provided initial support for the hypothesized links between learning and performance orientations with comfort and interest

in intergroup contact. Additionally, by examining goal orientations among European American and African American children, this study was the first one to compare how these orientations function in relation to intergroup contact for members of racial minority and majority groups.

Some limitations to this study should be noted. First, due to the need to keep the survey brief, single-item measures were used to assess comfort and interest, which could potentially undermine the reliability of the measurement of these constructs. Second, the cross-sectional nature of this study provides only a snapshot of the relationships between learning and performance orientations and the outcomes of interest and does not consider whether these persist over time. Study 2 will address both of these limitations by (a) expanding the number of items in our outcome measures and by (b) utilizing a longitudinal research design to examine how initial goal orientations predict comfort and interest in intergroup contact over time.

Study 2

Study 2 extends Study 1 by investigating how initial learning and performance orientations predict comfort and interest in intergroup contact over time. Added benefits of Study 2 are that we can test for replication of the effects we observed in Study 1 with youth from a different age group in a non-academic context, and we can use multi-item scales rather than single-item measures to assess our outcomes of interest. As in Study 1, we expected that a stronger learning orientation would predict greater comfort and interest in intergroup contact, both cross-sectionally and longitudinally. At the same time, we expected that a greater performance orientation would predict less comfort and interest in intergroup contact, both cross-sectionally and over time.

Method

Participants and procedure. Participants in this study were high school students who were a part of a week-long community-based service learning program, structured as a summer camp. Some of the primary goals of the program were to bring together urban and suburban youth from different parts of a metropolitan area in the northeastern United States, to create an environment that promotes diversity, and to provide an opportunity for students to work together for the betterment of their community. The program assigned students to work on community projects every day (e.g., at soup kitchens, homeless shelters, Habitat for Humanity), alongside community residents from their own and other racial backgrounds; students also participated in additional programming and group discussions each evening.

Although the program included some students from racial minority backgrounds, there were too few non-White students to make meaningful comparisons across racial groups. Thus, the final sample in Study 2 included 52 European American participants who completed surveys both at Time 1 and Time 2, ages from 13 to 19 years, $M = 15.75$ years, $SD = 1.38$.

Participants completed two identical surveys: The first within 3 weeks before the program started (Time 1), and the second immediately after the program ended (Time 2). Participants were encouraged to respond openly and honestly to the surveys and were informed that there were no right or wrong answers to any of the survey questions. To ensure their privacy, participants sat individually in separate areas of a large auditorium and were asked not to write any personally identifying information on their survey. Upon completion, participants placed their surveys into an envelope among other completed surveys, to further ensure confidentiality and anonymity of their responses.

Measures. As in Study 1, the survey included measures of participants' learning and performance orientations, along with items to assess comfort and interest in intergroup contact. These outcome variables were measured both before and after the service learning program, using identical sets of items. These items were inspired by the ones used in previous research (see Plant

& Butz, 2006; Stephan & Stephan, 1985; Tropp, 2003; Tropp & Bianchi, 2006). Unless noted otherwise, all items were rated on a scale ranging from 1 (Not at all) to 5 (Very much). The full list of items is presented in Appendix B.

We slightly modified the wording of the original items from Study 1 to make them age-appropriate for use with adolescents, and we included additional items to assess each construct, in order to extend each of the scales used in Study 1. Participants' learning orientation was measured with six items (e.g., "When you interact with people of a different racial/ethnic background, how much do you think about what you can learn from them?"; $a_{(Time\ 1)} = .78$, $a_{(Time\ 2)} = .85$), and performance orientation with six items (e.g., "When you interact with people of a different racial/ethnic background, how much do you think about how you should act around them?"; $a_{(Time\ 1)} = .84$, $a_{(Time\ 2)} = .84$). Similar to Study 1, learning orientation and performance orientation were moderately and positively correlated ($r = .33$, $p < .05$).

Our extended measure of *comfort* in intergroup contact included six items (e.g., "In general, when you interact with people of a different racial/ethnic background, how comfortable do you feel?" $a_{(Time\ 1)} = .77$, $a_{(Time\ 2)} = .95$. In addition, our extended measure of participants' *interest* in intergroup contact included three items (e.g., "How interested are you in getting to know people from racial/ethnic groups other than yours?" $a_{(Time\ 1)} = .71$; $a_{(Time\ 2)} = .86$). Comfort and interest were marginally correlated at Time 1 ($r = .27$ $p = .053$), but showed a stronger correlation at Time 2 ($r = .40$, $p < .01$). Comfort reported at Time 1 was moderately related to comfort reported at Time 2 ($r = .36$, $p < .05$), and interest reported at Time 1 was strongly related to interest reported at Time 2 ($r = .58$, $p < .001$).

Additionally, participants' *cross-group friendships* were assessed by asking them to report in a series of items how many of their friends were Black/African American, Black/Caribbean American, Asian/Asian American, or Hispanic/Latino American. Responses to these items were later summed to create a composite measure of participants' friendships with outgroup members, to represent their overall cross-group friendship experience. Like in Study 1, this measure was included to statistically control for its relationship with comfort and interest.

Results

Preliminary analyses revealed that participants reported moderate ratings of comfort at Time 1 ($M = 3.36$, $SD = .74$), yet their ratings of comfort were significantly higher by the end of the service learning program, at the time of the second assessment ($M = 4.10$, $SD = .79$), $t(48) = 6.23$, $p < .001$. At the same time, participants did not significantly differ in their reported levels of interest in contact at Time 1 ($M = 3.97$, $SD = .69$), and at Time 2 ($M = 4.09$, $SD = .81$), $t(51) = -1.19$, $p > .05$. Participants' learning orientation at Time 1 ($M = 3.49$, $SD = .66$) did not differ significantly from their learning orientation at Time 2 ($M = 3.64$, $SD = .81$), $t(51) = -1.35$, $p > .05$. However, participants' performance orientation increased in the time between two assessments ($M_{T1} = 2.80$, $SD = .85$; $M_{T2} = 3.11$, $SD = .70$), $t(51) = -3.00$, $p < .01$. Participants also reported having similar number of outgroup friends at Time 1 ($M = 9.28$, $SD = 5.71$) and at Time 2 ($M = 10.03$, $SD = 7.88$), $t(35) = 1.08$, $p > .05$.

Since the sample size in this study did not meet the requirements of power for path or structural equation analyses (MacCallum, Browne, & Sugawara, 1996), we conducted a series of zero-order correlations, followed by multiple regression analyses.

Correlations. First, we examined how learning and performance orientations reported at Time 1 correlated with comfort and interest reported both at Time 1 and at Time 2 (see Table 3). A stronger learning orientation related to greater comfort at Time 1 ($r = .36$, $p < .01$), and at Time 2 ($r = .43$, $p < .01$); learning orientation also related to greater interest in intergroup contact at both time points (Time 1: $r = .47$, $p < .001$, Time 2: $r = .49$, $p < .001$). Performance orientation related to greater comfort at Time 1 ($r = .28$, $p < .05$), but did not relate significantly to comfort at

Table 3. Correlations between learning orientation and performance orientation with comfort and interest at Times 1 and 2 (Study 2).

	Learning orientation	Performance orientation
Time	1 .36**	.28*
Comfort		
Time	2 .43**	–.08
Time	1 .47**	–.12
Interest		
Time	2 .49**	–.15

Note. *$p < .05$; **$p < .01$; ***$p < .001$.

Time 2 ($r = –.08$, $p > .05$). In addition, performance orientation revealed no significant relationship with interest in intergroup contact either at Time 1 ($r = –.12$, $p > .05$) or at Time 2 ($r = –.15$, $p > .05$).

Regression analyses. We performed two types of hierarchical regression analyses for each outcome variable. First, we examined cross-sectionally the extent to which learning and performance orientations could uniquely predict comfort and interest in contact at Time 1. Second, we examined longitudinally whether learning and performance orientations assessed at Time 1 could predict comfort and interest in contact reported at Time 2, while controlling for each outcome variable assessed at Time 1.

Cross-sectional analyses. We conducted two separate multiple regression analyses in which we entered learning orientation, performance orientation, and cross-group friendships as predictors of comfort and interest at Time 1. As shown in Table 4, when predicting comfort, we found a main effect of learning orientation, such that a stronger learning orientation predicted greater comfort in intergroup contact ($\beta = .45$, $t = 3.00$, $p < .01$). However, performance orientation did not uniquely predict comfort ($\beta = .17$, $t = 1.45$, $p > .05$).[2] The analysis for interest yielded unique main effects of both learning orientation and performance orientation: a stronger learning orientation predicted greater interest in intergroup contact ($\beta = .53$, $t = 4.26$, $p < .001$), [3] whereas a stronger performance orientation predicted less interest in intergroup contact ($\beta = –.38$, $t = –3.11$, $p < .010$).

Longitudinal analyses. We then conducted two separate multiple regression analyses using learning and performance orientations at Time 1 to predict comfort and interest at Time 2. Specifically, in each analysis, assessments of learning orientation, performance orientation, and cross-group friendships at Time 1 were included as predictors for either comfort at Time 2 or interest at Time 2, in addition to controlling for scores on the corresponding outcome measure assessed at Time 1.

Comfort. As shown in Table 5, we found a main effect of learning orientation, such that greater learning orientation at Time 1 predicted greater comfort in intergroup contact at Time 2 ($\beta = .43$, $t = 3.01$, $p < .01$), even after controlling for comfort reported at Time 1. The main effect of performance orientation also emerged: a stronger performance orientation at Time 1 predicted less comfort in intergroup contact at Time 2 ($\beta = –.30$, $t = 2.21$, $p < .05$), even after controlling for comfort reported at Time 1.

Interest. Also presented in Table 5, we found a significant main effect of learning orientation, such that greater learning orientation at Time 1 predicted greater interest in intergroup contact at Time 2 ($\beta = .30$, $t = 2.05$, $p < .05$), even after controlling for interest at Time 1. We also found a marginally significant main effect of performance orientation, such that greater performance orientation at Time 1 predicted less interest in intergroup contact at Time 2 ($\beta = –.24$, $t = –1.83$, $p = .70$), even after controlling for interest reported at Time 1.

Discussion

The overall goal of Study 2 was to further examine how people's orientations in intergroup contexts relate to their comfort and interest in intergroup contact. In this study we utilized both

Table 4. Summary of cross-sectional regression analyses predicting comfort and interest at Time 1 (Study 2).

Predictor variables	Comfort at Time 1			Interest at Time 1		
	B	*SE B*	*β*	*B*	*SE B*	*β*
Prior cross-group friendships	.03+	.02	.22+	.03*	.01	.28*
Learning orientation	.45**	.15	.40**	.56***	.20	.53***
Performance orientation	.17	.12	.19	–.31**	.15	–.38**
R^2	.35***			.42***		
F	7.47***			10.28***		

Note. $^{+}p = .10$; $*p < .05$; $**p < .01$; $***p < .001$.

Table 5. Summary of longitudinal regression analyses predicting comfort and interest at Time 2 (Study 2).

Predictor variables	Comfort at Time 2			Interest at Time 2		
	B	*SE B*	*β*	*B*	*SE B*	*β*
Prior cross-group friendships	.02	.02	.17	.02	.02	.14
Outcome variable at Time 1	.24	.17	.21	.46**	.03	.38**
Learning orientation	.55**	.18	.43**	.38*	.18	.30*
Performance orientation	–.28*	.13	–.30*	$–.24^{+}$	.13	$–.24^{+}$
R^2	.36**			.46***		
F	5.60**			8.83***		

Note. $+p = .07$; $*p < .05$; $**p < .01$; $***p < .001$.

cross-sectional and longitudinal survey data to test for replication of the links that emerged in Study 1, and to assess whether these links would persist over time. The longitudinal design also allowed us to investigate whether people's initial learning and performance orientations would predict comfort and interest in contact at Time 2 beyond what could be explained by their initial feelings of comfort and interest reported at Time 1. Additionally, Study 2 addressed some of the limitations of Study 1 by using multi-item scales to enhance the reliability of each of the measured constructs.

Cross-sectional analyses replicated the associations between learning orientation and the outcomes that emerged in Study 1. Greater learning orientation predicted both greater comfort and greater interest in intergroup contact at Time 1. Importantly, these links remained significant over time, such that a stronger initial learning orientation predicted greater comfort and greater interest at Time 2, even after controlling for participants' prior cross-group friendships and the feelings of comfort and interest they reported at Time 1.

Although Study 2 replicated the performance orientation-interest association we observed in Study 1, performance orientation did not uniquely predict comfort in the cross-sectional analyses. However the hypothesized relationships between performance orientation and the outcomes emerged more consistently in the longitudinal analyses. Beyond what could be explained by participants' prior cross-group friendships, their initial learning orientation, and their reports of comfort and interest at Time 1, performance orientation at Time 1 predicted marginally less comfort and significantly less interest in intergroup contact at Time 2. Together, these findings suggest that while performance orientation may play a relevant role, learning orientation is especially critical for predicting levels of comfort and interest in intergroup contact.

Additionally, while we do not have detailed information about the kinds of experiences students had between the two assessments, it is likely that the service learning program, with diversity promotion as one of its objectives, contributed to increases in particpiants' comfort over time. As revealed both in the current study and in prior research (e.g., Astin & Sax, 1998; Brody, 2004; Clary et al., 1998), students who choose to participate in these types of service learning programs may already be highly interested in getting to know people from other racial groups, regardless of their level of comfort. Through repeated exposure of participants to members of different racial groups, and through facilitation of diversity-related discussions, the service learning program may have helped participants to grow more comfortable with people from other racial groups, thereby complementing their initial interest in getting to know them.

In sum, using extended multi-item measures, Study 2 replicated most findings that emerged in Study 1 and showed that these relationships persist over time. In particular, the longitudinal findings indicate that a stronger learning orientation can predict greater comfort and interest in intergroup contact in the future, while a performance orientation may predict less comfort and interest in intergroup contact over time. Still, it is important to note that the time interval between the two assessments was relatively short (approximately 4 weeks), and we lack detailed information about the specific kinds of contact experiences students had in the time between the two assessments. Future studies with longitudinal designs could more precisely examine the effects of participants' contact experiences over longer time periods, and studies utilizing experimental designs could assess the effects of participants' orientations in the context of more structured cross-group interactions.

General Discussion

Overall, this research provides evidence that learning orientation is an important factor for predicting positive feelings toward intergroup contact. The positive relationships between learning orientation and comfort and interest in intergroup contact were replicated across samples of European American and African American middle school students (Study 1) and European American high school students (Study 2), even after taking into account their performance orientation and prior cross-group friendships. Importantly, using the longitudinal design in Study 2, we also showed that the positive relationships between learning orientation and comfort and interest in intergroup contact remain consistent over time.

As such, the present studies offer useful building blocks at this early stage of research on goal orientations in the domain of intergroup relations. Still, more work is necessary to paint a comprehensive picture of the nature of goal orientations in intergroup contexts, and, more specifically, their effects on intergroup contact for members of different status groups. The present work has begun to investigate how learning and performance orientations function among members of racial minority and majority groups; our findings suggest that regardless of group status, learning orientation might encourage greater comfort and interest in intergroup contact, while performance orientation may inhibit both.

Still, due to the divergent social experiences of majority and minority groups (e.g., Shelton, 2006; Tropp, 2006), learning orientation might not always be conducive to positive contact experiences and outcomes among both groups. For example, minorities are often viewed as experts on race-relevant topics (e.g., Niemann & Secord, 1995) and often feel the burden to educate Whites about race. Correspondingly, as Whites may have a general lack of awareness about racial issues (Tatum & Sekaquaptewa, 2009) and may be driven by motives to appear non-prejudiced (e.g., Monteith, 2003), minorities may find themselves in the position of educating Whites while receiving very little new information or knowledge in exchange (Tatum & Sekaquaptewa, 2009). Hence, by suggesting that learning orientation may be an effective way to promote comfort in intergroup contact, we may inadvertently overlook potential

adverse consequences of such contact for members of racial minority groups. Future studies should therefore examine minority experiences in intergroup contact in relation to a broader constellation of motivations and goals that majorities may have as they approach intergroup contact.

Similarly, concerns associated with performance orientation may differ somewhat among majority and minority group members. For instance, performance orientation of European Americans may arise from concerns about appearing prejudiced or a desire to demonstrate their egalitarian values (e.g., Devine et al., 2005; Dovidio & Gaertner, 2004; Vorauer & Kumhyr, 2001). In contrast, performance orientation of African Americans may stem from concerns about confirming negative stereotypes or detecting bias in an outgroup partner (Devine & Vasquez, 1998; Mendoza-Denton, Downey, Purdie, Davis, & Pietrzak, 2002; Vorauer, 2006). While both types of performance concerns may share certain qualities in common, future studies should consider how performance orientation measures can be constructed to attune to the specific concerns of different status groups.

In addressing these issues, future research should also examine how learning and performance orientations associate and interact with other well-established motivational constructs in the research literature (e.g., approach and avoidance motivation (Carver & Scheirer, 1990); promotion and prevention focus (Higgins, 1997)). Research indicates that both avoidance and approach motivations may be associated with people's performance concerns in the context of academic achievement (Cury, Elliot, Fonseca, & Moller, 2006; Elliot & McGregor, 2001; Midgley et al., 1998); this work also suggests that performance orientation may encourage beneficial outcomes when coupled with approach motivation, but it can be particularly detrimental when coupled with avoidance motivation. Other evidence for the positive role of approach orientation (e.g., Kawakami, Phills, Steele, & Dovidio, 2007) and negative consequences of avoidance orientation (e.g., Plant & Butz, 2006) has also emerged in intergroup relations literature. Future studies should therefore explore how the distinction between approach and avoidance motivations applies to performance orientation in the intergroup domain, to better understand how such motivations can enhance our prediction of group members' comfort and interest in intergroup contact.

Relatedly, future research could examine how promotion or prevention regulatory focus shapes learning and performance orientations and their relationship with comfort and interest in intergroup contact. Emerging theory and research suggest that people who adopt a promotion mindset are less preoccupied with monitoring their behaviors in intergroup contact (Murphy et al., 2011), while those who adopt a prevention mindset place focus more on possible threats and security, experience more discomfort in anticipation of intergroup interactions, and prefer to avoid them (Shah, Brazy, & Higgins, 2004). Thus, both learning orientation and performance orientation may be fueled by an *aspiration* to form positive ties with outgroup members (i.e., promotion focus) or by a perceived *obligation* to have a pleasant intergroup exchange (i.e., prevention focus). Future studies might therefore consider how learning and performance orientations relate to different dimensions of regulatory focus, to test their effectiveness in fostering positive contact experiences (see also Murphy et al., 2011).

Furthermore, it would be of value to test in the future whether learning and performance orientations are equally effective in alleviating and/or exacerbating discomfort associated with different types of concerns. The sources of discomfort in intergroup contexts are multiple and varied: evaluative concerns (e.g., Vorauer, 2006), uncertainty (Mazziotta, Mummendey, & Wright, 2011), negative expectancies (Devine et al., 1996), negative self-efficacy beliefs (Leary & Atherton, 1986; Plant & Butz, 2006), anticipation of rejection (Barlow, Louis, & Hewstone, 2009; Mendoza-Denton et al., 2002), stereotype threat (Goff et al., 2008), and stigma consciousness (Pinel, 1999), are just to name a few. Knowing whether the effects of learning or performance orientation would differ in each of these cases, will help

us to provide specific recommendations for interventions aiming to bring together people from different backgrounds, who bring a variety of concerns with them.

Finally, although our findings show compelling evidence for the association between learning orientation and enhanced comfort and interest in intergroup contact, experimental work is necessary to draw more firm conclusions about its causal effects. Future studies should manipulate participants' learning and performance orientations to determine whether learning orientation can actually increase comfort and interest during intergroup contact, and whether performance orientation might diminish these effects. Such experimental endeavors could also help us to understand the extent to which these orientations are malleable and/or may be induced, which would be especially important for those interested in creating interventions to encourage positive effects of intergroup contact. In light of research evidence indicating the importance of intergroup contact for improving intergroup relations (e.g., Pettigrew & Tropp, 2011; Pettigrew, Tropp, Wagner, & Christ, 2011), the current findings suggests that a greater orientation toward learning may be an effective way to promote interest in intergroup contact and enhance group members' intergroup experiences (Pettigrew, et al., 2011).

Notes

1. All other possible latent interaction terms were included in the initial analyses but nonsignificant interactions were trimmed from the final model (Judd & Kenny, 1981).
2. We also explored whether prior cross-group friendship experience moderates the relationship between performance orientation and comfort, given the positive relationship that emerged in the correlational and regression analyses. Among participants with a greater number of outgroup friends (1 *SD* above the mean), stronger performance orientation predicted greater comfort in intergroup contact, $B_{\text{(simple slope)}} = 5.55$, $t\,(40) = 3.06$, $p < .001$, but among participants with fewer outgroup friends (1 *SD* below the mean), greater performance orientation predicted less comfort, $B_{\text{(simple slope)}} = -5.07$, $t\,(40) = -2.89$, $p = .01$. It is possible that the performance concerns of people with less contact experience provoke threat (Butz & Plant, 2011; Doerr et al., 2011), whereas the performance concerns of people with more contact experience represent more of a challenge (Blascovich, Mendes, Hunter, Lickel, & Kowai-Bell, 2001).
3. This effect was further qualified by a significant learning orientation by cross-group friendship interaction. For participants with greater numbers of outgroup friends (1 *SD* above the mean), learning orientation did not significantly predict interest, $B_{\text{(simple slope)}} = -2.06$, $t\,(40) = -1.25$, $p = .22$; however, for participants with fewer outgroup friends (1 *SD* below the mean), learning orientation predicted significantly greater interest in intergroup contact, $B_{\text{(simple slope)}} = 3.17$, $t\,(40) = 2.00$, $p = .05$. This suggests that learning orientation may be especially important for promoting interest in intergroup contact among people with limited contact experience. No other interaction terms were significant.

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Appendix A

Items Used in Study 1

Learning orientation

1 When you meet people who have a different skin color than you, how much do you
2 think about what you can learn from them?
3 When you meet people who have a different skin color than you, how much do you try to learn about who they are and what they think?
4 When you meet people who have a different skin color than you, how much do you feel curious about who they are and what they are like?

Performance orientation

1 When you meet people who have a different skin color than you, how much do you wonder how you should act around them?
2 When you meet people who have a different skin color than you, how much do you worry what they will think of you?
3 When you meet people who have a different skin color than you, how much do you feel confused about how to act around them?

Comfort in intergroup contact

1 When you meet people who have a different skin color than you, how much do you feel comfortable around them?

Interest in intergroup contact

1 In general, how much would you like to become friends with kids who are [White/Black]?

Appendix B

Items Used in Study 2

Learning orientation

1 When you interact with people of a different ethnic/racial background than yours, how much do you focus on learning about them?
2 When you interact with people of a different ethnic/racial background than yours, how much are you interested in their ideas and what they have to say?
3 When you interact with people of a different ethnic/racial background than yours, how much do you feel curious about who they are?
4 When you interact with people of a different ethnic/racial background than yours, how much do you focus on how you can learn from experiences like this?
5 When you interact with people of a different ethnic/racial background than yours, how much do you try to lean about their perspective?
6 When you interact with people of a different ethnic/racial background than yours, how much do you think about how you can grow from this experience?

Performance orientation

1 When you interact with people of a different ethnic/racial background than yours, how much do you think about how to act around them?

2 When you interact with people of a different ethnic/racial background than yours, how much do you feel like you are being evaluated?
3 When you interact with people of a different ethnic/racial background than yours, how much do you wonder what they will think about you?
4 When you interact with people of a different ethnic/racial background than yours, how much do you choose your words carefully?
5 When you interact with people of a different ethnic/racial backgrounds than yours, how much do you try to make sure that you do not appear prejudiced?
6 When you interact with people of a different ethnic/racial background than yours, how much do you wonder if they understand you correctly?

Comfort in intergroup contact

1 In general, when you interact with people of a different racial or ethnic background, how comfortable do you feel?
2 In general, when you interact with people of a different racial or ethnic background, how much do you feel at ease?
3 In general, when you interact with people of a different racial or ethnic background, how much do you feel accepted?
4 In general, when you interact with people of a different racial or ethnic background, how nervous do you feel? (reverse-coded)
5 In general, when you interact with people of a different racial or ethnic background, how secure do you feel?
6 In general, when you interact with people of a different racial or ethnic background, how much do you feel trusted?

Interest in intergroup contact

1 How interested are you in getting to know people from ethnic/racial groups other than yours?
2 To what extent are you interested in joining a multi-cultural club in your church or school?
3 To what extent are you interested in living in a diverse neighborhood when you are an adult?