

How Intergroup Contact Shapes Intergroup Attitudes and Construals of Relations Between Ethnic Groups: Evidence From Bosnia and Herzegovina

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Two studies examined how intergroup contact in Bosnia-Herzegovina (BiH) corresponds with shifts in intergroup attitudes and broader construals of intergroup relations in society. In Study 1, youth in Bosnia-Herzegovina from diverse ethnic backgrounds ($n = 122$) responded to a survey about their contact experiences, intergroup attitudes, and perceptions of relations between ethnic groups in BiH. Study 1 demonstrated that among Bosnian youth, more frequent positive intergroup contact significantly predicted more positive attitudes toward ethnic outgroup members (e.g., outgroup trust, closeness, empathy, humanization, and willingness for future contact), but did not predict holding more positive broader construals of relations between ethnic groups in BiH (e.g., as enemies or allies). Study 2 used a pre–post design to replicate and extend these findings by evaluating the effects of a week-long “Peace Camp” Intervention that brought together youth from diverse ethnic backgrounds ($n = 43$). This study found that youth reported significantly more positive attitudes following the Peace Camp Intervention; however, there were no significant pre–post differences in youths’ construals of relations between ethnic groups. Taken together, these findings indicate that, in contexts of ethnic conflict, intergroup contact may have greater effects on measures that tap into intergroup attitudes toward ethnic outgroups than on measures that assess their broader construals of relations between groups in society.

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Public Significance Statement

Across two studies in Bosnia-Herzegovina (BiH)—one correlational and one pre–post comparison of survey responses from youth in Peace Camps—our research highlights that more frequent positive intergroup contact is more strongly associated with measures that tap individuals' own attitudes toward other ethnic groups (e.g., outgroup trust, empathy, humanization) than with their perceptions of broader intergroup construals (e.g., perceiving groups as allies or enemies). Our studies add to a body of literature indicating that intergroup contact is generally beneficial for creating more positive intergroup attitudes while also demonstrating the need for continued research that specifies if and how greater positive and negative contact experiences may inform broader construals of intergroup relations, especially when occurring in conflict or postconflict settings.

Keywords: intergroup contact, Bosnia and Herzegovina, conflict reconciliation, intergroup relations

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Intergroup contact theory remains a cornerstone for research on how to improve relations between groups (see Allport, 1954; Pettigrew, 1997). The basic premise is graceful in its simplicity and robust in its consistency: Greater contact between individuals from distinct ethnic, racial, and/or religious groups typically reduces intergroup prejudice (Pettigrew & Tropp, 2006). Generations of scientists have drawn from its insights and refined its contentions, seeking to better understand its functions and complexities, and grappling with its limitations (see Paolini et al., 2021; Pettigrew et al., 2011). Indeed, the role of intergroup contact in improving intergroup relations has continued to be examined and expanded in its capacity for application—from classroom exercises, to exchange programs, to peacebuilding interventions in conflict societies—all of which attempt to capture both its broad potential and boundaries of its effects.

As such, using contact as a tool for improving intergroup relations has required not only continued consideration of how contact may shape people's attitudes toward and relations with members of other groups, but also its potential to impact how people construe relations between groups more broadly in their society. This is perhaps no truer than in settings of entrenched conflict where intergroup relations continue to be marred by differences in group status, conflict narratives, and strategic political and social goals (Tropp, 2015). While existing literature has demonstrated that positive contact can improve personally held attitudes across several conflict contexts (e.g., McKeown & Taylor, 2017; Schroeder & Risen, 2016; Swart et al., 2011), relatively little work has distinguished between contact effects pertaining to individuals' own attitudes toward members of different groups, and their broader construals of how relations between groups exist in society. The current research emphasizes this distinction with the goal of understanding how the broader-reaching effects of contact experiences may be affected by contexts of protracted conflict.

Intergroup Attitudes and Construals of Intergroup Relations in Conflict Contexts

Only within the last few decades have researchers begun to investigate how social and psychological processes associated with contact may function differently in contexts with legacies of prolonged—and often violent—conflict, as compared to less volatile settings (e.g., Donno et al., 2021; Tropp, 2015; Uluğ & Cohrs, 2017; Wagner & Hewstone, 2012). As such, much more remains to be uncovered regarding how contact may contribute to shaping relations

between groups in contexts where group relations have been rooted in conflict. Conceptual distinctions are especially important to consider in complex conflict geographies such as Bosnia-Herzegovina (BiH), where several ethnic groups face long-standing and ongoing conflicts, and construals of relations between different groups vary widely across localities (United Nations Development Programme, 2021).

In the current research, we differentiate between assessment of individuals' own intergroup attitudes toward members of other groups (*intergroup attitude* measures) and their broader construals of relations between groups in society (*intergroup construal* measures), because of the distinct social and psychological processes that may be associated with each in conflict settings. Here, we define *intergroup attitude* measures as those that concern people's own attitudes regarding interactions across group lines and their perceptions of outgroup members. For example, in the context of BiH, research findings indicate that positive contact tends to be associated with greater personal readiness for reconciliation with outgroup members in the aftermath of ethnic violence (Biro et al., 2004), as well as a greater willingness to forgive outgroup members (Čehajić et al., 2008); likewise, contact-based peacebuilding initiatives have also been shown to lead to both short- and long-term changes in how positively outgroup members are viewed (Čehajić-Clancy et al., in press). Similar benefits of intergroup contact have also been observed in other conflict contexts, such as building greater trust between Palestinians and Jewish Israelis (Maoz & McCauley, 2011), and fostering greater willingness to forgive among Protestants and Catholics in Northern Ireland (Hewstone et al., 2006).

A related, yet separate, question concerns whether such contact-based interventions can shift broader understandings of relations between groups in society—assessed using measures of *intergroup construals*—and if so, to what degree. Particularly in conflict settings, one might question whether intergroup contact should contribute to shaping people's views of relations between groups at a societal level, beyond the realm of their own experiences and interactions with members of other groups. The notion that contact may compel people to reinterpret and reframe relations between their own group and other groups has gained prominence within the intergroup contact literature in recent decades (see, e.g., Frey & Tropp, 2006; Wright et al., 2017). For instance, contact has been shown not only to shift people's attitudes toward other groups at the individual level, but in the aggregate, it can also transform norms pertaining to intergroup relations in the broader social context (Christ et al., 2014). Contact can also contribute to

shaping people's understandings of their own group's position in society relative to other groups—including both groups with whom contact has occurred, and other groups not directly involved in the contact (e.g., Brewer, 2008; Dhont et al., 2014; Pettigrew, 1997; Verkuyten et al., 2022). Even in contexts grappling with legacies of violent conflict, contact may shift perceptions of competitive victimhood between groups and enhance willingness to acknowledge harm caused by one's own group onto other groups (Čehajić & Brown, 2010; Gilad et al., 2021), along with shaping views of outgroup members' intentions in ways that foster greater support for intergroup reconciliation (Tropp et al., 2017).

Despite these advances, the capacity for contact to effect meaningful change in construals of intergroup relations has understandably been questioned (see Dixon et al., 2005; Saguy et al., 2009). Especially given the historical focus on the reduction of prejudiced attitudes within the contact literature, there has been limited assessment of outcomes relevant to broader construals of intergroup relations, particularly within conflict settings. Though measured at the individual level, measures of *intergroup construals* tap into how groups are understood to relate to one another within the larger society, including whether people see groups as existing in conflict or in harmony (Dixon & Levine, 2012; Saguy et al., 2009; Tropp, 2015).

In distinguishing between intergroup attitudes and construals of group relations, our intention is not to offer rigid definitions of these concepts, but rather to envision the different kinds of contact outcomes that may (or may not) be relevant in conflict and postconflict settings. Considering the robust associations between positive intergroup contact and improved intergroup attitudes, alongside the more nuanced findings concerning relations between contact and intergroup construals, we expected to observe important differences in how contact corresponds with these two types of outcomes. Though positive contact contributes to changing personally held attitudes about outgroups in conflict settings, its ability to shift understandings of how groups relate to each other may be less attainable given prevailing social norms and conflict narratives that likely run counter to group members' experiences of positive intergroup contact (see Bar-Tal, 2007). Thus, in contexts such as BiH, we expected that having frequent positive contact experiences should be more strongly associated with people's intergroup attitudes than their intergroup construals.

Conflict Contexts and the Likelihood of Negative Contact

An additional challenge associated with pursuing intergroup contact as a peacebuilding strategy in conflict contexts is the potential for people from different groups to have unpleasant or unfriendly encounters (i.e., negative contact) as they engage with each other. Contexts marked by prolonged intergroup conflict—which may involve resource scarcity and heightened levels of threat, not to mention displacement and/or loss of life—face unique obstacles to creating conditions that would be conducive to facilitating positive intergroup contact (Wagner & Hewstone, 2012). Correspondingly, it is not surprising that negative intergroup contact may be a common occurrence in conflict or postconflict settings (Tropp, 2015).

Overall, although positive contact tends to occur with greater frequency, negative contact experiences tend to be more influential in shaping intergroup attitudes about the outgroup (Barlow et al., 2012; Graf et al., 2014; Graf & Paolini, 2016; Paolini et al., 2010, 2014). This makes sense because humans are especially likely to be

vigilant in response to perceived harm and threat to themselves and their groups (see Baumeister et al., 2001). Moreover, negative contact not only heightens the salience of group differences (Paolini et al., 2010), but heightened salience of group differences fuels greater perceptions of intergroup competition and threat (Wildschut & Insko, 2007), both of which align with overarching conflict narratives that drive intergroup tensions at a societal level (Bar-Tal, 2007). Because negative contact experiences are consistent with prevailing conflict narratives, they should reinforce construals of intergroup relations that highlight conflict, division, and separation between groups, rather than those that seek to find harmony or common ground (Tropp, 2015). Thus, when there have been long-standing intergroup conflicts, negative contact experiences should not only correspond with more negative intergroup attitudes, but they should also correspond with more negative construals of relations between the groups, in a manner consistent with the prevailing conflict narratives.

Peacebuilding in the Context of BiH

The sociopolitical context and history of BiH is a conflict context long fraught by ethnic divisions and power struggles (see Buzov, 2004). During World War II, Bosnia-Herzegovina was one of six republics that made up the Socialist Federal Republic of Yugoslavia founded in 1943. Following the end of the war, Yugoslavia saw a rise in ethnic nationalism in the aftermath of Tito's death in 1980, culminating in 1991 when Slovenia and Croatia declared their independence (Pinson & Mottahedeh, 1996). The ensuing conflict—with an estimated death toll of over 250,000 individuals (Čehajić et al., 2008)—was characterized by complex ethnic divisions and mass violence, war crimes, and tragic loss of life, exemplified by the Siege of Sarajevo and the Srebrenica massacre in BiH (Jagiello-Szostak & Kulska, 2020).

While the Dayton Peace Agreement of 1995 brought an end to the war, the agreement was viewed by many as codifying the political structures and constitutional amendments that resulted in divisive, identity-based politics. BiH remains a country gridlocked by ethnic segregation structurally embedded in the 1995 agreement (Čehajić et al., 2008; O'Brien, 2010) and complex layers of ethnic and religious affiliation (primarily Catholic Croat at approximately 15% of the population, Orthodox Christian Serbs at 30% of the population, and Bosniak Muslims at 50% of the population). Entrenched geographic segregation and ongoing intergroup hostilities have remained formidable challenges to peacebuilding interventions (Opacin, 2020). Thus, how relations between ethnic groups are construed—whether they see each other as enemies in conflict, or as allies who can live in harmony—are of central relevance to the current crises in BiH.

The Present Research

In light of the social and political realities in BiH, the present research examined how intergroup contact corresponds with intergroup attitudes and intergroup construals in this postconflict context. Because youth are viewed as critical agents in the prevention and conclusion of conflicts, and are often the targets of intervention for peacebuilding efforts (United Nations Development Programme, 2021; Taylor, 2020), data were collected from youth as part of their participation in peacebuilding interventions that took place in BiH

between 2018 and 2020. Together, these interventions represented a collaborative, multipronged partnership between researchers and practitioners, including five local peacebuilding organizations in BiH and one based in the United States.

For the present research, we sought to investigate how intergroup contact between youth from different ethnic groups would predict intergroup attitudes and intergroup construals in this challenging postconflict context. In Study 1, youth from across BiH responded to a survey related to intergroup contact and ethnic relations in BiH following their participation in a human rights workshop. Study 2 utilized a pre–post design to assess the effects of a “Peace Camp” Intervention that brought together youth to participate in interethnic relationship building and dialog over the course of 7 days, with one of the two Peace Camp cohorts studied having an additional 5-day project extension.

Hypotheses

Across the two studies:

Hypothesis 1: Consistent with prior work, we expected greater frequency of positive contact would be significantly associated with holding more positive intergroup attitudes.

Hypothesis 2: Correspondingly, we hypothesized that greater frequency of negative contact would be significantly associated with holding more negative intergroup attitudes.

Hypothesis 3: At the same time, we hypothesized that greater frequency of positive contact would be less strongly, and perhaps nonsignificantly, associated with intergroup construals.

Hypothesis 4: By contrast, greater frequency of negative contact would be significantly associated with holding more negative intergroup construals.

Study 1

Study 1 examined how participants’ reported frequency of positive and negative contact corresponded with their attitudes toward ethnic outgroups, both in terms of how they felt about their relationships with ethnic outgroups (intergroup attitude outcomes) and how they conceive of broader relations between ethnic groups in BiH (intergroup construal outcomes).¹ Students completed a brief survey following their participation in a human rights workshop in their home communities, facilitated by the Youth Initiative for Human Rights. The workshops served as an initial form of recruitment for intervention efforts conducted in eight local communities across BiH. Each workshop consisted of a 2-hr session that broadly covered topics related to human rights, identity, and prejudice, along with time for conversation about how these topics were relevant to intergroup dynamics in the local context.

Participants

One hundred seventy-seven secondary school students in eight project communities across BiH (Velika Kladuša, Jajce, Banja Luka, Bijeljina, Dobož, Mostar, Stolac, and Sokolac) were invited to attend and participate in a 2-hr human rights workshop. Of the 177 students who participated in the human rights workshops, 122 (69%) chose to complete a follow-up survey (73 women, 47 men, 2 gender

unreported; $M_{\text{age}} = 17.79$, $SD_{\text{age}} = 2.92$). Of these participants, 57 (47%) identified as Bosniak, 51 (42%) as Serb, 8 (7%) as Croat, 1 (<1%) as Roma, and 5 (4%) who choose not to specify their ethnic background.

Materials and Procedure

The survey was originally developed in English and translated and administered in Bosnian; although BiH has three official languages that are largely mutually understandable (Bosnian, Croatian, and Serbian), Bosnian is the most commonly spoken language in BiH with approximately 2 million speakers (Language Facts: Bosnian, 2017). Given ongoing ethnic tensions in BiH, participants were asked to indicate “another group in BiH with whom you feel ethnic relations are especially difficult, challenging, or in conflict,” (see Table 1). Participants then provided responses to the following measures concerning their experiences of positive and negative intergroup contact with the specified outgroup. Although preregistrations were not made for either Study 1 or Study 2, survey materials, data, and additional supplemental materials are all publicly available: https://osf.io/pv3ma/?view_only=8ac4f3bede804564b536833293a0eda0

Measures of Intergroup Contact

Response options for all frequency of positive and negative contact items were 1 (*never*), 2 (*rarely*), 3 (*sometimes*), and 4 (*often*).

Positive Contact Frequency. Two items assessed the frequency of positive contact with the specified ethnic outgroup (*In general, how often have you had friendly interactions with/been treated fairly and with respect by [people from that ethnic group]?*), using items adapted from prior contact studies (e.g., Barlow et al., 2012). A reliability coefficient was calculated using the Spearman–Brown formula (ρ) and responses to these two items were averaged to create a composite measure of positive contact frequency ($\rho = .73$, $M = 3.38$, standard deviation [SD] = .75).

Negative Contact Frequency. Similarly, two items assessed the frequency of negative contact with the specified ethnic outgroup (i.e., *In general, how often have you had unfriendly interactions with/been treated poorly or unfairly by [people from that ethnic group]?*). Responses to these two items were averaged to create a composite measure of negative contact frequency ($\rho = .81$, $M = 1.79$, $SD = .80$).

Measures of Intergroup Attitudes

To capture many commonly studied aspects of participants’ intergroup attitudes, participants were asked to report their feelings of trust (three items; $\alpha = .96$; see Tropp et al., 2017), closeness (seven items; $\alpha = .94$; see Paolini et al., 2016), and empathy (three items; $\alpha = .87$; see Stephan & Finlay, 2003) toward the specified outgroup, as well as their humanization of that outgroup (five items; $\alpha = .92$; see Prati & Loughnan, 2018) and their willingness for future contact with that outgroup (four items; $\alpha = .89$; see Paolini et al., 2018). Item responses

¹ An additional two-item measure of “general contact frequency” was also included in the survey. Overall reports of contact frequency and reports of positive contact frequency were highly correlated, and supplementary analyses showed that effects for overall contact frequency were virtually identical to those observed for positive contact frequency (see Supplemental Materials).

Table 1
Participant's Own Self-Reported Ethnic Group and Specified Ethnic Outgroup (Study 1)

Participant ethnic group	Specified ethnic outgroup
Bosnian (57 participants)	<ul style="list-style-type: none"> • 17 serbs • 8 croats • 6 roma • 2 croats/serbs • 2 orthodox • 1 jews • 1 none • 1 others • 19 no response
Croat (8 participants)	<ul style="list-style-type: none"> • 1 bosnians/croats • 1 muslims • 1 orthodox • 5 no response
Serb (51 participants)	<ul style="list-style-type: none"> • 16 bosnians • 7 croats • 4 roma • 2 none • 22 no response
Roma (1 participant)	<ul style="list-style-type: none"> • 1 no response
No response/"prefer not to say" (5 participants)	<ul style="list-style-type: none"> • 5 no response

were scored on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*); sample items for each construct, as well as mean scores for each composite measure, are provided in Table 2.

Measure of Intergroup Construals

Three items asked participants to indicate how they perceived broader relations between their ethnic group, and the specified ethnic outgroup, in BiH, that is,

When you think about relations between your ethnic group and that other ethnic group, to what extent do you perceive those relations to be: (1) as enemies or as allies? (2) competitive or cooperative? (3) in conflict or in harmony?.

Responses to these items were scored on 5-point scale ranging from 1 (*completely enemies/competitive/in conflict*) to 5 (*completely allies/cooperative/in harmony*), and they were averaged to create a composite measure ($\alpha = .78$, $M = 2.83$, $SD = .93$).

Table 2
Means, Standard Deviations, and Sample Items for Measures of Intergroup Attitudes

Variable	α	$M (SD)$	Sample item
Trust toward outgroup (Three items)	.96	3.47 (1.17)	I think I could trust most members of that ethnic group.
Closeness to outgroup (Seven items)	.94	3.61 (1.00)	When you think about people in that ethnic group, to what extent do you feel: distant from or close to them?
Empathy toward outgroup (Three items)	.87	3.71 (1.14)	I sometimes think how people from that ethnic group might have felt during the war.
Humanization of outgroup (Five items)	.92	4.02 (1.06)	I think people in that ethnic group are just as moral as people in my ethnic group.
Willingness to interact with outgroup (Four items)	.89	3.98 (1.09)	I am willing to have members of that ethnic group as neighbors.

Results

All statistical analyses were conducted using IBM SPSS Statistics 25. Although items used to assess positive and negative contact frequency paralleled each other in their written construction, a principal components analysis revealed that they loaded onto two separate factors, $r = .001$, $p = .99$. Reports of positive contact ($M = 3.38$, $SD = .75$) were generally more common than reports of negative contact frequency ($M = 1.79$, $SD = .80$), $t(1, 108) = 15.08$, $p < .001$. Descriptive statistics (e.g., means, SD s) are provided in Table 3, along with bivariate correlations between all key variables.

To address our hypotheses, we conducted multiple linear regressions to examine associations between participants' scores on positive and negative contact frequency and their scores on measures of intergroup attitudes and intergroup construals. Positive contact frequency and negative contact frequency were entered simultaneously as predictors in each regression, to allow us to control for the other type of contact and examine unique associations between each contact measure and each indicator of intergroup attitudes or construals (see Table 4).

Intergroup Contact on Intergroup Attitudes and Construals of Group Relations

As shown in Table 4, regression results indicated that greater frequency of positive contact was associated with significantly greater outgroup trust, $b = .71$, standard error (SE) = .15, $p < .001$, 95% Confidence Interval (CI) [.412, 1.00], greater closeness to outgroup members, $b = .71$, $SE = .12$, $p < .001$, 95% CI [.474, 9.41], greater empathy toward the outgroup, $b = .51$, $SE = .15$, $p = .001$, 95% CI [.202, .808], greater humanization of the outgroup, $b = .77$, $SE = .13$, $p < .001$, 95% CI [.518, 1.01], and greater willingness to interact with outgroup members, $b = .82$, $SE = .13$, $p < .001$, 95% CI [.558, 1.076]. At the same time, greater frequency of negative contact was only associated with significantly lower closeness to outgroup members, $b = -.26$, $SE = .10$, $p = .015$, 95% CI [-.463, -.052], and lower humanization of the outgroup, $b = -.24$, $SE = .11$, $p = .029$, 95% CI [-.462, -.026]. However, neither positive contact frequency nor negative contact frequency was significantly associated with construals of group relations (see Table 4).

Discussion

In Study 1, we observed higher reports of positive contact frequency than negative contact frequency, a finding consistent with

Table 3
Study 1 Correlations Among Measures of Contact, Intergroup Attitudes, and Intergroup Construals

Contact variables	1	2	3	4	5	6	7	8
1. Positive contact frequency	—	-.018	.43***	.51***	.32***	.52***	.53***	.13***
2. Negative contact frequency	—	—	-.18***	-.22***	.02**	-.20***	-.16***	-.18***
Outcome variables								
3. Trust	—	—	—	.64***	.40***	.62***	.70***	.15***
4. Closeness	—	—	—	—	.50***	.73***	.75***	.41***
5. Empathy	—	—	—	—	—	.49***	.54***	.25***
6. Humanization	—	—	—	—	—	—	.77***	.25***
7. Willingness to interact	—	—	—	—	—	—	—	.31***
8. Construals of group relations	—	—	—	—	—	—	—	—

** $p < .01$. *** $p < .001$.

prior research suggesting that positive contact tends to be more common than negative contact (Graf & Paolini, 2016). Study 1 also provided evidence in support of Hypothesis 1: As predicted, positive contact frequency was significantly associated with more positive intergroup attitudes, across all five indicators, a finding likewise consistent with previous literature which shows that greater positive contact typically corresponds with more positive intergroup attitudes (Pettigrew & Tropp, 2006). At the same time, we observed only partial support for Hypothesis 2: Although we expected negative contact frequency to be significantly and negatively associated with all five personal attitude outcomes, it only showed significant associations with two of the five personal attitude measures.

Additionally, in line with Hypothesis 3, positive contact frequency was not significantly associated with participants' broader construals of relations between ethnic groups in BiH. However, Hypothesis 4 was not supported: Greater negative contact frequency was not significantly associated with more negative construals of group relations; here, only a nonsignificant trend in the predicted direction emerged. Overall, findings from Study 1 suggest that intergroup contact experiences in BiH were more often reported to be positive, and that greater positive contact experiences tended to be more strongly and consistently associated with intergroup attitudes than with broader construals about group relations.

Study 2

Study 1 documented initial differences in how intergroup attitudes and construals of group relations may be associated with

positive and negative intergroup contact, yet it was limited by its purely correlational nature. In an effort to replicate and extend these findings, Study 2 involved pre-post comparisons of survey responses from youth participating in two "Peace Camps" in Bosnia-Herzegovina. The Peace Camps brought together youth from multiple ethnic backgrounds to participate in a process of interethnic relationship building and dialog over the course of 7 days; during the Peace Camps, workshops and lectures covered key topics in peace education, conflict analysis, and nonviolent communication. As such, the Peace Camps represent an intentionally structured, short-term intergroup contact activity, during which group identities were likely to be highly salient.

It should also be noted that Study 2 includes data across two cohorts of participants in Peace Camps that were both organized and implemented by the same international and local BiH partners. Importantly, however, the first Peace Camp cohort experienced a 5-day "Peace Caravan" extension of the Camp during which youth traveled together to diverse locations in BiH to meet community members who survived the war and listen to their stories and experiences, along with discussing peacebuilding and its associated challenges and successes. Due to the COVID-19 pandemic in the summer of 2020, the Peace Caravan extension was not implemented for the second cohort of Peace Camp participants. Thus, the first Peace Camp cohort experienced contact with peers from other ethnic outgroups (during the camp) in addition to learning about other ethnic outgroup members' stories and experiences during the war through interviews they conducted (during the Caravan), whereas the second Peace Camp cohort only experienced intergroup

Table 4
Positive Contact Frequency and Negative Contact Frequency Predicting Intergroup Attitudes and Intergroup Construals (Study 1)

Variable	Trust				Closeness				Empathy			
	<i>b</i>	<i>SE</i>	<i>p</i>	95% CI	<i>b</i>	<i>SE</i>	<i>p</i>	95% CI	<i>b</i>	<i>SE</i>	<i>p</i>	95% CI
Positive contact	.71	.15	<.001	[.412, 1.00]	.71	.12	<.001	[.474, 9.41]	.51	.15	.001	[.202, .808]
Negative contact	-.26	.13	.053	[-.515, .003]	-.26	.10	.015	[-.463, -.052]	.04	.13	.710	[-.231, .303]
Variable	Humanization				Willingness to interact with outgroup				Construals of group relations			
	<i>b</i>	<i>SE</i>	<i>p</i>	95% CI	<i>b</i>	<i>SE</i>	<i>p</i>	95% CI	<i>b</i>	<i>SE</i>	<i>p</i>	95% CI
Positive contact	.77	.13	<.001	[.518, 1.01]	.82	.13	<.001	[.558, 1.076]	.16	.13	.205	[-.090, .416]
Negative contact	-.24	.11	.029	[-.462, -.026]	-.20	.11	.089	[-.426, .031]	-.21	.11	.071	[-.430, .018]

Note. *b* = unstandardized regression coefficient; *SE* = standard error of the estimate; CI = confidence interval.

contact directly with peers during the camp itself. Correspondingly, postintervention assessments were completed after the Peace Camp and Caravan for the first cohort, while there were completed directly following the end of the Peace Camp for the second cohort.

This unexpected design change in Study 2 provided us with an opportunity to further extend Study 1 by comparing how an intervention may shape intergroup attitudes and construals among youth who interacted only with peers from different ethnic backgrounds (Peace Camp only) or with peers and ethnic outgroup members they interviewed while traveling across BiH during a 5-day extension (Peace Camp + Caravan). Thus, in addition to testing for replication of findings from Study 1 (by conducting regressions with measures assessed at Timepoint 1), this quasi-experimental design allows us to consider some additional hypotheses:

Hypothesis 5: Given the potential for greater positive contact with a wider range of outgroup members, we hypothesized that participants in the first Peace Camp cohort (which included the 5-day Caravan extension) would report significantly more positive intergroup attitudes as compared to participants in the second Peace Camp cohort (without the 5-day Caravan extension).

Hypothesis 6: On an exploratory basis, we also considered whether participants in the first Peace Camp cohort (including the 5-day Caravan extension) might report greater positive change in intergroup construals compared to participants in the second Peace Camp cohort.

Participants

A total of 48 Peace Camp participants (Cohort 1 $n = 25$; Cohort 2 $n = 23$) completed preassessment surveys before the Peace Camp Intervention and postassessment surveys after the Peace Camp Intervention. As in Study 1, participants self-identified with varying ethnic group affiliations: 23 (53.5%) identified as Bosniak, 15 (34.9%) as Serb, 4 (9.3%) as Bosnian, and 1 (2.3%) as Croat; five participants were excluded from data analysis because the ethnic identity they reported was either universal or unclear (e.g., “human,” “cannot identify”). Of the remaining 43 youth who took part in the Peace Camps, 22 identified as women and 21 as men ($M_{age} = 20.74, SD_{age} = 2.98$).

Youth participants were recruited for each Peace Camp through an application published and disseminated widely across social media,

schools, and non-governmental organization networks. During the Peace Camps, youth listened to lectures and participated in discussions relating to conflict analysis and nonviolent communication, and they considered how prejudice and identity manifest in the aftermath of the violence that occurs in wartime. Participants also interactively developed solution-based assessments of conflicts within their home communities and were provided with both structured and unstructured time to build relationships with one another (e.g., working together on a farm or sitting around a nightly fire).

To assess the impact of these activities, participants completed the preintervention survey at the start of each Peace Camp (Timepoint 1, or T1). For Cohort 1, participants completed the post-intervention survey (Timepoint 2, or T2) after the Peace Caravan extension, which lasted for 5 additional days following the initial 7-day Peace Camp; for Cohort 2, participants completed the postintervention survey at the close of the 7-day Peace Camp. The same measures used in Study 1 were also used in Study 2 for all variables, with one important caveat: Instead of responding to survey questions in relation to a specific ethnic group they identified, participants were asked to respond to survey questions in relation to “other ethnic groups in BiH.” See Table 5 for means, SDs, reliability estimates, and bivariate correlations for measures assessed at T1 (and Supplemental Table 12 for T2).

Results

As in Study 1, all statistical analyses were conducted using IBM SPSS Statistics 25. To address our initial four hypotheses from Study 1, we conducted multiple linear regression analysis using T1 survey responses to examine associations between contact type and measures of intergroup attitudes and intergroup construals (for T2 results, see Supplemental Table 13). To examine Hypothesis 5 and Hypothesis 6, we used mixed-model General Linear Models (GLMs) to examine pre–post comparisons on all measures of intergroup attitudes and intergroup construals, and whether these varied depending on the Peace Camp cohort (Cohort 1 with Caravan extension vs. Cohort 2 without Caravan extension).

Frequency of Positive and Negative Intergroup Contact

As in Study 1, a principal components analysis showed that, at T1, positive and negative contact quality loaded onto separate factors,

Table 5
Reliability Estimates, Means, Standard Deviations, and Correlations Among Measures of Contact, Intergroup Attitudes, and Intergroup Construals for Timepoint 1 (Study 2)

Contact variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Positive contact frequency ($\rho = .58$)	3.70	.51	—	.06	.21*	.47**	.39***	.55***	.50***	.08
2. Negative contact frequency ($\rho = .80$)	1.91	.85	—	—	.26*	-.01**	.10***	.13***	-.05***	.22
Outcome variables										
3. Trust ($\alpha = .94$)	3.67	1.05	—	—	—	.48**	.68***	.35***	.59***	.22
4. Closeness ($\alpha = .87$)	3.80	.67	—	—	—	—	.38***	.33***	.55***	.17
5. Empathy ($\alpha = .85$)	3.88	.93	—	—	—	—	—	.28***	.69***	.08
6. Humanization ($\alpha = .80$)	4.48	.55	—	—	—	—	—	—	.47***	.23
7. Willingness to interact ($\alpha = .79$)	4.04	.87	—	—	—	—	—	—	—	.22
8. Construals of group relations ($\alpha = .79$)	3.46	.90	—	—	—	—	—	—	—	—

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

and these two factors were not significantly correlated with one another, $r = .06, p = .72$. At T1, positive contact frequency ($M = 3.70, SD = .51$) was more commonly reported than negative contact ($M = 1.91, SD = .85$), $t(1, 42) = 12.09, p < .001$. There were also no significant differences between T1 and T2 in overall reports of positive contact frequency, $F(1, 41) < .01, p = 1.000$, or negative contact frequency, $F(1, 41) = .35, p = .560$ (see Table 6).

Intergroup Contact as a Predictor of Intergroup Attitudes and Construals

As summarized in Table 7, when controlling for negative contact frequency, greater frequency of positive contact was significantly and positively associated with all indicators of intergroup attitudes, with the exception of trust. In contrast, when controlling for positive contact frequency, negative contact frequency was not significantly associated with any of the intergroup attitude indicators. Neither positive contact frequency nor negative contact frequency was significantly associated with intergroup construals when controlling for the other contact type.

Pre-Post Comparisons Across the Two Peace Camp Cohorts

Next, we examined whether there were differences between pre- and post-survey scores on the intergroup attitude and construal measures among participants in the two Peace Camp cohorts, see Table 8.

Intergroup Attitudes. Scores on outgroup trust, closeness, empathy, and willingness to interact with ethnic outgroup members all significantly increased following the camp intervention, with $p < .001$, as did humanization of ethnic outgroup members, $p = .005$. In addition, there were significant interactions between timepoint (pre vs. post) and Peace Camp Caravan extension (with extension vs. without) on trust, $F(1, 41) = 5.48, p = .024$, and humanization, $F(1, 41) = 8.26, p = .006$. Planned comparisons showed that, for participants in the first Peace Camp (with the Caravan extension), there was a greater increase in outgroup trust from T1 ($M = 3.41, SE = .23$) to T2 ($M = 4.44, SE = .15$), $t(20) = -5.02, p < .001, d = 1.19$, as compared to the increase in outgroup trust from T1 ($M = 3.91, SE = .22$) to T2 ($M = 4.32, SE = .15$) for the second Peace Camp without the Caravan extension, $t(21) = -2.39, p = .026, d = .46$. Outgroup humanization demonstrated a similar pattern: There was a greater increase in outgroup humanization from T1 ($M = 4.28, SE = .11$) to T2 ($M = 4.69, SE = .10$) among

participants in the first Peace Camp (with the Caravan extension), $t(20) = -3.35, p = .003, d = .72$, while there was no significant change in outgroup humanization from T1 ($M = 4.67, SE = .11$) to T2 ($M = 4.68, SE = .10$) among participants in the second Peace Camp (without the Caravan extension), $t(21) = -.13, p = .898, d = .02$. No other interactions were significant for any of the other indicators of intergroup attitudes.

Intergroup Construals. There were no significant differences in pre- and post-survey scores for construals of group relations, $p = .493$, nor were there any significant interactions in effects across the two Peace Camp cohorts.

Discussion

Study 2 replicated and extended our findings from Study 1. Largely consistent with Study 1, and aligned with Hypothesis 1, regression analysis using measures assessed at T1 indicated that positive contact frequency was positively and significantly associated with all but one indicator of intergroup attitudes (closeness, empathy, humanization, willingness to interact). And, in line with Hypothesis 3, positive contact frequency was not significantly associated with broader construals of group relations, when negative contact frequency is taken into account. Also consistent with Study 1, we did not find support for Hypothesis 2: Negative contact frequency was not significantly associated with any of the intergroup attitude indicators. Similarly, we did not find support for Hypothesis 4: Negative contact frequency was not significantly associated with intergroup construals at T1.

When examining scores over time, participants reported significantly more positive scores on all five indicators of intergroup attitudes at T2 as compared to T1; however, no significant change in scores were observed over time for the group construal measure. We also observed partial support for Hypothesis 5: Adding the 5-day Caravan extension to the Peace Camp resulted in significantly greater positive changes in outgroup trust and humanization over time. However, we did not find support for exploratory Hypothesis 6: Adding the 5-day Caravan extension to the Peace Camp did not result in significant changes in participants' intergroup construals.

General Discussion

Although intergroup contact has been shown to reduce prejudice across many contexts and studies, prior research has been limited in its ability to distinguish between its effects on intergroup attitudes and broader intergroup construals, while also considering

Table 6
Mixed-Model GLM Results for Positive and Negative Contact Indicators

Contact type	Preintervention <i>M (SE)</i>	Postintervention <i>M (SE)</i>	Caravan interaction	<i>F</i>	<i>p</i>	η^2
Positive contact frequency						
Peace camp Cohort 1	3.62 (.11)	3.64 (.10)				
Peace camp Cohort 2	3.79 (.11)	3.76 (.10)	Pre-post × Caravan	.19	.664	.005
Peace camps combined	3.70 (.52)	3.70 (.47)	Pre-post only	.00	<.001	1.000
Negative contact frequency						
Peace camp Cohort 1	1.93 (.19)	1.74 (.19)				
Peace camp Cohort 2	1.86 (.19)	2.21 (.19)	Pre-post × Caravan	3.73	.061	.085
Peace camps combined	1.89 (.86)	1.98 (.91)	Pre-post only	.35	.560	.009

Note. For the individual Peace Camp cohort rows. GLM = General Linear Model; *M* = estimated marginal means; *SE* = standard error of those estimates.

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Table 7

Positive Contact Frequency and Negative Contact Frequency Predicting Intergroup Attitudes and Intergroup Construals (Study 2, Timepoint 1)

Variable	Trust				Closeness				Empathy			
	<i>b</i>	<i>SE</i>	<i>p</i>	95% CI	<i>b</i>	<i>SE</i>	<i>p</i>	95% CI	<i>b</i>	<i>SE</i>	<i>p</i>	95% CI
Positive contact	.39	.31	.209	[-.230, 1.02]	.62	.18	<.001	[.247, .983]	.71	.26	.011	[.170, 1.239]
Negative contact	.30	.19	.111	[-.072, .677]	-.03	.11	.780	[-.252, .190]	.09	.16	.596	[-.236, .406]

Variable	Humanization				Willingness to interact with outgroup				Construals of group relations			
	<i>b</i>	<i>SE</i>	<i>p</i>	95% CI	<i>b</i>	<i>SE</i>	<i>p</i>	95% CI	<i>b</i>	<i>SE</i>	<i>p</i>	95% CI
Positive contact	.58	.14	<.001	[.302, .865]	.86	.23	.001	[.392, 1.32]	.11	.27	.688	[-.435, .653]
Negative contact	.07	.08	.439	[-.104, .235]	-.08	.14	.562	[-.361, .199]	.23	.16	.163	[-.097, .557]

Note. *b* = unstandardized regression coefficient; *SE* = standard error of the estimate; CI = confidence interval.

how positive and negative contact experiences may shape these outcomes. Our research helps to address these gaps in the context of BiH where interethnic relations remain complex and fraught. Across the two studies, our findings show that positive contact frequency was reported more often than negative contact frequency, and that positive and negative contact frequency were not strongly related. Like previous work showing that positive contact tends to be experienced more frequently than negative contact (Graf et al., 2014; Paolini et al., 2010), our research finds this may even be true in the challenging postconflict setting of BiH.

Our research also suggests that in contexts of prolonged conflict, and where substantial segregation between groups remains, positive contact experiences can contribute meaningfully to shaping people’s intergroup attitudes, yet its effects on people’s broader understandings of relations between groups in the larger society may be limited. Across both studies, regression analysis indicated that positive

contact frequency typically corresponds with more positive intergroup attitudes, even when controlling for negative contact frequency (Hypothesis 1) but it was not associated with more positive intergroup construals (Hypothesis 3). At the same time, negative contact frequency was not significantly associated with more negative intergroup attitudes when controlling for positive contact frequency (Hypothesis 2). Moreover, neither positive contact (Hypothesis 3) nor negative contact frequency (Hypothesis 4) generally corresponded with broader intergroup construals.

Pre–post comparisons from Study 2 also indicated that a week-long contact-based Peace Camp resulted in significant, positive changes in intergroup attitudes, with additional positive changes in outgroup trust and humanization observed among those who had richer contact experiences during the 5-day Caravan following the Peace Camp (Hypothesis 5). However, contrary to exploratory Hypothesis 6, with or without the Caravan extension, the Peace

Table 8

Mixed-Model GLM Results for All Outcome Variables

Outcome variable	Preintervention <i>M</i> (<i>SE</i>)	Postintervention <i>M</i> (<i>SE</i>)	Caravan interaction	<i>F</i>	<i>p</i>	η^2
Trust						
Peace camp Cohort 1	3.41 (.23)	4.44 (.15)				
Peace camp Cohort 2	3.91 (.22)	4.32 (.15)	Pre–post × Caravan	5.48	.024	.117
Peace camps combined	3.67 (1.05)	4.38 (.68)	Pre–post only	29.99	<.001	.416
Closeness						
Peace camp Cohort 1	3.87 (.15)	4.50 (.15)				
Peace camp Cohort 2	3.76 (.15)	4.17 (.15)	Pre–post × Caravan	1.14	.293	.028
Peace camps combined	3.82 (.67)	4.34 (.71)	Pre–post only	27.33	<.001	.406
Empathy						
Peace camp Cohort 1	3.84 (.21)	4.40 (.16)				
Peace camp Cohort 2	3.91 (.20)	4.43 (.16)	Pre–post × Caravan	.35	.559	.008
Peace camps combined	3.88 (.93)	4.36 (.74)	Pre–post only	19.32	<.001	.320
Humanization						
Peace camp Cohort 1	4.28 (.11)	4.69 (.10)				
Peace camp Cohort 2	4.67 (.11)	4.68 (.10)	Pre–post × Caravan	8.26	.006	.168
Peace camps combined	4.48 (.55)	4.68 (.47)	Pre–post only	9.02	.005	.180
Willingness for future contact						
Peace camp Cohort 1	4.04 (.19)	4.55 (.14)				
Peace camp Cohort 2	4.05 (.19)	4.41 (.13)	Pre–Post × Caravan	.60	.455	.014
Peace camps combined	4.40 (.87)	4.48 (.63)	Pre–post only	20.75	<.001	.336
Construals of group relations						
Peace camp Cohort 1	3.30 (.20)	3.57 (.18)				
Peace camp Cohort 2	3.61 (.19)	3.55 (.17)	Pre–post × Caravan	1.19	.281	.028
Peace camps combined	3.46 (.90)	3.56 (.80)	Pre–post only	.48	.493	.012

Note. For the individual Peace Camp cohort rows. GLM = General Linear Model; *M* = estimated marginal means; *SE* = standard error of those estimates.

Camp experiences did not translate into significant changes in intergroup construals.

Taken together, Study 1 and Study 2 provide insight into how contact may operate in conflict contexts where entrenched conflict narratives and an “ethos of conflict” (Bar-Tal, 2007) create challenges to establishing more positive relations between members of different groups. Though helpful in improving intergroup attitudes, even thoughtfully designed contact interventions may not be sufficient to dismantle conflict narratives at a level that transforms participants’ perceptions and understandings of how different groups relate to one another. Changes in how people construe relations between groups may only emerge as a function of contact that is longer in duration and that intentionally recognizes how ongoing and/or unaddressed conflict influences the contact experience (Christ et al., 2014; Frey & Tropp, 2006; Tropp & Dehron, 2022). At the same time, it is also possible that some effects of short-term interventions in conflict or postconflict settings may only emerge as changes within people accumulate over time and life experience, such that they lay important groundwork for future cross-group engagement even if difficult to observe in direct response to an intervention.

Support for Hypothesis 2 and Hypothesis 4 were mixed, though largely unsupported, across both studies. In Study 1, negative contact experiences were associated with significantly more negative scores on only some indicators of intergroup attitudes, and none of the associations were significant in Study 2 (Hypothesis 2). While Study 1 showed a nonsignificant trend to suggest that negative contact frequency might hold some association with more negative intergroup construals, there was no such trend or significant effect in Study 2 (Hypothesis 4). Our research thus extends ongoing calls for greater attention to how positive and negative contact are experienced in conflict settings, and how these contact experiences correspond with different intergroup outcomes (see Schäfer et al., 2021).

Limitations and Future Directions

Due to the context in which data were collected, and the relatively small sample size of participants who took part in the intervention, further research is needed to test whether the patterns of effects we observed replicate across different conflict and postconflict contexts. In addition, aspects of the research designs in Study 1 and Study 2 also make it challenging to discern precisely which components may have shaped our current findings. For example, it is possible that because participants completed surveys directly following a human rights workshop in Study 1, they may have been more willing to endorse positive intergroup attitudes than what would be reported by youth on a random occasion. In a similar vein, the design of Study 2 does not allow us to disentangle the potential impacts of peace education (e.g., discussing the conflict and conflict resolution strategies) with the frequency of time spent with peers from different ethnic backgrounds during the Peace Camp.

Interestingly, among Peace Camp participants in Study 2, we observed significant changes in intergroup attitudes over time, yet participants’ reports of contact frequency did not change significantly over time. It is possible that the week-long intervention, even with an additional 5-day extension, may not have been enough to transform participants’ views of the frequency of their intergroup experiences, given that reports of intergroup contact usually refer to

the accumulation and amalgamation of contact experiences over much longer periods of time (MacInnis & Page-Gould, 2015). It is possible that we would have observed significant change in reports of positive contact had we used indicators to assess its depth or quality, given that more intimate and higher quality contact experiences have been shown to predict positive shifts in intergroup attitudes and relations in prior research (see Davies et al., 2011; Paolini et al., 2016; Pettigrew, 1998). Alternatively, the observed changes in intergroup attitudes may also be related to other elements of the multifaceted intervention that the present study does not directly capture.

We also observed some notable differences in effects across the two Peace camp cohorts. Specifically, outgroup trust and humanization showed significantly greater change over time among participants in the first Peace Camp cohort, who experienced greater and more varied opportunities for cross-group contact during the 5-day Caravan extension. In part, this pattern of results could reflect meaningful change over time due to the longer duration and extent of intergroup contact; at the same time, it could be related to the tendency for participants in the first cohort to have scored lower on these measures at baseline as compared to participants in the second cohort. More work is needed to better understand the social contexts and circumstances that shape participants’ responses to interventions, in line with recent calls to examine the impact of differing conditions of contact interventions more closely (see, e.g., Paluck et al., 2019).

In addition to addressing these issues, further research could usefully incorporate intervention strategies that address participant perceptions of group dynamics more directly. For example, contact-based interventions that explicitly highlight processes of recategorization, where people from different groups come to understand themselves as belonging to a common group (Gaertner et al., 2000; González & Brown, 2003), may lead to stronger positive associations between intergroup contact and construals of group relations. Relatedly, other interventions that target specific group representations and narratives about intergroup relations can be successful in fostering these recategorization processes (Čehajić-Clancy & Bilewicz, 2021). Another approach might involve promoting beliefs about group malleability, as this has been associated with greater motivations to engage in intergroup contact and greater willingness to compromise for peace (Halperin et al., 2011, 2012). Thus, future contact interventions that focus more directly on prevailing narratives about groups, and about relations between groups, may be needed to change broader construals of intergroup relations.

In conclusion, our studies add to the growing body of evidence that positive contact experiences are generally beneficial for cultivating more positive intergroup attitudes, even in contexts marked by prolonged intergroup conflict. Still, more research is needed to specify if and how positive and negative contact experiences may inform people’s construals of intergroup relations in conflict contexts. Future research should investigate how variations in structure and length of contact interventions, and how the depth and quality of contact resulting from these interventions, may contribute to changing broader construals of intergroup relations. Such extensions of the research literature are especially important to consider within conflict and postconflict settings where dismantling entrenched conflict dynamics and narratives pose distinct challenges to establishing more positive prospects for relations between groups

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