To Whom Can I Turn? Maintenance of Positive Intergroup Relations in the Face of Intergroup Conflict

Social Psychological and Personality Science 3(4) 462-470 © The Author(s) 2012 Reprints and permission: sagepub.com/journalsPermissions.nav DOI: 10.1177/1948550611426937 http://spps.sagepub.com



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Abstract

Intergroup conflict is a salient aspect of our social world, yet relatively little is known about the way intergroup conflicts affect subsequent intergroup interactions. The present research employed a daily diary methodology to examine how cross-group friendship affects intergroup approach and avoidance after intergroup conflict. After assessing the diversity and quality of participants' social networks, the daily social interactions of 60 participants were tracked for 10 days. Among individuals with low-quality or no cross-group friends, intergroup conflict on a preceding day predicted reductions in self-initiated intergroup interactions on the following day. However, individuals with close cross-group friends did not avoid intergroup interactions after intergroup conflict. This effect was mediated by the degree to which people with close cross-group friends sought social support from out-group members in the social interactions that followed intergroup conflict. The implications of these findings for maintenance of positive intergroup relations are discussed.

Keywords

intergroup contact, cross-group friendship, social support, intergroup conflict, intergroup avoidance

Research on intergroup contact shows us a rosy picture of the future of intergroup relations, with meta-analytic findings from hundreds of studies showing that intergroup contact generally improves intergroup attitudes (Pettigrew & Tropp, 2006). However, the quality of contact episodes are a major moderating factor in the relationship between contact and prejudice reduction (Paolini, Hewstone, Voci, Harwood, & Cairns, 2006; Pettigrew & Tropp, 2006). In the contexts of active intergroup violence, only high-quality intergroup contact (e.g., cooperative, pleasant) predicts intergroup attitudes; contact quantity is unrelated to prejudice among high-conflict groups (Islam & Hewstone, 1993; Paolini, Hewstone, Cairns, & Voci, 2004). As a prototypical example of high-quality contact, cross-group friendship has among the strongest relationships with reduced prejudice (Pettigrew & Tropp, 2006), and this relationship even holds true in intergroup contexts where most of the population has experienced the serious injury or death of a loved one as a result of conflict (Paolini et al., 2004). Despite experiencing severe hardship due to intergroup conflict, participants with cross-group friends reported low anxiety about interacting with out-group members and low prejudice (Paolini et al., 2004). These findings imply that cross-group friendship provides a buffer between negative intergroup experiences and intergroup attitudes. The goal of the present research is to explore the mechanism through which people with cross-group friends maintain positive intergroup orientations in the face of negative intergroup experiences.

Coping With Negative Intergroup Experiences

In daily life, negative intergroup experiences will inevitably occur, even among people with cross-group friends. In fact, cross-group friendship provides more opportunity for intergroup interaction which also provides more opportunities for intergroup conflict. Assuming that cross-group friendship increases the likelihood of intergroup conflict, then how are positive intergroup relations sustained? The stress and coping framework (Blascovich, Mendes, Tomaka, Salomon, & Seery, 2003; Lazarus & Folkman, 1984; Trawalter, Richeson, & Shelton, 2009) provides a theoretical model that may answer this question.

Intergroup conflict can be conceptualized as a stressor that occurs during an intergroup interaction, and we know that responses to stress vary between situations. According to the model of Lazarus and Folkman (1984), how you respond to a stressful situation depends on your appraisal of (1) the demands

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Elizabeth Page-Gould, Psychology Department, University of Toronto Scarborough, 1265 Military Trail, Toronto, ON MIC 1A4, Canada Email: elizabeth.page-gould@utsc.utoronto.ca of the situation and (2) your resources for handling the situation. If you appraise your resources to exceed the situational demands, then you will respond with positive, approach-related coping strategies. If you appraise the demands as exceeding your resources, then you will respond with threatened, avoidance-related coping strategies (Blascovich et al., 2003; Lazarus & Folkman, 1984). Recently, the stress and coping model has been applied to the context of intergroup interaction (Trawalter et al., 2009). Trawalter and colleagues emphasized that people who perceive intergroup interactions as too demanding will exhibit avoidant behaviors, whereas people who have ample resources for interacting with out-group members will exhibit approach-related behaviors during the interaction. To the extent that people with crossgroup friends have more resources for intergroup interactions in general-and perhaps intergroup conflict specifically-then cross-group friendship should predict engagement with outgroup members in response to intergroup stressors.

There are at least three ways in which cross-group friendship should equip people with resources for intergroup stress. People with cross-group friends have relatively high levels of intergroup contact, which provides experience and social skills specific to intergroup interactions. Indeed, intergroup contact predicts physiological responses during intergroup interactions that are related to approach and engagement (Blascovich, Mendes, Hunter, Lickel, & Kowai-Bell, 2001) and speedy physiological recovery after a stressful intergroup interaction (Page-Gould, Mendes, & Major, 2010). From a social cognitive perspective, cross-group friends are positive out-group exemplars that can be brought to mind to negate the impact of negative intergroup experiences (Mendoza-Denton, Page-Gould, & Pietrzak, 2006). The closer the friendship is, the more chronically accessible the friend should be in working memory (Andersen, Glassman, Chen, & Cole, 1995). Supporting this idea, priming a close cross-group friend elicited adaptive hormonal responses during interactions with out-group strangers (Page-Gould, Mendoza-Denton, Alegre, & Siy, 2010). Most importantly, after an intergroup conflict is over, people with cross-group friends have a source of social support that is uniquely relevant to the source of the problem. Social support is a fundamental component of close relationships (Gottlieb, 1985) and has broad implications for psychological resilience and physical health (Eisenberger, Taylor, Gable, Hilmert, & Lieberman, 2007; Taylor, 2007). In the context of intergroup conflict, social support may be the key factor that mitigates the impact of negative intergroup experiences on intergroup attitudes and behavior. As such, it is hypothesized that people with cross-group friends will respond to negative intergroup experiences by engaging with out-group members for social support after negative intergroup experiences.

The Present Research

To understand how people with cross-group friends maintain positive intergroup orientations in the face of negative intergroup experiences, the present research tracked social

interactions for 10 days. A key goal was to examine how negative intergroup interactions-operationalized as intergroup conflict—affected approach and avoidance of the intergroup interactions that followed. Based on both theory (Paolini et al., 2006; Trawalter et al., 2009) and evidence (Dovidio, Gaertner, Kawakami, & Hodson, 2002; Plant & Butz, 2006; Plant & Devine, 2003) that avoidance is a common response to negative intergroup experiences, it is hypothesized that the typical person will respond to intergroup conflict by avoiding future intergroup interactions. However, individuals who have resources to cope with intergroup conflict should not exhibit patterns of intergroup avoidance after intergroup conflict but rather engagement (Trawalter et al., 2009). The degree to which people with cross-group friends seek out intergroup social support was explored as a possible coping mechanism through which positive intergroup relations can be maintained in the face of intergroup conflict.

This research contributes to the literature in a number of ways. For one, the population sampled was very ethnically diverse relative to most samples in intergroup relations research (c.f., Shelton, 2000). Thus, our results should have relatively high external validity for interethnic relations and hopefully intergroup processes, on the whole. Another strength is the use of a diary approach to longitudinal contact research. Almost all research on intergroup contact has viewed contact in an amalgamated, trait-like sense. The present study measured experiences during each contact episode to examine intergroup contact from an atomic vantage point.

Method

Participants

A mixed community and student sample of 60 participants (50.0% community; 58.3% female) were recruited from the Scarborough neighborhood of Toronto, Ontario, Canada, and the University of Toronto Scarborough campus. The mean age of this sample was 23.5 years (standard deviation [SD] = 8.1) and the mean household income was \$46,661.55 CAD (median [Mdn] = \$33,000). This sample was ethnically diverse, reflecting the Scarborough community: 33.3% East Asian, 30.0%South Asian/South East Asian, 15.0% European/White, 10.0% African/Black/Caribbean, 6.7% Multiracial, 3.3% Arab/Middle Eastern, and 1.7% Latino/Latin American. Participants were recruited through flyers on campus, Toronto Craigslist, and the Scarborough Mirror newspaper. The only eligibility requirement was nightly Internet access. Participants were compensated with \$30 upon study completion. Sixty-one participants were initially recruited, but one student was excluded from the analyses because she refrained from providing the ethnicities of any friends or interaction partners.

Procedure and Materials

Information session. Participants attended an initial information session in the laboratory. They were given paper copies of the diary surveys to have as a reference, and each survey item was briefly explained. "Social interaction" was defined as any dyadic exchange with another person lasting 10 min or longer (Brissette & Cohen, 2002). "Social support" was defined as being akin to helping in social interactions and some examples were given. These definitions were given to the participants with the goal of increasing the reliability and validity of the diary measures. After participants asked questions about the diary items, they completed a questionnaire that assessed their ethnicity and close social network. E-mail addresses were also collected to facilitate nightly distribution of diary surveys.

Ethnicity. Ethnicity was reported with an open-ended item to increase the accuracy of ethnic categorization. Open-ended responses were coded into broader racial categories using Google Refine 2.0. The online supplement to this article contains an exhaustive list of the responses provided for ethnicity items in the study and the racial categories to which they were assigned. This method of recording ethnicity was used for the participant's ethnicity, their friends' ethnicities, and the ethnicities of social interaction partners. The racial categories were used to classify friends and social interaction partners as "in-group" or "out-group."

Cross-group friendship quality. Cross-group friendship quality was measured with a social network questionnaire (Smith, 2002). Participants listed six people whom they considered to be their closest friends. Next, participants were asked to indicate how close they felt to each friend on a 7-point Likerttype scale ranging from not at all to extremely close. Finally, participants indicated the age, sex, and ethnicity of each friend. Cross-group friendship quality was calculated by summing closeness responses for all cross-ethnic friends (Page-Gould, Mendoza-Denton, et al., 2010), so that higher values represent having many close cross-group friends and lower scores represent participants with no cross-group friends or a few, nonclose cross-group friends. This method of quantifying the quality of cross-group friendship is preferable to taking the mean closeness with cross-group friends¹—which would capture the closeness of cross-group friendships independent of the quantity of cross-group friends-because past research has demonstrated that both the quantity and quality of cross-group friends must be considered together to distinguish when cross-group friendship leads to better or worse intergroup attitudes (Hunter & Elias, 1999). Across all the friends, closeness ratings were reliable ($\alpha = .82$).

Daily diaries. For 10 days beginning the evening of the day after the information session, a script programmed in Perl 5.10 e-mailed personalized URLs to participants at 5:00 p.m. Participants were told they should complete the diaries by the end of the night. In addition to an overall survey about participants' mood and health habits that day, participants completed a social interaction survey for every social interaction that met the conditions explained during the information session (i.e., dyadic exchange ≥ 10 min). The social interaction survey was modeled after retrospective diary surveys used to capture social interactions in previous research (Reynolds et al., 2006). Three metrics were extracted for both in-group and intergroup interactions: (1) initiation of social interaction by the participant; (2) interactions involving conflict; (3) social support seeking after conflict. All participants who attended the information session completed the study (0% attrition), and the compliance rate for completing each diary was good (M = 8.78 diaries/participant, SD = 1.46). In total, 513 days were reported out of the total possible 600 days.

Initiation. Participants reported who initiated each social interaction by responding to the question, "Who initiated the interaction?" with one of four options: "Myself," "Other Person," "Mutual/Both," or "Neither." A social interaction was considered to be self-initiated when a participant chose the "Myself" option, because this response reflects social interactions that the participant was motivated to have. The number of in-group and intergroup interactions that the participants, for initiation of both intergroup interactions (average $r_i = .890$) and in-group interactions (average $r_i = .780$).

Interpersonal conflict. Conflict during each interaction was assessed with the item, "During this interaction was there any conflict?" Responses were binary (0 = no, 1 = yes). The number of conflicts that occurred during in-group and intergroup interactions were counted each day. These counts were reliable within participant for both intergroup conflicts (average $r_i = .903$) and in-group conflicts (average $r_i = .915$).

Post-conflict support seeking. Social support seeking was assessed with the item, "Did either you or the other person seek social support?" Participants responded by choosing, "Yes, I did," "Yes, the other person did," "Yes, we both did," or "No, no one did," and the "Yes I did" response was considered to represent unilateral support seeking during the interaction. To capture processes that occur directly after intergroup conflict, intergroup support seeking was calculated by summing the number of intergroup interactions in which social support was sought over two time periods: (1) the intergroup interactions that occurred after the first intergroup conflict of the day and (2) during all intergroup interactions on the next day. If there were no intergroup conflicts on a particular day, then a complementary measure of intergroup support seeking was calculated by counting the intergroup interactions in which social support was sought after the first intergroup interaction of the day and during all intergroup interactions on the next day. Post-conflict support seeking behavior was reliable from day to day within participants for support sought from both out-group members (average $r_i = .727$) and in-group members (average $r_i = .867$).

Results

Analytic Strategy

Since each participant completed multiple diary surveys, the longitudinal design of the study violated the assumption of

independent residuals required for a regression analysis. Therefore, multilevel modeling was used because this analysis can account for dependence between repeated measurements. Specifically, the lme function of R 2.10 was used to run a 2-level model with a random intercept for each participant, using an unstructured covariance matrix and the "between–within" method of estimating degrees of freedom (Schluchter & Elashoff, 1990).

Since the goal of this study was to predict future intergroup behavior based on the intergroup interactions that occurred the day before, the data set was arranged for a lagged analysis by having both "lagged" and "current" variables for the dependent variable (i.e., intergroup initiation) and a lagged variable for intergroup conflict. For example, the lagged variable for intergroup initiation was the sum of self-initiated intergroup interactions on days 1–9 and the current variable for intergroup initiation was the sum of selfinitiated intergroup interactions on days 2–10, such that each participant had 9 rows of data.

The lagged intergroup initiation variable was used as a covariate to assess change in intergroup initiation from one day to the next. Diary day was also used as a covariate to account for any effects related to repeated measurements. Given the diversity of the sample, the demographic variables of race, age, sex, income, and student status were used as covariates. Since there were 7 racial categories, race was included as 6 dummy variables with the majority group, East Asians, being the comparison group. Finally, the total number of social interactions and in-group conflicts from the current day were used as covariates to ensure the results reflected effects of intergroup conflict and cross-group friendship quality above and beyond the effects of general sociability and propensity for conflict, respectively. All covariates² and predictors were mean centered prior to being included in the model.

Preliminary Analyses

Fewer intergroup interactions (M = 41.3%) were reported than in-group interactions (M = 58.7%), t(512) = -5.89, p < .001. Conflict was equally likely during intergroup (19.1%) and in-group interactions (19.5%), t(131) = 1.47, p = .144. The sample average of cross-group friends were about two cross-group friends among the six closest friends (M = 1.92 cross-group friends, SD = 1.84). However, more than one third of the sample listed only in-group members as their closest friends (36.7%) and 3 participants named only out-group members as their closest friends (5%), with the remaining 58.3% of the sample reporting an average of 2.69 cross-group friends among their six closest friends (SD = 1.23). Among the 35 participants who named at least one same-group and one cross-group friend, there was no difference between the average closeness of same-group (M =5.49, SD = 1.13) and cross-group friends (M = 5.44, SD= 0.92), t(34) = -0.25, p = .804.

Number of intergroup conflicts was modeled as a function of cross-group friendship quality and the covariates. As

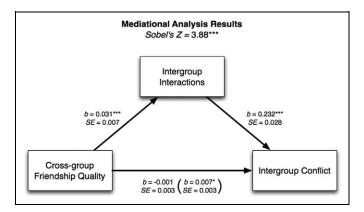


Figure 1. Mediational model of the role of opportunity for intergroup interaction in the relationship between cross-group friendship quality and cross-group conflict. Unstandardized regression coefficients and associated standard errors are reported along the paths they model. Statistics reported within parentheses represent the direct effect prior to adding the mediating term. *p < .05, **p < .01, **p < 0.01.

suspected, cross-group friendship quality predicted more intergroup conflict, b = 0.007, SE = 0.003, t(48) = 2.02, p = .049, but this relationship was explained by the fact that people with close cross-group friends were more likely to have intergroup interactions, Sobel's Z = 3.88, p < .001 (Figure 1). That is, cross-group friendship quality predicted more intergroup interactions, b = 0.031, SE = 0.007, t(48) = 4.41, p < .001, and the quantity of intergroup interactions predicted more intergroup conflicts, b = .232, SE = 0.028, t(449) = 8.42, p < .001, rendering the relationship between cross-group friendship quality and intergroup conflicts nonsignificant when the quantity of intergroup interactions was taken into account, b = -0.0005, SE = 0.003, t(48) = -0.166, p = 0.869.

Intergroup Initiation After Intergroup Conflict

Intergroup initiation was modeled as a function of cross-group friendship quality and intergroup conflict³ on the preceding day, controlling for the covariates. This revealed a main effect for intergroup conflict to predict less intergroup initiation on the next day, b = -0.142, SE = 0.067, t(447) = -2.13, p = .034, and a trend for cross-group friendship quality to predict more intergroup initiation, b = 0.008, SE = 0.004, t(48) = 1.79, p = .080. As hypothesized, cross-group friendship quality moderated the effect of intergroup conflict, b = 0.009, SE = 0.004, t(447) =2.19, p = .029 (Figure 2). Simple effects were tested by examining the slopes of intergroup conflict at 1 SD above and below the mean of cross-group friendship quality (Aiken & West, 1991). Participants with low cross-group friendship quality initiated less intergroup interactions as a function of intergroup conflict experienced on the previous day, b = -0.239, SE = 0.096, t(447) =-2.48, p = .014. However, participants with high-quality crossgroup friendships showed no change in intergroup initiation as a function of intergroup conflict, b = -0.045, SE = 0.060, t(447) = -0.750, p = .454.

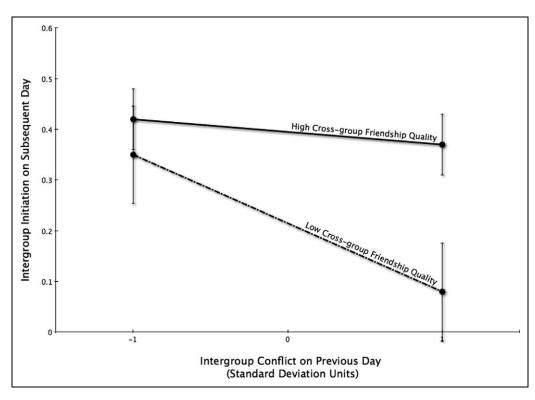


Figure 2. Intergroup initiation as a function of intergroup conflict on the previous day and cross-group friendship quality. Least squares estimates are plotted at I standard deviation (SD) above the mean (solid line) and I SD below the mean (dashed line) of cross-group friendship quality, with error bars representing standard errors.

Role of Intergroup Social Support

To examine whether intergroup support seeking explained why cross-group friendship quality moderated the effects of prior intergroup conflict on subsequent intergroup avoidance, a mediated moderation analysis was conducted (Krull & Mackinnon, 2001; Muller, Judd, & Yzerbyt, 2005). The results of this analysis are presented in Table 1. Intergroup support seeking was predicted by an interaction between intergroup conflict³ and cross-group friendship, b = 0.020, SE = 0.006, t(447) = 3.21, p = .001 (Figure 3). Simple effects testing showed that intergroup conflict predicted more intergroup support seeking among people with close cross-group friends, b = 0.239, SE = 0.090, t(447) =2.65, p = .008, whereas intergroup conflict was unrelated to intergroup support seeking among people with low cross-group friendship quality, b = -0.197, SE = 0.146, t(447) = -1.35, p = .178. Moreover, intergroup initiation was predicted by an interaction between intergroup support seeking and cross-group friendship quality, b = -0.006, SE = 0.002, t(445) = -3.84, p < .001, and the inclusion of themediational terms rendered the original interaction between intergroup conflict and cross-group friendship quality nonsignificant, b = 0.005, SE = 0.003, t(445) = 1.53, p =.128. This analysis shows that intergroup support seeking after an intergroup conflict explained why participants with high-quality cross-group friendships did not avoid intergroup interactions on the days that followed intergroup conflict, Sobel's Z = 2.46, p = .014.

Discussion

The data reported here illuminate a process whereby individual episodes of intergroup contact feed into subsequent intergroup behavior. Among people who did not have close friendships with out-group members, intergroup conflict had detrimental effects on subsequent intergroup interactions. They did not approach out-group members for help after a conflict, and this behavior carried over to avoiding intergroup interactions as a whole the next day. However, people who had close crossgroup friendships turned to out-group members as a source of social support after intergroup conflicts and, as a result, their intergroup conflicts did not affect their willingness to approach out-group members.

These results are consistent with the stress and coping model that was recently extended to the context of intergroup interaction (Trawalter et al., 2009) and support the hypothesis that cross-group friends provide resources for coping with stressful intergroup interactions. People who have diverse friendship networks can receive social support from out-group members. By comparison, people without close cross-group friends may not have sought social support from out-group members after intergroup conflict because they did not know out-group

Table I	 Results 	of Mediated	Moderation	Analysis
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Covariates	Original Model $(DV = Intergroup \ Initiation)$		$\begin{array}{l} \mbox{Mediator Model} \\ \mbox{(DV = ISS)} \end{array}$		Mediated Moderation Model (DV = Intergroup Initiation)	
	Ь	t	Ь	t	Ь	t
Intercept	0.181	2.38*	0.599	4.90***	-0.068	-I.20
South Asian	0.103	1.01	0.175	1.06	0.032	0.43
White	-0.019	-0.14	-0.097	-0.44	0.044	0.45
Black	0.311	1.65	0.289	0.95	0.172	1.27
Latino	-0.048	-0.15	0.218	0.42	-0.140	-0.6I
Arab	0.832	3.71***	1.17	3.24**	0.292	I.77 [†]
Multiracial	0.402	2.04*	0.693	2.19*	0.193	1.34
Sex	-0.05 l	-1.16	-0.012	-0.17	-0.057	-1.79^{\dagger}
Student	0.024	0.50	0.106	1.38	-0.016	-0.46
Income	0.000	-0.02	-0.000	-0.23	0.000	0.16
Age	-0.005	-0.72	0.009	0.76	-0.009	-1.72^{\dagger}
In-group conflict	-0.060	-1.27	-0.020	-0.29	-0.056	- I.48
Interactions	0.099	3.51***	0.132	3.10***	0.044	1.97*
INIT-PREV	-0.005	-0.12	0.092	1.30	-0.02 l	-0.55
Diary day	-0.007	-0.74	0.001	0.04	-0.007	-0.90
Predictors						
CON	-0.I42	-2.13*	0.021	0.21	-0.169	-3.18**
CFQ	0.008	I.79 [†]	0.036	5.05***	-0.00 I	-0.15
CON:CFQ	0.009	2.19*	0.020	3.21**	0.005	1.53
ISS					0.439	16.54***
CFQ:ISS					-0.006	-3.84 ***

CON = intergroup conflict; CFQ = cross-group friendship quality; DV = dependent variable; INIT-PREV = intergroup initiation on previous day; ISS = intergroup support seeking. Sex was coded where male = 1 and female = -1, and student was coded where student = 1 and community participant = -1. [†]p < .10. *p < .05. **p < .01.

members whom they felt comfortable approaching for help. It is possible that these findings help explain why cross-group friendships are more likely to dissolve during the first 6 weeks of the friendship than in-group friendships (Hallinan & Williams, 1987). If someone is developing a new cross-group friendship but does not have any other cross-group friends, an interpersonal conflict with the new friend may be a stressor for which social support is lacking. In the case of in-group friendships, however, an interpersonal conflict with a new friend may not be as threatening because other in-group members can provide social support.

The present research dovetails nicely with the idea that different forms of intergroup contact may operate best in a sequential manner instead of being considered as parallel processes (Crisp & Turner, 2009; Pettigrew, 2008). Given that people without high-quality cross-group friendship avoided out-group members after intergroup conflict, negative intergroup interactions may hinder the development of cross-group friendships among people who have none. Although the present findings also showed that people who have cross-group friendships are able to overcome intergroup conflicts readily, this resource may be hard to develop. Recent extensions of contact theory that focus on nondirect contact (e.g., Turner, Crisp, & Lambert, 2007; Wright, Aron, McLaughlin-Volpe, & Ropp, 1997) provide a bridge between these processes. For example, research on imagined intergroup contact shows that simply imagining oneself interacting with an out-group member is sufficient

for increasing interest in future intergroup interactions (Turner et al., 2007). The reliability of imagined contact effects (e.g., Crisp & Turner, 2009; Turner & Crisp, 2010; Turner et al., 2007) may be partially due to the control that an individual has over the positivity of their imagined contact experience, whereas direct intergroup contact has a higher probability of going awry because the behavior of an interaction partner is essentially a random variable. Taken together, nondirect forms of contact represent methods through which people may be motivated to approach out-group members and form cross-group friendships, and then these friendships can provide resources for maintaining positive intergroup orientations once they are established.

An interesting finding from this research is that most intergroup interactions were relatively benign. Only one out of five social interactions involved conflict, irrespective of whether the interactions were intra- or interethnic. While intergroup interactions are more likely to involve anxiety and threat (Dovidio et al., 2002; Mendes, Blascovich, Lickel, & S. Hunter, 2002; Stephan & Stephan, 1985; Trawalter et al., 2009), most intergroup interactions are at least conflict free. These findings partially explain why research on intergroup interaction tends to paint a darker picture of intergroup contact, whereas research that studies prior contact as an individual difference finds powerful effects on intergroup attitudes (Pettigrew & Tropp, 2006). Although any given instance of intergroup interaction has the potential to be uncomfortable, intergroup contact is generally good when taken in aggregate.

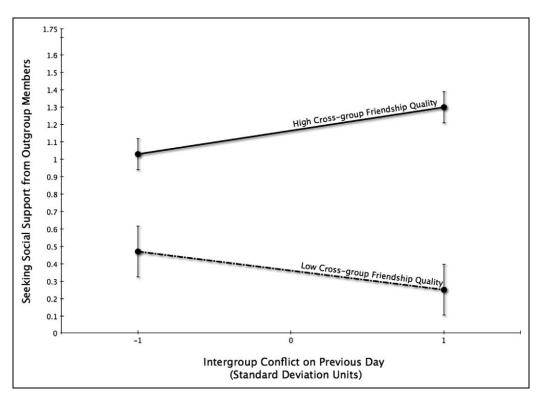


Figure 3. Intergroup support seeking as a function of intergroup conflict on the previous day and cross-group friendship quality. Least squares estimates are plotted at one standard deviation above the mean (solid line) and I standard deviation (SD) below the mean (dashed line) of cross-group friendship quality, with error bars representing standard errors.

Limitations and Future Directions

The greatest limitation to the current work is lack of data on with whom, specifically, the participants interacted, and this presents at least two avenues for future research. It would be interesting to know whether people with cross-group friends turn to *those friends* for social support, or are just more likely to view out-group members as potential sources of social support, irrespective of whether those out-group members are close friends. Another key question is: since people with cross-group friends were more likely to get into intergroup conflicts, were these conflicts with their cross-group friends or with nonclose out-group members? Hopefully, future research will collect richer data on each interaction to more deeply understand how the nature of each intergroup interaction shapes future interactions.⁴

Although most intergroup contact research seeks to answer the question of whether intergroup *attitudes* are shaped by intergroup contact (Allport, 1954; Pettigrew & Tropp, 2006), only intergroup behaviors were measured in this study. Nonetheless, the present findings showed a link between intergroup interactions and subsequent intergroup approach and avoidance, which suggests that daily intergroup interactions may shape generalized attitudes toward out-groups. All the same, a promising question for future research is how episodes of intergroup contact shape intergroup attitudes on a daily basis. This could be assessed by measuring intergroup attitudes each night as a function of that day's intergroup interactions. The use of a retrospective diary paradigm means that the social interactions reported were not necessarily fresh in the participants' minds. There is no doubt that the use of experience sampling methodologies would reduce noise in the data. In addition, the retrospective nature of the diaries necessitated that only basic, single-item questions could be collected for each interaction (e.g., presence of conflict, partner's demographics), so experience sampling methodologies may be able to increase the resolution with which we understand how one contact experience feeds into the next.

Conclusion

In a seminal review, Pettigrew (1998) underscored the importance of longitudinal research on intergroup contact. The researchers that answered this call have demonstrated the power of intergroup contact to shape intergroup attitudes and behavior over long time periods (Brown, Eller, Leeds, & Stace, 2007; Eller & Abrams, 2004; Levin, van Laar, & Sidanius, 2003; Schrieff, Tredoux, Finchilescu, & Dixon, 2010). The present research focused on specific intergroup interactions within a smaller time period to answer a different question. The results showed that people with cross-group friends maintain positive intergroup orientations in the face of negative intergroup experiences because they draw on out-group members for social support. Altogether, this research highlights the dynamic daily landscape of intergroup contact.

Acknowledgments

I deeply appreciate the assistance of Jeffrey Wong, Marian Claudio, Martin Lee, and Warda Qazi. I also thank Michael Inzlicht, Geoff MacDonald, Alison Chasteen, Stephanie Spielman, Rupert Brown, and an anonymous reviewer for their feedback and insights.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Social Sciences and Humanities Research Council of Canada; Canada Foundation for Innovation; Ontario Ministry of Research and Innovation; Connaught Fund.

Notes

- 1. The results are similar if the average closeness with cross-group friends (mean closeness) is used instead of cross-group friendship quality. Intergroup initiation was predicted by an interaction between intergroup conflict and mean closeness, b = 0.052, SE = 0.024, t(447) = 2.15, p = .032. Intergroup support seeking was predicted by an interaction between intergroup conflict and mean closeness, b = 0.123, SE = 0.037, t(447) = 3.37, p = .001. Finally, the interaction between intergroup support seeking and mean closeness predicted intergroup initiation, b = -0.038, SE = 0.010, t(445) = -3.85, p < .001, reducing the interaction of intergroup conflict and mean closeness to nonsignificance, b = 0.027, SE = 0.020, t(445) = 1.37, p = .172, Sobel's Z = 2.50, p = .012.
- 2. Although they are theoretically important covariates, they are not necessary for the results to be significant. Without using any covariates, intergroup initiation was significantly predicted by an interaction between intergroup conflict and cross-group friendship quality, b = 0.008, SE = 0.004, t(451) = 2.02, p = .044. Intergroup support seeking was predicted by an interaction between intergroup conflict and cross-group friendship quality, b = 0.019, SE = 0.006, t(451) = 3.04, p = .003. The interaction between intergroup support seeking and cross-group friendship quality predicted intergroup initiation, b = -0.006, SE = 0.002, t(449) = -4.01, p < .001, reducing the interaction of intergroup conflict and cross-group friendship quality to nonsignificance, b = 0.005, SE = 0.003, t(449) = 1.54, p = 0.125, Sobel's Z = 2.42, p = .015.
- 3. As an ancillary analysis, a parallel model was run to test the effects of in-group conflict on subsequent intergroup initiation, controlling for intergroup conflict. In contrast to the results with intergroup conflicts, there was no main effect of in-group conflict, b = -0.063, SE = 0.049, t(447) = -1.28, p = .201, nor an interaction between ingroup conflict and cross-group friendship quality, b = -0.03, SE = 0.005, t(447) = -0.69, p = .493. In-group conflict was also unrelated to intergroup support seeking either directly, b = -0.071, SE = 0.007, t(448) = -0.58, p = .563, or as moderated by cross-group friendship quality, b = -0.001, SE = 0.007, t(448) = -0.15, p = .877.
- 4. Although the data cannot individually identify interaction partners, participants reported how close they felt to each interaction partner, allowing a crude test of these questions. Cross-group friendship

quality was unrelated to closeness with interaction partners from intergroup conflicts, b = 0.018, SE = 0.029, t(45) = 0.624, p =.536, but cross-group friendship quality was strongly related to closeness with all intergroup interaction partners, b = 0.195, SE =0.039, t(49) = 5.08, p < .001. Moreover, cross-group friendship quality predicted the closeness of out-group members from whom participants sought social support, b = 0.049, SE = 0.017, t(38) =2.97, p = .005. These post hoc analyses suggest that people with cross-group friends were not more likely to fight with out-group friends, but they were more likely to seek help from them.

References

- Aiken, L. S., & West, S. G. (1991). Multiple regression: Testing and interpreting interactions. Thousand Oaks, CA, US: SAGE.
- Allport, G. W. (1954). The nature of prejudice. Reading, MA, US: Addison-Wesley.
- Andersen, S. M., Glassman, N. S., Chen, S., & Cole, S. W. (1995). Transference in social perception: The role of chronic accessibility in significant-other representations. *Journal of Personality and Social Psychology*, 69, 41-57.
- Blascovich, J., Mendes, W. B., Hunter, S. B., Lickel, B., & Kowai-Bell, N. (2001). Perceiver threat in social interactions with stigmatized others. *Journal of Personality and Social Psychology*, 80, 253-267.
- Blascovich, J., Mendes, W. B., Tomaka, J., Salomon, K., & Seery, M. (2003). The robust nature of the biopsychosocial model challenge and threat: A reply to Wright and Kirby. *Personality and Social Psychology Review*, 7, 234-243.
- Brissette, I., & Cohen, S. (2002). The contribution of individual differences in hostility to the associations between daily interpersonal conflict, affect, and sleep. *Personality and Social Psychology Bulletin*, 28, 1265-1274.
- Brown, R., Eller, A., Leeds, S., & Stace, K. (2007). Intergroup contact and intergroup attitudes: A longitudinal study. *European Journal* of Social Psychology, 37, 692-703.
- Crisp, R. J., & Turner, R. N. (2009). Can imagined interactions produce positive perceptions?: Reducing prejudice through simulated social contact. *American Psychologist*, 64, 231-240.
- Dovidio, J. F., Gaertner, S. L., Kawakami, K., & Hodson, G. (2002). Why can't we just get along? Interpersonal biases and interracial distrust. *Cultural Diversity and Ethnic Minority Psychology*, 8, 88-102.
- Eisenberger, N. I., Taylor, S. E., Gable, S. L., Hilmert, C. J., & Lieberman, M. D. (2007). Neural pathways link social support to attenuated neuroendocrine stress responses. *NeuroImage*, 35, 1601-1612.
- Eller, A., & Abrams, D. (2004). Come together: Longitudinal comparisons of Pettigrew's reformulated intergroup contact model and the common ingroup identity model in Anglo-French and Mexican-American contexts. *European Journal of Social Psychology*, 34, 229-256.
- Gottlieb, B. H. (1985). Social networks and social support: An overview of research, practice, and policy implications. *Health Education & Behavior*, 12, 5-22.
- Hallinan, M. T., & Williams, R. A. (1987). The stability of students' interracial friendships. *American Sociological Review*, 52, 653-664.

- Hunter, L., & Elias, M. J. (1999). Interracial friendships, multicultural sensitivity, and social competence: How are they related? *Journal* of Applied Developmental Psychology, 20, 551-573.
- Islam, M. R., & Hewstone, M. (1993). Dimensions of contact as predictors of intergroup anxiety, perceived out-group variability, and out-group attitude: An integrative model. *Personality and Social Psychology Bulletin*, 19, 700-710.
- Krull, J. L., & Mackinnon, D. P. (2001). Multilevel modeling of individual and group level mediated effects. *Multivariate Behavioral Research*, 36, 249-277.
- Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. New York, NY, US: Springer Publishing Company.
- Levin, S., van Laar, C., & Sidanius, J. (2003). The effects of ingroup and outgroup friendship on ethnic attitudes in college: A longitudinal study. *Group Processes & Intergroup Relations*, 6, 76-92.
- Mendes, W. B., Blascovich, J., Lickel, B., & Hunter, S. (2002). Challenge and threat during social interactions with White and Black men. *Personality and Social Psychology Bulletin*, 28, 939-952.
- Mendoza-Denton, R., Page-Gould, E., & Pietrzak, J. (2006). Mechanisms for coping with status-based rejection expectations. In S. Levin & C. van Laar (Eds.), Stigma and group inequality: Social psychological perspectives, The Claremont symposium on Applied Social Psychology (pp. 151-169). Mahwah, NJ: Lawrence Erlbaum Associates.
- Muller, D., Judd, C. M., & Yzerbyt, V. Y. (2005). When moderation is mediated and mediation is moderated. *Journal of Personality and Social Psychology*, 89, 852-863.
- Page-Gould, E., Mendes, W. B., & Major, B. (2010). Intergroup contact facilitates physiological recovery following stressful intergroup interactions. *Journal of Experimental Social Psychology*, 46, 854-858.
- Page-Gould, E., Mendoza-Denton, R., Alegre, J. M., & Siy, J. O. (2010). Understanding the impact of cross-group friendship on interactions with novel outgroup members. *Journal of Personality* and Social Psychology, 98, 775-793.
- Paolini, S., Hewstone, M., Cairns, E., & Voci, A. (2004). Effects of direct and indirect cross-group friendships on judgments of Catholics and Protestants in Northern Ireland: The mediating role of an anxiety-reduction mechanism. *Personality and Social Psychology Bulletin*, 30, 770-786.
- Paolini, S., Hewstone, M., Voci, A., Harwood, J., & Cairns, E. (2006). Intergroup contact and the promotion of intergroup harmony: The influence of intergroup emotions. In Brown, Rupert; Capozza, Dora (2006). Social Identities: Motivational.
- Pettigrew, T. F. (1998). Intergroup contact theory. Annual Review of Psychology, 49, 65-85.
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychol*ogy, 90, 751-783.

- Plant, E. A., & Butz, D. A. (2006). The causes and consequences of an avoidance-focus for interracial interactions. *Personality and Social Psychology Bulletin*, 32, 833-846.
- Plant, E. A., & Devine, P. G. (2003). The antecedents and implications of interracial anxiety. *Personality and Social Psychology Bulletin*, 29, 790-801.
- Reynolds, K. A., Helgeson, V. S., Seltman, H., Janicki, D., Page-Gould, E., & Wardle, M. (2006). Impact of interpersonal conflict on individuals high in unmitigated communion. *Journal of Applied Social Psychology*, *36*, 1595-1616.
- Schluchter, M. D., & Elashoff, J. T. (1990). Small-sample adjustments to tests with unbalanced repeated measures assuming several covariance structures. *Journal of Statistical Computation and Simulation*, 37, 69-87.
- Schrieff, L. E., Tredoux, C. G., Finchilescu, G., & Dixon, J. A. (2010). Understanding the seating patterns in a residence-dining hall: A longitudinal study of intergroup contact. *South African Journal* of Psychology, 40, 5-17.
- Shelton, J. N. (2000). A reconceptualization of how we study issues of racial prejudice. *Personality and Social Psychology Review*, 4, 374-390.
- Smith, T. W. (2002). Measuring inter-racial friendships. Social Science Research, 31, 576-593.
- Stephan, W. G., & Stephan, C. W. (1985). Intergroup anxiety. Journal of Social Issues, 41, 157-175.
- Taylor, S. E. (2007). Social support. In H. S. Friedman & R. C. Silver (Eds.), *Foundations of health psychology* (pp. 145-171). New York, NY, US: Oxford University Press.
- Trawalter, S., Richeson, J. A., & Shelton, J. N. (2009). Predicting behavior during interracial interactions: A stress and coping approach. *Personality and Social Psychology Review*, 13, 243-268.
- Turner, R. N., & Crisp, R. J. (2010). Imagining intergroup contact reduces implicit prejudice. *British Journal of Social Psychology*, 49, 129-142.
- Turner, R. N., Crisp, R. J., & Lambert, E. (2007). Imagining intergroup contact can improve intergroup attitudes. *Group Processes* & *Intergroup Relations*, 10, 427-441.
- Wright, S. C., Aron, A., McLaughlin-Volpe, T., & Ropp, S. A. (1997). The extended contact effect: Knowledge of cross–group friendships and prejudice. *Journal of Personality and Social Psychology*, 73, 73-90.

Bio

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