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## Improving relations among conservatives and liberals on a college campus: A preliminary trial of a contextual-behavioral intervention

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### ABSTRACT

The US has never been more divided politically. Polarization is notable on majority-liberal college campuses where conservatives feel outnumbered and marginalized. In this study, we examined the effectiveness of a half-day workshop to decrease polarization and improve closeness between conservatives and liberals at a majority-liberal college campus. Informed by political psychology and relationship science, the intervention employed exercises derived from Acceptance and Commitment Therapy and Functional Analytic Psychotherapy to encourage identification of core beliefs and vulnerable discussions of deeper reasons for core political beliefs aimed at generating closeness and understanding between participants. Participants (N = 20) were assigned to 2 groups: one of mixed conservatives and liberals, and one of all liberals. All participants reported improvements in attitudes and hostility towards outgroup members from pre- to post-workshop, but only differences in relations with specific outgroup workshop participants were maintained at 1-month follow-up. Participants also reported arguing less than expected.

### 1. Introduction

Political polarization is at its highest level in recent history and appears to be getting worse (Dimock, Doherty, Kiley, & Oates, 2014). Extreme polarization involves *political Manichaeism* - demonizing those with opposing political ideologies as inhuman and evil (Johnson et al., 2017), a phenomenon that is occurring on majority-liberal college campuses which minority conservative students are increasingly experiencing as hostile and unwelcoming (Eagan et al., 2017). In response to these trends, efforts are increasing to reach out across the partisan divide and improve relations (Iyer, 2017). To our knowledge, however, very little research has occurred to inform these efforts and their efficacy is generally unknown.

In the current preliminary study, we evaluated a workshop-style intervention for college students at a large, majority-liberal institution, designed to facilitate improved relations between conservative and liberal workshop attendees and to facilitate generalization of these improvements as reduced political Manichaeism towards out-group members in general. A large body of social psychological research on contact theory suggests that direct, positive contact between ingroup and outgroup members improves empathic attunement of ingroup

members to outgroup perspectives (Pettigrew & Tropp, 2006, 2008); similar effects are seen in groups of people with differing political ideologies (Poteat, Mereish, Liu, & Nam, 2011). These benefits, however, only appears under certain conditions (MacInnis & Page-Gould, 2015). To guide our intervention design, we used a contextual-behavioral science (CBS) framework to maximize effectiveness of intergroup contact techniques.

Specifically, we designed the intervention to target a modified version of the Awareness, Courage, and Love model (ACL; Maitland, Kanter, Manbeck, & Kuczynski, 2017), recently proposed as a way of conceptualizing clinical interactions in Functional Analytic Psychotherapy (Tsai et al., 2009). The ACL model is an elaboration of the Interpersonal Process Model (IPM; Reis & Shaver, 1988), a well-validated model of the development of closeness between individuals which proposes that intimacy develops from interactions characterized by one member engaging in vulnerable self-disclosure and the other responding with responsiveness, defined as expressing understanding, validation and caring. Multiple studies indicate that when such vulnerability-responsiveness interactions are repeated and reciprocal, closeness develops. This occurs across same-group relationships in multiple contexts (e.g., Haworth et al., 2015; Laurenceau, Barrett, &

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**Table 1**  
Workshop components.

Component	Target	Content	Duration
1. Ice-breaker	<ul style="list-style-type: none"> <li>Expressing and increasing flexibility of non-political conceptualized selves</li> </ul>	<ul style="list-style-type: none"> <li>Identity Shuffle: Participants group in different parts of the room in response to a series of identity questions, such as “Who was a class clown?” and “Who is a child of divorce?” and briefly introduce themselves to each other</li> </ul>	30 min
2. Values	<ul style="list-style-type: none"> <li>Identifying and expressing non-political values</li> </ul>	<ul style="list-style-type: none"> <li>Life values exercise: Participants reflect on their personal values related to four life domains, identify something they have recently done consistent with one of those values, and share it with the group</li> </ul>	30 min
3. Contact	<ul style="list-style-type: none"> <li>Exchanges of vulnerability and responsiveness to increase connectedness</li> </ul>	<ul style="list-style-type: none"> <li>“Downward Arrow” exercise: In subgroups of 4, each participant discusses a current, personally significant political issue by a) identifying a personal memory relevant to the issue, b) sharing a vulnerability or fear around that memory, and c) sharing something they love related to that value, then receives feedback from the others.</li> </ul>	60 min
4. Discussion	<ul style="list-style-type: none"> <li>Generalization</li> </ul>	<ul style="list-style-type: none"> <li>“Dig deep” exercise: In subgroups of 4, each participant discusses a personal and vulnerable autobiographical story and then receives feedback from the others.</li> <li>Open-ended discussion of what participants wanted to take away from the workshop</li> </ul>	60 min 30 min

Pietromonaco, 1998; Laurenceau, Barrett, & Rovine, 2005; Manne et al., 2004), and ingroup-outgroup college friendships (Page-Gould, Mendoza-Denton, & Tropp, 2008). Studies have revealed that the primary mechanism of this process is *perceived responsiveness*; both individuals must perceive the other as responsive to their vulnerability for closeness to develop (Reis & Clark, 2013).

The ACL model extends the IPM to clinical interactions (Haworth et al., 2015) and adds the notion that both members enter the interaction with *awareness* of themselves (their feelings, needs, and beliefs) and awareness of the other's feelings, needs, and beliefs, which facilitates intimate exchanges of vulnerability (*courage* in the ACL model) and responsiveness (*love* in the ACL model). In the context of political polarization, we clarify the ACL model thus: a rigid focus on political ideology impairs awareness of the self and other by narrowing focus to one element of the self and blocking attention to awareness of additional content, including other-related content, leading to stereotyping. Recent research suggests that being aware of the other in a political debate is motivationally difficult because doing so threatens one's own political identity and risks criticism and rejection from one's ingroup (Binning, Sherman, Cohen, & Heitland, 2010; Cohen et al., 2007). Therefore, one focus of the intervention is expanding awareness of the self to non-political beliefs and identities. Two exercises addressed this goal; both were informed by experiential exercises from Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999). Exercises aimed to decrease participants' fusion with rigidly held political identities and to increase contact with and awareness of a more flexible and expansive view of the self that emphasizes non-political identities and beliefs. We expected these interventions to decrease stereotyping, increase perspective taking, and increase flexibility in responding.

In our model, increased awareness lays the critical groundwork for interactions to develop closeness. Thus, once participants finished these exercises they engaged in experiential closeness-generating exercises informed by the ACL model. Specifically, we developed two exercises that facilitated exchanges of courage and love between workshop participants, specifically informed by research on the effectiveness of these exercises in FAP trainings at instantiating ACL and increasing empathy and closeness among mental health clinicians (Kanter, Tsai, Holman, & Koerner, 2013; Keng et al., 2017; pp. 2064; Maitland et al., 2016). In the first exercise, participants shared vulnerable details of their life histories with each other; in the second exercise, they shared an important political value, but did so by sharing vulnerable memories of events or people that give the value personal meaning.

We assumed that liberal students would be more likely to seek out and attend a workshop aimed at healing political divisiveness and that it would be difficult to recruit conservative students due to their experience of increased hostility on college campuses (Eagan et al., 2017). Thus, we randomized liberal students to either a group that comprised half liberals and half conservatives or a group that was all liberals. The

all-liberal group did not allow for an instantiation of the direct contact hypothesis, but some research supports the role of imagined contact on prejudice reduction (Miles, Greene, & Crisp, 2014). Inclusion of this group allowed us to test whether all-liberal groups, which may be easier and less-resource intensive to recruit, may be beneficial on college campuses. Outcomes were assessed before and immediately after the workshops, and at a one-month follow-up assessment.

## 1. Method

### 1.1. Design, recruitment, and sample

The study was approved by the University's institutional review board and occurred during Summer Quarter, 2017. Subjects were recruited via posted flyers and outreach to student groups. Psychology students received \$20 plus extra-credit for study completion; all others received \$40. A total of 31 interested students completed an online eligibility screen including confirmation of student status, age, and availability for workshop dates and were instructed to arrive on the morning of the study. A total of 23 students arrived (5 conservatives and 18 liberals), provided consent, and started the study. There were 11 male and 12 female participants. Participants were majority Asian (14); the rest were White (5), Hispanic (2), Black (1), and Arabic (1). Participants were within the traditional college age range (18–24).

All conservatives were assigned to the mixed conservatives and liberals group (MG). Five liberals were randomly assigned to the MG, 10 to the all liberals group (LG), and 3 to serve as no-intervention controls (CG). Participants completed T1 and T2 measures immediately before and after the workshop. T3 measures were completed one month later in an online survey. Only 1 of 3 CGs provided full data at T2 and T3; thus, this group was excluded from our analyses.

## 2. Intervention

The workshop was titled “Healing the Political Divide” and consisted of four components described in Table 1. Overall, the workshop included large-group exercises to facilitate expression of non-political conceptualized selves and beliefs, and two contact exercises. In the contact exercises, participants formed subgroups of four. Participants in the MG were assigned such that equal numbers of conservatives and liberals were in each subgroup. The MG workshop was conducted by the second author and an undergraduate assistant. The LG workshop was delivered by the first and fourth authors. In the LG workshop, the participants were not told that they were in an all-liberal group and no explicit naming of political ideologies occurred during the workshop.

## 2.1. Measures

### 2.1.1. Allophilia Scale (AS)

The AS (Pittinsky, Rosenthal, & Montoya, 2011) is a 17-item measure of explicit positive attitudes toward outgroup members (liberals or conservatives in the current study) and has been used in previous research to examine whites' attitudes toward Blacks. (Pittinsky et al., 2011). We modified the AS such that participants responded to it twice at T2 and T3: Once with respect to the specific participants with whom they attended the workshop (*AS-Workshop*; e.g., "I feel like I can be myself around the liberals with whom I did this workshop"), and once with respect to outgroup others in general (*AS-General*; e.g., "I feel like I can be myself around liberals"). The scale's internal consistency was high at all timepoints ( $\alpha > 0.90$ ). For the *AS-Workshop*, participants in the LG were asked about feelings toward "others" with whom they did the study (e.g. "I feel like I can be myself around others with whom I did this workshop"). For the *AS-General*, participants in the LG were asked about feelings towards conservatives.

### 2.1.2. Feeling thermometer (FT)

The feeling thermometer asks participants to indicate their attitudes towards members of a specific outgroup (liberals or conservatives in the current study) on the thermometer which ranges from 0 (*Extremely Unfavorable*) to 100 (*Extremely Favorable*). A low score on the FT is often interpreted as a simple indicator of explicit prejudice (e.g., Greenwald, McGhee, & Schwartz, 1998; McConnell & Leibold, 2001; Talaska, Fiske, & Chaiken, 2008). We modified the FT for T2 and T3 as we did the AS into a *FT-Workshop* and *FT-General*.

### 2.1.3. Political Manichaeism Scale (PMS)

The PMS (Johnson et al., 2017) consists of two 10-item subscales: an anti-liberal subscale (e.g., "The country would be better off if most liberals just packed up and left") which was given to conservative participants, and an anti-conservative subscale (e.g., "The country would be better off if most conservatives just packed up and left") which was given to liberal participants. Johnson et al. documented the scale's validity across a range of metrics. Internal consistencies were 0.66 (T1), 0.75 (T2), and 0.79 (T3).

### 2.1.4. Pre-workshop expectations and post-workshop perceptions

At T1, we asked a series of questions about workshop expectations (Table 3) on a 7-point scale from 1 (*Very Unlikely*) to 7 (*Very likely*). At T2, we asked the same questions to assess participants' perceptions of what actually happened in the workshop (e.g., "I felt like people argued angrily at some point today") on a 7-point scale from 1 (*Strongly disagree*) to 7 (*Strongly agree*).

### 2.1.5. Perceived Responsiveness (PR)

At T2 we administered a six-item PR measure used in previous responsiveness research (Canevello & Crocker, 2010), modified for the current study. Each item (e.g., "Those of other political beliefs made me feel valued as a person") was responded to on a 5-point scale from 1 (*Not at all*) to 5 (*Very much*). The scale demonstrated strong internal consistency ( $\alpha =$

0.97).

## 2.2. Statistical analyses

Repeated-measures two-way analysis of variance (ANOVA) tests were run for each dependent variable (*AS-Workshop*, *AS-General*, *FT-Workshop*, *FT-General*, and *PMS*) across time (T1, T2, T3), first with condition (MG, LG) as the independent variable and then with political ideology (liberal, conservative) as the independent variable. To assess change across time in workshop-specific scales, we used *AS-general* and *FT-general* for T1, and *AS-workshop* and *FT-workshop* for T2 and T3. Some literature suggests that feelings toward individual outgroup members may be different than feelings toward the outgroup social category (e.g. Orbell, Dawes, & Schwartz-Shea, 1994), so these results should be interpreted with caution. To increase confidence about workshop effects, we computed difference scores: one comparing T2-workshop and T1-general, and the other comparing T2-workshop and T2-general. We conducted paired-sample *t*-tests to determine whether there were significant differences between these two difference scores. Significant *t*-statistics would provide some support for the hypothesis that different favorability of individuals versus categories did not explain the entire difference when comparing T1-general and T2-workshop; that is, the difference between T2-workshop and T2-general should represent differences in feelings toward individuals and social categories, and a larger difference between T1-general and T2-workshop likely represents effects of the workshop over and above the individual/category difference. We also computed reliable change index (RCI; Jacobson & Truax, 1991) scores when possible, using our obtained internal consistency and standard deviation at pretreatment to approximate the standard error (this was not possible for the single-item FT measures). A reliable change was observed when a participant's obtained RCI score was  $> 1.96$ , which corresponds to an alpha criterion of 0.05.

Different wording of workshop-specific questions in the MG and LG (i.e. asking about "conservatives/liberals" versus "others") means that MG questions assess openness to other political perspectives in the workshop while LG questions assess familiarity in general. Therefore, we also conducted a repeated-measures ANOVA comparing *AS-general* to *AS-workshop* and *FT-general* to *FT-workshop* in only the MG, to ensure that results were not due to artificial inflation of power.

## 3. Results

For all five dependent variables (*AS* for other workshop participants and in general, *FT* for other workshop participants and in general, and *PMS* in general), we conducted repeated measure ANOVAs with condition and affiliation as independent variables. We found significant main effects of time in all analyses, but did not find significant effects of condition or affiliation, nor interaction effects. Therefore, results presented are repeated measure ANOVAs without condition or affiliation as variables. Means and standard deviations for all dependent variables are reported in Table 2.

**Table 2**  
Means (SDs) of Outcome Measures by Time and Political Ideology.

Measure	Pre-workshop			Post-workshop			1-Month Follow-Up		
	Conservs	Liberals	Total	Conservs	Liberals	Total	Conservs	Liberals	Total
AS-Workshop				5.00 (0.22)	5.14 (0.58)	5.10 (0.51)	4.67 (0.38)	5.13 (0.86)	5.01 (0.78)
AS-General	3.92 (0.83)	3.38 (0.79)	3.52 (0.81)	4.33 (0.67)	4.06 (0.64)	4.13 (0.64)	4.24 (0.75)	3.53 (0.95)	3.70 (0.94)
FT-Workshop				93.00 (9.75)	89.64 (9.09)	90.53 (9.11)	85.40 (3.71)	83.60 (13.25)	84.05 (11.53)
FT-General	51.80 (19.52)	48.27 (27.26)	49.15 (25.11)	80.80 (23.36)	70.00 (14.88)	72.70 (17.35)	70.20 (19.34)	58.00 (19.04)	61.05 (19.37)
PMS	3.04 (0.69)	3.70 (0.79)	3.54 (0.80)	2.96 (0.59)	3.07 (0.83)	3.05 (0.76)	2.88 (0.66)	3.75 (0.84)	3.53 (0.87)

Note. AS: Allophilia Scale; FT: Feeling Thermometer; PMS: Political Manichaeism Scale.

### 3.1. Assessments of other workshop participants

A large, significant main effect for time was found comparing AS-general at T1 to AS-Workshop at T2 and T3,  $F(2, 38) = 25.60$ ,  $p < .001$ ,  $\eta^2 = .57$ . Follow-up paired  $t$ -tests documented significant differences between T1 and T2,  $t(19) = -7.23$ ,  $p < .001$ ,  $d = 2.41$ , and between T1 and T3,  $t(19) = -4.88$ ,  $p < .001$ ,  $d = 1.88$ , but not between T2 and T3,  $t(19) = 0.43$ ,  $p = .67$ ,  $d = 0.11$ . This was replicated with FT,  $F(2, 36) = 36.94$ ,  $p < .001$ ,  $\eta^2 = .672$ , with significant differences between T1 to T2,  $t(19) = -7.01$ ,  $p < .001$ ,  $d = 2.52$ , T1 and T3,  $t(19) = -5.94$ ,  $p < .001$ ,  $d = 1.95$ , and T2 and T3,  $t(18) = 2.22$ ,  $p = .04$ ,  $d = 0.49$ . In both cases (AS and FT), feelings for ideologically opposed workshop participants were higher at T2 than feelings for the ideologically opposed outgroup generally at T1. While T2-workshop was higher than T2-general, (AS:  $t(19) = -7.26$ ,  $p < .001$ ,  $d = -1.65$ ; FT:  $t(18) = -5.55$ ,  $p < .001$ ,  $d = -1.53$ ), this difference was smaller than the difference between T1-general and T2-workshop. We found significant differences between these two difference scores on both AS,  $t(19) = 3.51$ ,  $p = .002$ ,  $d = 0.8$ , and FT,  $t(18) = 5.05$ ,  $p < .001$ ,  $d = 1.36$ . Differences between T1-general and T2-workshop were sustained at 1-month follow-up. On the AS, 18 of 20 participants (90%) demonstrated reliable differences from T1 to T2. These differences remained reliable at T3 for 15 participants (75%).

We conducted ANOVA considering only MG participants to ensure that these results were not due to artificial inflation of power and found a very similar pattern of results. For AS, there was a significant main effect of time,  $F(2, 7) = 19.48$ ,  $p = .001$ ,  $\eta^2 = .85$ , but no significant main effect of affiliation nor an interaction effect.  $T$ -tests revealed significant differences between T1 and both T2,  $t(9) = -6.77$ ,  $p < .001$ ,  $d = -2.49$ , and T3,  $t(9) = -4.33$ ,  $p = .002$ ,  $d = -1.37$ , but not between T2 and T3,  $t(9) = 0.86$ ,  $p = .41$ ,  $d = 0.35$ . Similar results revealed main effects of time on FT,  $F(2, 7) = 26.76$ ,  $p = .001$ ,  $\eta^2 = .88$  and no main effects of affiliation nor interaction effects. Follow-up tests revealed significant differences between all three times: T1 and T2,  $t(9) = -7.31$ ,  $p < .001$ ,  $d = -2.74$ ; T1 and T3,  $t(9) = -5.88$ ,  $p < .001$ ,  $d = -2.67$ ; T2 and T3,  $t(9) = 2.3$ ,  $p = .05$ ,  $d = 0.76$ .

### 3.2. Assessments of general others

A significant main effect for time was found for AS-General,  $F(2, 38) = 4.10$ ,  $p = .024$ ,  $\eta^2 = .177$ . Follow-up paired  $t$ -tests documented a significant increase from T1 to T2,  $t(19) = -3.51$ ,  $p = .002$ ,  $d = 0.84$ , but not from T1 to T3,  $d = 0.21$ . This was replicated with FT-General,  $F(2, 38) = 10.01$ ,  $p < .001$ ,  $\eta^2 = .345$ , with a significant increase from T1 to T2,  $t(19) = -5.02$ ,  $p < .001$ ,  $d = 1.14$ , but not T1 to T3,  $d = 0.60$ . In both cases, significant increases were observed from T1 to T2 for all participants, but these effects deteriorate completely (AS-General) or somewhat (FT-General) over 1-month follow-up. On the AS-General, 11 of 20 participants (55%) demonstrated reliable change from T1 to T2. These improvements remained reliable at T3 for 8 participants (40%).

A significant main effect for time was found with the PMS,  $F(2, 38) = 3.56$ ,  $p = .038$ ,  $\eta^2 = .158$ , with a significant decrease from T1 to T2,  $t(19) = 3.77$ ,  $p = .001$ ,  $d = 0.63$ , but not from T1 to T3,  $d = 0.00$ , suggesting a decrease in Manichaeism immediately after the workshop which was not sustained at the 1-month follow-up period. Only 4 participants (20%) demonstrated reliable change from T1 to T2, and 2 (10%) demonstrated reliable changes from T1 to T3. Although no significant interactions were observed, the pattern of results by political ideology is illustrated in Fig. 1 as a consideration for future studies.

### 3.3. Pre-workshop expectations and post-workshop perceptions

Similar repeated-measures ANOVAs were conducted exploring change from T1 expectations to T2 perceptions by condition and ideology. Tests revealed significant main effects for time, with no

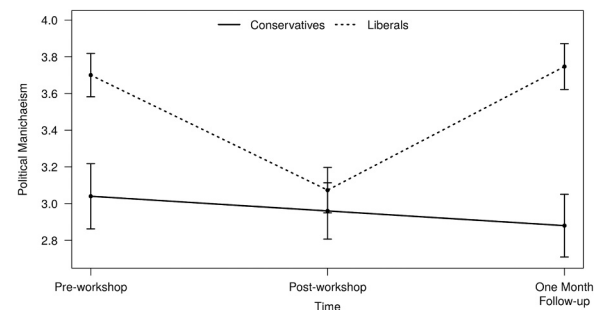


Fig. 1. Political Manichaeism by time and political ideology.

significant interactions (Table 3). Results were all in directions supporting positive reactions to the workshops.

### 3.4. Perceived responsiveness

Post-workshop PR predicted change in three of the five outcome measures from T1 to T2: AS-Workshop ( $r = 0.50$ ,  $p = .018$ ), PMS ( $r = 0.46$ ,  $p = .031$ ), and FT-General ( $r = 0.43$ ,  $p = .044$ ). Correlations with PR and the other two measures (AS-General and FT-Workshop) were positive but not significant.

## 4. Discussion

This preliminary study evaluated a multi-component workshop designed to facilitate bipartisan friendships and decrease political Manichaeism among participants. The workshop integrated exercises and constructs from ACT and FAP training protocols with existing relevant science, following an ACL framework by increasing awareness of non-political identities and beliefs (with ACT experiential exercises) and asking participants to engage in reciprocal exchanges of courage and love (with FAP experiential exercises). One workshop was given to a mixed group of conservatives and liberals, and another workshop tested the possibility that an all-liberal group would also benefit in terms of decreased political Manichaeism. Only significant main effects for time were found with no interactions by condition. Both conditions appeared to be effective, immediately after the workshops, at improving participants' attitudes towards general outgroup members and reducing political Manichaeism.

At the one-month follow-up, however, while workshop participants continued to report positive attitudes towards each other (as indicated by high absolute scores), attitudes towards general outgroup members and political Manichaeism were not sustained and approached pre-workshop levels for both groups. As depicted in Fig. 1 and consistent with previous findings that liberals' stereotypes about conservatives are less accurate and more extreme (Graham, Nosek, & Haidt, 2012; Scherer, Windschitl, & Graham, 2015), it may be the case that liberals in our study were higher in Manichaeism and more reactive to the workshop, but these effects were transient, while conservatives were less Manichaeistic and more stable in these attitudes over time.

Although there is no indication that the mixed group workshop produced better outcomes than the all liberal workshop, our findings suggest that the workshop experience may facilitate friendships and temporarily decrease political Manichaeism. Optimally, therefore, both liberals and conservatives should be involved, although there is no evidence that group composition matters. Conservatives may experience marginalization and isolation on predominantly liberal college campuses, and thus involving them in interventions may be particularly important; increasing connectedness may decrease minority stress (e.g. Detrie & Lease, 2007). The finding that workshop participants improved attitudes towards outgroup members generally is important and speaks to the potential benefits of the intervention, whether done in mixed or all-liberal groups. Future research should test whether all-conservative



**Table 3**  
Means (SDs) and ANOVA results for pre-workshop expectations and post-workshop perceptions.

	Pre- workshop	Post-workshop	Main effect for time		
			<i>F</i> (1,19)	<i>p</i>	$\eta^2$
People will argue angrily	5.05 (1.61)	1.10 (0.31)	138.04	< 0.001	0.88
I will feel uncomfortable	4.05 (1.64)	3.35 (2.03)	2.90	0.11	0.13
This workshop was created to change my views	3.50 (1.70)	2.60 (2.33)	3.51	0.077	0.16
I will feel closer to and more understanding of those in the workshop	5.10 (0.91)	6.55 (0.61)	47.14	< 0.001	0.71
I will recommend this to a friend	4.95 (0.95)	6.20 (0.77)	30.06	< 0.001	0.61
I will recommend this to the University as an offering to students	5.05 (1.05)	6.45 (0.61)	25.86	< 0.001	0.58
I will want to keep in touch with someone with opposing viewpoints	3.65 (1.50)	4.35 (1.57)	4.21	0.054	0.18
I will want to attend another workshop of this nature	4.60 (0.94)	5.60 (1.10)	17.27	0.001	0.48

groups also produce benefits. Post-workshop evaluations provide further support for these benefits. Students expressed surprise that the workshops did not deteriorate into arguments, left feeling closer to and more understanding of the other participants, and said they would recommend the workshop to the University. Thus, we encourage future efforts to identify methods of recruitment and engagement of conservative students in workshop experiences that may be beneficial to them.

The finding that both groups experienced benefits was unexpected, but makes some sense based on workshop design. Specifically, in both groups participants were instructed not to disclose political identity. Therefore, it is possible that people in the liberal-only group believed that there were conservatives in the group, and this thought caused participants to feel as though they were developing closeness with a political outgroup member and thus triggered changes in closeness with theoretical outgroup members because there was enough uncertainty about who in the group was a political outgroup member. Thus, this provides preliminary support that intergroup contact improves attitudes towards outgroup members even if the contact is hypothetical or assumed rather than real.

The interventions did not have a lasting impact on political polarization and Manichaeism in general. This remains a vexing problem indicative of the power of the larger socio-political context. Temporary reductions in polarization may be achieved, perhaps especially for liberals, but more polarized attitudes may snap back into place as workshop memories fade without continued, or more powerful, interventions. That said, even temporary reductions in polarization may be beneficial in some contexts, such as when bipartisan family members get together for holiday meals or special occasions. Future research should test modifications of the intervention that may promote lasting impact. One possible modification is to increase everyday contact between Conservatives and Liberals, such as encouraging workshop participants to form study groups.

The study was not able to isolate or test the hypothesized mechanisms of specific workshop components, such as the relative importance of broadened awareness, more courage, or more perceived love. However, perceived responsiveness – our hypothesized mechanism of contact's benefit according to the IPM and FAP – was a significant predictor of some changes. This lends some support for the importance of contact and the value of the FAP exercises as a framework for contact. The current report is the first application of the ACL model and specific FAP exercises in the context of contact interventions generally, and political differences in particular. The current findings encourage more precise applications and evaluations and also support careful study of other workshop components in combination and isolation.

The study demonstrates several limitations and should be seen as preliminary. The small sample size made it difficult to evaluate between group differences. However, the primary findings are main effects and the post-hoc power for these tests was adequate. The effect sizes were large and replicated across multiple measures (and reliable changes were observed for most participants), reducing the possibility of effects

being unreliable. The positive mechanism findings bolster our confidence in the results as well. Nonetheless, these results are preliminary and require replication with larger samples.

An additional limitation is that we cannot make definitive claims about the impacts of the workshop on attitudes toward other workshop attendees, because we did not assess attitudes toward specific workshop attendees before the intervention took place. There is concern that our use of pre-intervention attitudes towards outgroup members in general as the baseline for this analysis was biased by a method effect; specifically, some research suggests that ratings towards specific others will generally be more favorable than ratings towards an abstract category (e.g. Orbell et al., 1994). However, our analyses document that the difference between pre-experiment attitudes towards general outgroup members and post-experiment attitudes towards outgroup workshop participants was significant larger than was the difference between post-experiment attitudes toward general outgroup members and post-experiment attitudes toward outgroup workshop participants. The latter can be seen as an indicator of the size of the method effect; therefore, the larger difference between pre-experiment general favorability and post-experiment workshop participant favorability suggests that the intervention had an independent effect. Furthermore, it is unlikely that the very high post-intervention scores on measures of attitudes toward others in the workshop was entirely due to differential ratings of large groups versus individuals. Finally, the finding that perceived responsiveness experienced during the intervention significantly predicted several outcomes further supports the hypothesis that the workshop had a specific effect. Taken together, this evidence supports a hypothesis that the intervention improved attitudes toward others in the workshop. Future research should examine this hypothesis directly, by asking people about perceptions of other attendees before the intervention begins.

We also used a relatively simplistic indicator of political ideology, simply asking people to report on a 7-point scale how liberal or conservative they are; people who reported that they were “somewhat conservative,” “conservative,” or “very conservative” were put in the conservative group, while those who stated that they were “somewhat liberal,” “liberal,” or “very liberal” were put in the liberal group. Future research would benefit from a more nuanced exploration of political ideology, including increasing sample size to detect differences in effects based on extremity and certainty of belief.

The difficulty recruiting conservatives calls into question the generalizability of the protocol, especially in majority liberal contexts. However, to the extent that liberal hostility toward conservatives contributes to feelings of isolation in conservatives, implementing the workshop in liberal-only groups may improve campus climates for conservatives even if conservatives do not receive direct benefits because they have not attended the workshop. Future research may aim to replicate these findings with larger, more diverse samples, and in other locations. Research should also explore whether Manichaeism directed towards conservatives increases conservative minority stress. In addition, the lack of a true control group does not allow us to claim with confidence that the workshop effects are specific to the workshop

components. For example, it is possible that any attempts to bring students together for a period of time may produce equivalent results. Future research with additional resources for recruitment and outreach may benefit from randomization to true control conditions.

## Conflicts of interest

None.

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