Group Member Affect and Session Evaluations in Intergroup Dialogue

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A growing body of research suggests that participation in intergroup dialogue (IGD) is associated with a variety of positive outcomes related to diversity and social justice (Dessel & Rogge, 2008; Gurin, Nagda, & Zúñiga, 2013). Research on intergroup contact (Pettigrew, 1998; Stephan & Finlay, 1999) suggests that this may be because of the affective component of IGD, but little research has examined session-level experiences of emotion in IGD. We examined participants’ experiences of positive and negative emotions across 8 sessions in 18 IGD groups at a large public university, and their relationships to group members’ perceptions of session depth and smoothness. Across the 8 weeks, we found significant quadratic changes in positive and negative affect, and in session depth and smoothness. In addition, we found significant, positive relationships between positive affect and group members’ perceptions of both session depth and smoothness; and a significant, negative relationship between negative affect and perceptions of session smoothness. Results are examined in relation to the 4-stage model of IGD, and session-level implications for cofacilitators of IGD are discussed.

Keywords: critical multicultural education, emotion, intergroup contact, intergroup dialogue, multicultural groups

A large body of literature has highlighted the benefits of diversity in higher education (Gurin, Dey, Hurtado, & Gurin, 2002; Gurin, Nagda, & Lopez, 2004). This research suggests that structural (or numerical) diversity, while important, is not enough to fully realize the benefits of campus diversity (Hurtado, Griffin, Arellano, & Cuellar, 2008). Colleges and universities need to both increase the diversity of their student bodies, while also providing opportunities for genuine intergroup interactions between diverse students (Gurin et al., 2002). Intergroup dialogue (IGD) programs on a growing number of campuses are providing students with these opportunities to engage in genuine interactions across groups. IGD is a small group intervention that brings together individuals from social identity groups with a history of conflict between them (e.g., people of color and White people; lesbian, gay, and bisexual people and heterosexual people), to build relationships across groups, develop a critical awareness of social identities and social systems, and develop capacities to promote social justice (Zúñiga, Nagda, Chesler, & Cytron-Walker, 2007; Zúñiga, Nagda, & Sevig, 2002).

A growing body of research suggests that participation in IGD is associated with a wide-range of positive cognitive (e.g., increased knowledge of structural inequality); behavioral (e.g., increased perspective-taking abilities, engagement in social action); and affective (e.g., increased empathy; Alimo, 2012; Dessel & Ali, 2012; Dessel & Rogge, 2008; Gurin, Nagda, & Zúñiga, 2013) outcomes. However, much less research has examined the session-level processes involved in producing these positive (vs. null or negative) outcomes. This means that, while we know that IGD can work, we know...
less about when, how, or why it does. Not all intergroup contact has positive outcomes (Pettigrew, Tropp, Wagner, & Christ, 2011), so an understanding of session-level processes in IGD could aid in the training of cofacilitators, and could help cofacilitators ensure the best possible outcomes for participants. Therefore, the current study aimed to examine session-level processes and outcomes in IGD, namely, group members’ experiences of positive and negative affect within and across sessions, and session impact.

In higher education, IGD typically follows a four-stage, critical-dialogic model (Thompson, Brett, & Behling, 2001). This model is “critical” in that it encourages students to consciously examine the social construction of social identities, and the ways in which these identities grant privilege to some, oppress others, and perpetuate the status quo of systemic inequality (Sorensen, Nagda, Gurin, & Maxwell, 2009). Across multiple weeks (often one half or one full semester), two cofacilitators guide IGD participants through four stages, which include: (a) forming and building relationships, (b) exploring differences and commonalities, (c) dialoguing about “hot topics,” and (d) action planning and alliance building (Zúñiga et al., 2007). The first stages focus on the development of cohesion, safety, and relationships among IGD group members, before exploring issues related to personal and social identities (including socialization, identity-based privilege, and oppression), and then more difficult and emotionally charged “hot topics” (e.g., race-based admissions in colleges and universities, same-sex marriage) in later stages. As such, there is a shift over time from a focus on the individual to a focus on institutional and systemic issues; and a gradual, parallel increase in the amount of risk (e.g., self-exploration, self-disclosure) required of participants (Zúñiga et al., 2007). To successfully negotiate these shifts, cofacilitators need to be aware of the emotional experiences of the participants, and know how to appropriately and productively work with them (Khuri, 2004). In this sense, IGD is a unique form of multicultural education in that it “integrates cognitive learning about identity, difference, and inequality with affective involvement of oneself and others through sharing intimate personal reflections and meaningful critical dialogues” (Zúñiga et al., 2007, p. 5).

### Emotion in Intergroup Contact

In addition to drawing on critical multicultural education (Bell, 2010; Hardiman & Jackson, 2010), IGD is based, in part, on the intergroup contact hypothesis (Allport, 1954). The intergroup contact hypothesis suggests that intergroup interactions under certain conditions (i.e., equal status in the contact situation, common goals requiring interdependence, support of some authority, and friendship potential) have the potential to lead to positive outcomes (Allport, 1954; Pettigrew, 1998). A large body of research has supported the contact hypothesis (Pettigrew & Tropp, 2006; Pettigrew et al., 2011), highlighting the positive impact that intergroup contact can have.

Pettigrew (1998) noted that one reason that intergroup contact leads to positive outcomes is that it can help build affective ties between individuals from different social identity groups. Pettigrew pointed out, however, that both positive and negative affect are expected components of intergroup contact. For example, intergroup contact can provide opportunities for the experience and expression of positive emotions, and empathy can develop as the result of cross group friendships (Pettigrew, 1998; Stephan & Finlay, 1999). At the same time, however, negative emotions like anxiety may be expected in initial encounters with outgroup members (Pettigrew, 1998). Similarly, Tatum (1992) suggested that genuine interactions between members of social identity groups with a history of conflict between them have the potential to invoke strong negative emotional reactions, including guilt, shame, and anger. She went on to state that, “if not addressed, these emotional responses can result in student resistance to oppression-related content areas. Such resistance can ultimately interfere with the cognitive understanding and mastery of the material” (p. 2).

Intergroup contact, in general, may improve intergroup relations by reducing negative emotions toward outgroup members (Koschate, Oethinger, Kuchenbrandt, & van Dick, 2012). For example, real or imagined intergroup contact has been found to reduce negative affect (e.g., anger) toward outgroup members (Asbrock, Gutenbrunner, & Wagner, 2013; Tam et al., 2007). Other research also supports the idea that intergroup contact can decrease levels of
prejudice through affective experiences (Miller, Smith, & Mackie, 2004; Pagotto, Voci, & Maculan, 2010; van Alphen, Dijker, Bos, Van Den Borne, & Curfs, 2011). Further underscor-
ing the importance of emotion in intergroup contact, Bowman and Denson (2011) found that interracial emotional connections (i.e., feeling friendship, closeness, and meaningful connections) mediated the relationship between positive interracial interactions and outcomes (i.e., changes in intergroup attitudes and civic en-
gagement).

Though much of the research on intergroup contact suggests that it can improve intergroup relations (Pettigrew & Tropp, 2006), it is also important to take into account the valence of the intergroup contact (i.e., whether it is positive vs. negative contact). Pettigrew and Tropp (2006) noted that the contact hypothesis (Allport, 1954) sought to identify the positive features of intergroup contact that lead to improvement in intergroup relations; therefore, the existing re-
search on intergroup contact is limited in that it has not examined negative intergroup contact. Recent research on the valence of intergroup contact has suggested that negative intergroup contact relates to negative intergroup attitudes, both directly and indirectly through increased intergroup anxiety, while positive intergroup contact relates to more positive intergroup attitudes indirectly through reduced intergroup anxiety (Stephan & Stephan, 1996). These differences in va-
ence of intergroup contact have led some to call for the examination of both positive and nega-
tive intergroup contact simultaneously within an individual study (Graf, Paolini, & Rubin, 2014).

Similar to Allport’s (1954) articulation of the contact hypothesis, IGD is structured to provide a positive intergroup contact experience. Spec-
ifically, the first stage of the four-stage model of IGD (Zúñiga et al., 2007) is intended to build relationships and establish a safe atmosphere. Though conflict is an expected aspect of IGD, particularly in the sessions that cover “hot top-
ics,” IGD helps develop empathy and relationships across groups (Muller & Miles, 2015), and build capacities to work toward positive social change (Dessel, 2010; Gurin, Nagda, & Zúñiga, 2013; Griffin, Brown, & warren, 2012). Research supports the notion that IGD provides a positive intergroup contact experi-
ence, overall (Gurin et al., 2013). Given calls to examine both positive and negative intergroup contact experiences; however, in the current study, we examined both positive and negative emotions that occur within individual sessions.

### Emotion in IGD

In IGD, participants are asked to speak openly about their perceptions and experiences as members of their social identity groups, and how these socially constructed identities relate to their experiences of privilege and/or oppression (Dessel, Woodford, Routenberg, & Breijak, 2013; Khuri, 2004). Encounters like these cause people on both sides to feel threats to their group, resulting in intergroup anxiety (Stephan & Stephan, 1996). These feelings of threat and anxiety are often avoided in everyday life; therefore, IGD participants must learn to become aware of, and work through, these and other emotions. Although there is a growing amount of research on intergroup emotion in fields like experimental social psychology (see Mackie & Smith, 2015), less research specifically examines the role that emotion plays in applied intergroup interventions, like IGD.

The research on emotion in IGD that does exist, however, makes it clear that the experiences of positive and negative emotions are key process variables (Dessel & Ali, 2012; Dessel et al., 2013; Gurin-Sands, Gurin, Nagda, & Osuna, 2012; Khuri, 2004). This is consistent with the idea that a unique aspect of IGD as a form of critical multicultural pedagogy is its integration of cognitive and affective learning (Zúñiga et al., 2007). For example, in a longitudinal, mul-
tiuniversity study, Gurin, Nagda, and Zúñiga (2013) found that affective positivity was di-
rectly related to pre- to post-dialogue changes in intergroup empathy and intergroup action. Gu-
rin-Sands et al. (2012) examined final papers of students participating in the same race- and gender-focused IGD groups. They hypothesized and found a direct link between the presence of emotion words in these papers, and writing about social action (i.e., educating and collabo-
rating with others). Dessel and Ali (2012) also noted that emotion and conflict were two key process themes that emerged in their study of the experiences of the participants of two Arab/Jewish IGD groups. Through an analysis of final papers and interviews, they found that par-
participants experienced a wide range of emotions. For example, Arab participants reported having had negative emotions of frustration and disappointment at certain aspects of the dialogue (e.g., feeling like they were targets of bias), and the positive feeling of being validated and surprised. They also reported reductions in nervousness and anger in relation to the Jewish students. Jewish participants reported feeling enraged, surprised, uncomfortable, and embarrassed; and positive feelings of enjoyment, gratefulness, and happiness. Dessel and Ali also noted that the Arab participants reported a greater range of positive emotions, while the Jewish students reported a greater range of negative emotions.

Dessel et al. (2013) also conducted a qualitative study of the experiences of participants in nine IGD groups focused on sexual orientation. Among the emotional experiences reported were anxiety (e.g., about offending others, coming across as biased, being mislabeled as a sexual minority, or being able to understand others); fear (e.g., about having homophobic members in their IGD); “discomfort, awkwardness, self-consciousness, and embarrassment” (when asked to engage in an activity that could potentially lead to being mislabeled as a sexual minority); frustration (e.g., at participants’ self-censoring so as not to offend others); and empathy. Other research has found evidence for the experiences of empowerment (Dessel, Woodford, & Warren, 2011); pride (Ford & Malaney, 2012); guilt and shame (Ford, 2012); and empathy (Nagda, Kim, & Truelove, 2004).

While research on IGD clearly highlights the importance of emotion, it relies on retrospective accounts (e.g., final papers) of participants after the termination of their final dialogue sessions. Although retrospective accounts are useful, it is likely that after 8 weeks (or more) of dialogue, the richness of IGD participants’ session-level emotional experiences is lost, and participants write only about the strongest or most salient emotional experiences. As Khuri (2004) stated:

> A more deliberate consideration of affective processes throughout all four stages . . . has the potential to help educators not be caught off guard by eruptions of heightened affect, the lack of affect, the variety of affective responses, or by different forms of resistance that may appear in later stages but have their roots in unresolved affective concerns from earlier stages or may simply reflect ambivalence. (p. 606)

Additional, session-level research on the emotional experience of IGD participants is needed to aid cofacilitators in working through the four-stage model of IGD.

One recent study related to emotion in IGD examined the session-level experiences of participants. Muller and Miles (2015) found that participants in IGD significantly increased in empathic perspective taking from pre- to post-dialogue. However, empathic perspective-taking was examined as an overall outcome of dialogue participation, not at the session-level. Therefore, additional research is needed on the session-level experiences of both positive and negative emotions in IGD, and their impact on outcomes. The current study aimed to examine group members’ experiences of positive and negative emotions both within and across sessions.

**Session Impact in IGD: Depth and Smoothness**

Because we were interested in examining emotion as a session-level process, our second aim was to examine session-level outcomes in relation to emotion in IGD. Specifically, we were interested in session depth and smoothness. Though session depth and session smoothness have not been examined in IGD, these are two important session-level outcomes in other types of group interventions (e.g., group counseling). Session depth and smoothness have been characterized as measures of session impact, or “a session’s immediate subjective effects, including clients’ evaluations of the session, their assessments of the session’s specific character, and their post-session affective state” (Stiles et al., 1994, p. 174). Stiles et al. noted that, “measures of session impact are concerned with clients’ internal reactions to sessions” (p. 175), which mediate the relationship between what happens in individual sessions, and long-term effects of an intervention. Session depth and smoothness are typically measured by the Session Evaluation Questionnaire (SEQ; Stiles, 1980), which was designed to assess impact of individual psychotherapy sessions, to bridge the research on psychotherapy process and long-term outcomes. The depth and smoothness subscales of the SEQ each include five pairs of bipolar adjectives designed to assess participants’ experiences of a session: “(a) as deep
(powerful, effective) or shallow (weak, worthless) and (b) as smooth (relaxed, comfortable) or rough (tense, distressing)” (Stiles et al., 1994, p. 175). According to Stiles and colleagues (Stiles, 1980; Stiles et al., 1994), session depth and smoothness vary independently. Session depth has been associated with therapeutic success and linked to a number of other positive variables like problem solving, perceptions of session helpfulness, emotional and intellectual empathy, therapeutic alliance, attachment security in psychotherapy, and therapist competence (Antunes-Alves, Thompson, Kramer, & Drapeau, 2014; Cummings, Barak, & Hallberg, 1995; Duan, & Kivlighan, 2002; Lingiardi, Colli, Gentile, & Tanzilli, 2011; Romano, Fitzpatrick, & Janzen, 2008; and Thompson, & Hill, 1993, respectively). Less research has focused on smoothness, but some research does suggest that smoothness across sessions is associated with improved symptoms (Pesale, 2011; Pesale, Hilsenroth, & Owen, 2012).

Though the constructs were initially developed to examine session impact in individual psychotherapy, session depth and smoothness have become important session-level outcomes in research on group interventions. For example, Shechtman, Wade, and Khoury (2009) found that session depth was one of the best predictors of positive outcomes of a forgiveness intervention for adolescents. Wade, Post, Cornish, Vogel, and Tucker (2011) also found that group members’ perceptions of session depth following a single session of group counseling were related to both changes in self-stigma and interest in continuing counseling. In addition, using an actor-partner interdependence model (Kenny, Mannetti, Pierro, Livi, & Kashy, 2002), Kivlighan (2011) found that the other group members’ perceptions of therapeutic factors in personal growth groups were related to a focal individual group member’s perceptions of session smoothness, though not session depth.

Given that one of the goals of IGD is the development of a critical awareness of social identities and social systems, which necessitates self-exploration and self-disclosure about (sometimes painful) personal experiences as members of social identity groups with differing levels of privilege and/or oppression, we expected that session depth and smoothness would be important process variables in IGD. Because IGD participants engage with one another over a sustained period of time and focus primarily on one social identity, the potential for great depth is one unique aspect of IGD over more traditional forms of classroom-based multicultural education. Similarly, given that the goals of IGD include both the development of relationships across groups, and the development of a critical consciousness about hierarchical social systems, IGD necessitates enough smoothness that group members can build relationships, but not so much smoothness that group members avoid examining difficult intergroup issues and conflicts. IGD shifts in the amount of risk expected of participants over time—as group members develop relationships and a sense of cohesion, the focus moves to increasingly challenging topics, like privilege, and “hot topics” related to identities. Thus, we expected that session depth and smoothness would also necessarily vary as a function of the session number (and stage of IGD), with earlier stages being less deep but more smooth (to facilitate relationship building and the exploration of differences and commonalities—the first and second stages, respectively, Zúñiga et al., 2007), middle sessions being more deep and less smooth (as group members dialogue about hot topics in the third stage, Zúñiga et al., 2007), and later stages returning to less deep and more smooth (as group members work on social action planning and alliance building, Zúñiga et al., 2007). Interestingly, however, no research has examined session depth or smoothness in the context of IGD. Thus, another aim of the current study was to examine group members’ experiences of session depth and smoothness over time, in relation to the four-stage model of IGD. Our final aim was to examine whether session impact (i.e., depth and smoothness) could be predicted by the session-level experiences of positive and negative emotion.

The Current Study

The current study attempted to integrate the (largely experimental) research on intergroup emotion and the applied research on IGD. In addition, we sought to build on the research on the four-stage model of IGD (Zúñiga et al., 2007) by examining session-level processes and outcomes to gain a better understanding of how the model unfolds, in practice, over time. Specifically, our first aim was to examine the ses-
session-level experiences of positive and negative emotions across sessions in IGD. Though there is currently no research on group members’ session-level experiences of emotions in IGD, research on intergroup contact suggests that contact can be both positive and negative (Graf, Paolini, & Rubin, 2014). However, as described above, IGD is intended to provide a positive intergroup contact experience over all, despite conflict and negative emotion that might occur within any given session. Therefore, based on the four-stage model of IGD (Zúñiga et al., 2007), we expected that participants would experience high levels of positive emotions, and low levels of negative emotions, in the early stages, as cofacilitators work to develop relationships and establish cohesion and a safe group climate in which to dialogue. Over time, as the four-stage model shifts its focus from the individual to systems, and the level of risk required of participants grows (e.g., participants are asked to focus on personal experiences of privilege and oppression), we expected that the level of positive emotions would decrease, and the level of negative emotions would increase. Finally, as the four-stage model moves into the last stage of action planning and alliance building, we expected that the level of positive emotions would again rise, and the level of negative emotions would decrease, leaving IGD participants on a hopeful, empowered, and otherwise positive note regarding their intergroup contact experience. Therefore, in the present study, we expected that we would find evidence for quadratic trends in both positive and negative emotions. Specifically, we expected to see a U-shaped pattern (high-low-high) in positive emotion, and an inverted-U shaped pattern in negative emotion (low-high-low), across 8 weeks of IGD.

Our second aim was to examine session impact, operationalized as participants’ ratings of session depth and smoothness. Because the four-stage model of IGD requires increased personal risk over time after the initial stage of forming and building relationships, we expected that session depth would start low and gradually increase over time, while session smoothness would start high and gradually decrease over time. As group members neared termination of their groups and began to focus on the past stage of coalition building and social action planning, we expected that session smoothness would begin to rise again, and session depth would begin to fall. Therefore, we predicted an inverted U-shaped pattern (low-high-low) in session depth, and a U-shaped pattern in session smoothness (high-low-high), across 8 weeks of IGD.

Research by Gurin, Nagda, and Zúñiga (2013) suggests that positive affect was related to positive outcomes in terms of intergroup empathy and intergroup contact, however, we could locate no research on the session-level experience of emotion and its relationship to session-level outcomes like session depth and smoothness. Therefore, our final aim of the current study was to examine whether and how session-level experiences of positive and/or negative emotion predicted session depth and/or smoothness.

Method

Participants

Groups. Groups were 18 IGD groups from a large, public university in the Southeastern United States. These groups were a required component of three sections of a larger undergraduate multicultural psychology course, over three separate semesters. At the beginning of each semester, students were asked to provide demographic information, as well as their top three choices for an IGD topic (gender, race/ethnicity, religion/spirituality, sexual orientation, or social class). The instructor and teaching assistant used this information to assign students to groups such that there was approximately equal representation of students who were members of the oppressed and privileged social identity groups (e.g., people of color and White people, respectively, in a dialogue on race and ethnicity), and students were in a group focused on an identity topic of interest to them. Four groups focused on religion and spirituality, four groups focused on social class, four groups focused on race and ethnicity, three groups focused on sexual orientation, and three groups focused on gender. The number of students in each group ranged from 7 to 10. Groups were cofacilitated by doctoral students in counseling psychology who were taking or had already completed an advanced course on diversity and social justice in group work.

Group members. Across three semesters, 161 students participated in the 18 IGD groups. All of these students were invited to participate,
and were offered extra credit toward their final course grade for completing the surveys. Participation in the research was not a course requirement, and students had the opportunity to earn extra credit even if they chose not to participate. Of the 161 students who participated in the dialogues, 142 (88.20%) participated in the research and provided data for at least one session (the range of number of sessions for which each participant provided data was 1–8; $M = 6.14, SD = 2.10$). Ninety-one of these participants were women, 21 were men, and 30 participants did not provide their gender. Ages ranged from 20 to 52 years of age ($n = 109; M = 21.90, SD = 3.78$). In terms of race or ethnicity, 89 as participants identified as White, 13 as Black, 6 as Latina or Latino, 5 as Asian or Asian American, 2 as Middle Eastern or Arab, 1 as Native American or Alaskan Native, and 3 as multiracial (participants were allowed to select multiple options for this demographic question).

**Measures**

**Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988).** To assess positive and negative affect at the session-level, we used the PANAS. The PANAS is a 20-item, self-report measure that includes 10 positive (e.g., enthusiastic, excited, or interested) and 10 negative (e.g., ashamed, guilty, or hostile) emotions. Respondents are asked to indicate the extent to which they felt each of these emotions during a specified time frame on a scale ranging from 1 (very slightly or not at all) to 5 (extremely). In the current study, we asked participants to report the extent to which they felt each of the positive and negative emotions in their most recent IGD session. Scores for positive and negative affect are calculated by summing individual scores on the respective subscales, and can range from 10–50 for each scale. Watson, Clark, and Tellegen (1988) reported reliabilities ranging from .86 to .90 for positive affect, and .84 to .87 for negative affect in a student population. In the current study, reliabilities (Cronbach’s $\alpha$) were .91 and .88 for positive and negative affect, respectively.

**Session Evaluation Questionnaire (SEQ; Stiles, 1980).** The SEQ is a self-report measure of session impact (Stiles, 1980). The SEQ assesses session impact along two dimensions: depth and smoothness. Participants are presented with the stem “This session was . . .” followed 10 pairs of bipolar adjectives. Five of these pairs assess whether a session was perceived as shallow versus deep and five assess whether a session was perceived as rough versus smooth. The bipolar pairs of adjectives serve as anchors on a seven point rating scale, upon which participants are asked to rate their most recent session. For example, participants rate session depth on a scale of 1 (shallow) to 7 (deep), and a scale from 1 (full) to 7 (empty) (reverse scored). Participants rate session smoothness on a scale of 1 (rough) to 7 (smooth), and a scale of 1 (comfortable) to 7 (uncomfortable) (reverse scored). Mean scores for each scale are calculated, and can range from 1 to 7. Stiles et al. (1994) reported reliabilities of .90 and .92 for session depth and smoothness, respectively. Reliabilities (Cronbach’s $\alpha$) in the current study were .86 and .76 for session depth and smoothness, respectively.

**Procedure**

IGD groups met as a required component of the larger multicultural psychology course for 1.25 hr per week, for 8 weeks, starting half way through the semester. After each session, participants received an email with a link to an online survey. Reminder emails were sent every 2 days after the initial email for 1 week (until the participants’ next IGD session).

**Results**

First, we examined our data set for missing data. There were 142 participants who completed at least one postsession survey. Each participant could have each taken one survey after each of the eight dialogue sessions, for a total of 1,142 possible completed surveys. Of this number, 903 surveys were started (79.07% of the total number possible). We eliminated data from 11 surveys because more than 10% of the data were missing. Next, we eliminated data from 20 surveys because participants provided an incorrect identifying code on their survey, and it was impossible to match their data across sessions. This left us with data from 872 survey administrations. Across these 872 surveys, 39 data points (.14% of total items) were missing at the item level. To address these missing data
points, we followed the procedures outlined by Schlomer, Bauman, and Card (2010) for expectation maximization to calculate values for these missing data points. Means, SDs, and bivariate correlations for all variables are included in Table 1.

To partition the variance, we ran four completely unconditional hierarchical linear models (HLM: Raudenbush & Bryk, 2002), one for each of our four variables of interest. With regard to positive affect, 47.42% of the variance was at the session level, 49.64% of the variance was at the member level, and 2.93% of variance was at the group level. With regard to negative affect, 62.78% of the variance was at the session level, 32.53% of the variance was at the member level, and 4.69% of the variance was at the group level. With regard to session depth, 59.46% of the variance was at the session level, 36.94% was at the member level, and 3.60% of the variance was at the group level. With regard to session smoothness, 69.05% of the variance was at the session level, 19.05% of the variance was at the member level, and 11.90% of the variance was at the group level. Thus, for all of our variables, a great deal of the variance could be accounted for at the session-level (only for positive affect was the member level variance greater than the session level variance).

Next, we ran two sets of HLM analyses to test our hypotheses. The first set tested for quadratic changes in the session-level process and outcome variables across the eight sessions; the second set examined whether positive and negative affect experienced in a session predicted clients’ ratings of session depth and smoothness. HLM is an appropriate data analysis technique for longitudinal group data, given that it takes into account the nested nature of the data (i.e., sessions are nested within members, who are nested within groups; Miles & Paquin, 2014).

### Change in Affect and Session Impact Over Time

To examine whether there were significant quadratic changes in positive affect, negative affect, session depth, and session smoothness over the eight sessions, as predicted based on the four-stage model of IGD, four separate three-level (within group member or session-level, within group or member level, and between group level) growth curve analyses were conducted using HLM (Raudenbush & Bryk, 2002). In each of these analyses, the session number (linear term) and the session number squared (quadratic term) were entered as Level 1 predictors. There were no Level 2 or Level 3 predictors. For example, the three level model used for examining positive affect across sessions is shown below.

The Level 1 (session level) model for positive affect across sessions was:

\[
Y_{tjk} = \pi_{0jk} + \pi_{1jk}(\text{session}) \\
+ \pi_{2jk}(\text{session})^2 + e_{tjk}
\]

where

- \(Y_{tjk}\) is positive affect for group member \(j\) in group \(k\) at session \(t\)
- \(\pi_{0jk}\) is the intercept for group member \(j\) (centered such that the intercept represents group member \(j\)'s level of positive affect at the middle session)
- \(\pi_{1jk}\) is group member \(j\)'s linear change in positive affect by session
- \(\pi_{2jk}\) is group member \(j\)'s quadratic change in positive affect by session
- \(e_{tjk}\) is session level error

The Level 2 (between member) model for positive affect across sessions was:

\[
\pi_{0jk} = \beta_{00k} + r_{0jk}
\]

\[
\pi_{1jk} = \beta_{10k} + r_{1jk}
\]

### Table 1

<table>
<thead>
<tr>
<th></th>
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<th>SD</th>
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<th>Session smoothness</th>
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<td>1.12</td>
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</tbody>
</table>

** \(p < .01\).
\[ \pi_{2jk} = \beta_{20k} + r_{2jk} \]

where

- \( \beta_{00k} \) is the mean level of positive affect at the middle session across group members in group \( k \)
- \( \beta_{10k} \) is the mean linear change in positive affect across group members in group \( k \)
- \( \beta_{20k} \) is the mean quadratic change in positive affect across group members in group \( k \)

and \( r_{0jk}, r_{1jk}, \) and \( r_{2jk} \) represent member level error.

The Level 3 (group level) model for positive affect across sessions was:

\[
\begin{align*}
\beta_{00k} &= \gamma_{000} + u_{00k} \\
\beta_{10k} &= \gamma_{100} + u_{10k} \\
\beta_{20k} &= \gamma_{200} + u_{20k}
\end{align*}
\]

where

- \( \gamma_{000} \) is the grand mean level of positive affect at the middle session
- \( \gamma_{100} \) is the grand mean linear change in positive affect
- \( \gamma_{200} \) is the grand mean quadratic change in positive affect

and \( u_{00k}, u_{10k}, \) and \( u_{20k} \) represent group level error.

The models were identical for negative affect, session depth, and session smoothness, with the exception of the dependent variables.

Gamma coefficients, SEs, t-ratios, and degrees of freedom for analyses of affect and session impact over time are provided in Table 2.

### Table 2

<table>
<thead>
<tr>
<th></th>
<th>( \gamma ) coefficient</th>
<th>SE</th>
<th>t-ratio</th>
<th>df</th>
<th>p-value</th>
</tr>
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<tr>
<td>Positive affect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
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</tr>
<tr>
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<td>.37</td>
<td>-2.16</td>
<td>17</td>
<td>.05</td>
</tr>
<tr>
<td>Quadratic</td>
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<td>.04</td>
<td>2.61</td>
<td>17</td>
<td>.02</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
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<td>33.49</td>
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<tr>
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<td>.42</td>
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<tr>
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<td>.04</td>
<td>-4.00</td>
<td>17</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Session depth</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
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<td>69.43</td>
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<tr>
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<tr>
<td>Quadratic</td>
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<td>&lt;.01</td>
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<tr>
<td>Session smoothness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Intercept</td>
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<td>.11</td>
<td>48.10</td>
<td>17</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Linear</td>
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<td>.10</td>
<td>-5.30</td>
<td>17</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Quadratic</td>
<td>.05</td>
<td>.01</td>
<td>5.38</td>
<td>17</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>

\( p < .01; \) and \( \gamma = -.03, p < .01, \) respectively, indicating a positive slope in depth that becomes less steep over time (see Figure 3). Finally, the linear and quadratic slope terms for smoothness were also both significant (\( \gamma = -.51, p < .01; \) and \( \gamma = .05, p < .01, \) respectively), indicating a negative slope in smoothness that becomes less steep over time (see Figure 4).

### Affect and Session Impact

To examine whether experiences of positive and negative affect related to group members’ ratings of session impact (i.e., session depth and session smoothness), we conducted two additional three-level HLM analyses (one for depth and one for smoothness) in which positive and negative emotions were entered as Level 1 predictors. For example, the three level model used for examining whether positive and negative affect predicted session depth is shown below.

The Level 1 (session level) model for session depth was:

\[
Y_{ijk} = \pi_{0ijk} + \pi_{1ijk}(\text{positive affect}) + \pi_{2ijk}(\text{negative affect}) + e_{ijk}
\]

where

- \( \pi_{0ijk} \) is the mean level of positive affect at the middle session across group members in group \( k \)
- \( \pi_{1ijk} \) is the mean linear change in positive affect across group members in group \( k \)
- \( \pi_{2ijk} \) is the mean quadratic change in positive affect across group members in group \( k \)

and \( r_{0jk}, r_{1jk}, \) and \( r_{2jk} \) represent member level error.
\[ Y_{jk} \] is the session depth rating for group member \( j \) in group \( k \) at session \( t \)

\( \pi_{0jk} \) is the intercept for group member \( j \) (centered such that the intercept represents group member \( j \)'s rating of session depth at the middle session)

\( \pi_{1jk} \) is group member \( j \)'s linear change in session depth ratings by positive affect

\( \pi_{2jk} \) is group member \( j \)'s linear change in session depth ratings by negative affect

and \( e_{ijk} \) is session level error

The Level 2 (between member) model for session depth was:

\[ \pi_{0jk} = \beta_{00k} + r_{0jk} \]
\[ \pi_{1jk} = \beta_{10k} + r_{1jk} \]
\[ \pi_{2jk} = \beta_{20k} + r_{2jk} \]

where

\( \beta_{00k} \) is the mean rating of session depth at the middle session across group members in group \( k \)

---

**Figure 1.** Positive affect over time. Time (i.e., session) has been grand mean centered such that “0” represents the middle session.

**Figure 2.** Negative affect over time. Time (i.e., session) has been grand mean centered such that “0” represents the middle session.
\( \beta_{10k} \) is the mean linear change in session depth ratings by positive affect across group members in group \( k \)

\( \beta_{20k} \) is the mean linear change in session depth ratings across group members in group \( k \)

and \( r_{0jk}, r_{1jk}, \) and \( r_{2jk} \) represent member level error.

The Level 3 (group level) model for positive affect across sessions was:

\[ \beta_{00k} = \gamma_{000} + u_{00k} \]

where

\( \gamma_{000} \) is the grand mean rating of session depth at the middle session

\( \gamma_{100} \) is the grand mean linear change in session depth by positive affect

\( \gamma_{200} \) is the grand mean linear change in session depth by negative affect

\[ \beta_{10k} = \gamma_{100} + u_{10k} \]

\[ \beta_{20k} = \gamma_{200} + u_{20k} \]
and \( u_{00k}, u_{10k}, \) and \( u_{20k} \) represent group level error.

The models were identical for session smoothness with the exception of the dependent variable.

Gamma coefficients, SEs, t-ratios, and \( p \) values are provided in Table 3. In the analysis examining positive and negative affect in relation to session depth, the slope term for positive affect was significant (\( \gamma = .07, p < .01 \)), but the slope term for negative affect was not. In the analysis examining positive and negative affect in relation to session smoothness, both the slope terms for positive affect (\( \gamma = .04, p < .05 \)) and negative affect (\( \gamma = -.10, p < .01 \)) were significant in the expected directions.

**Discussion**

A growing body of literature supports the positive outcomes of the four-stage, critical dialogic model of IGD (Dessel & Rogge, 2006; Gurin et al., 2013); however, little research has examined the session-level processes that occur in this model. In the current study, we found the greatest amount of variance in each of our variables was at the session level, highlighting the importance of research on session-level processes. Given the importance of emotion in intergroup contact, generally (Pettigrew, 1998), and IGD, specifically (Khuri, 2004), we focused on emotion as a session-level process. Based on the four-stage model of IGD, we expected that positive emotion would be high in the early sessions when participants were forming relationships and engaging in lower-risk dialogue; would dip in the middle sessions in which group members grapple with challenging issues related to privilege, oppression, and “hot topics;” and would rise again in the final sessions as group members developed alliances and plans to work toward social justice and terminated their group experiences. For the same reasons, we hypothesized an inverse pattern in negative emotion over time.

Consistent with our hypotheses based on the four-stage model and previous IGD research (Miles & Kivlighan, 2008), we found the expected significant quadratic effects of session on positive affect and negative affect, and in session depth and smoothness. These patterns appear to be consistent with the four-stage model of IGD (Zúñiga et al., 2007). Specifically, as group members start to dialogue with one another about less risky topics and work on developing cohesion, we would expect positive emotions and session smoothness to be high, and negative emotions and session depth to be lower. As group members begin to engage in more difficult dialogues about privilege, oppression, and other hot topics, in the middle sessions of their IGD experience, we would expect that they might feel fewer positive emotions and rougher sessions, and increased negative emotions associated with intergroup tensions (e.g., guilt, anger) and session depth. Although we predicted that the quadratic changes in positive and negative affect and session depth and smoothness would result in U-shaped and inverted U-shaped patterns, respectively, across the 8 weeks, Figures 1–4 suggest that we did not see a return in positive affect nor session smoothness, or a decrease in negative affect nor session depth, in the later sessions. Anecdotally, some of the most common feedback we receive from students in our IGD groups is that they would have liked to have more time (additional weeks) to dialogue with one another. Thus, it may be that the 8 weeks are not long enough for the groups to pass fully through all of the stages. In addition, institutional constraints limited the length of each dialogue session to 1 hr and 15 min. Length of IGD groups (both individual sessions and entire programs) vary (Zúñiga et al., 2002), but the length of the dialogues in the current study are on the lower end of the range. Still, our findings are consistent with theory and research on emotion in intergroup contact situations, including IGD (suggest that IGD cofacilitators should be aware of, and able to work

**Table 3**

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Gamma Coefficients, SEs, t-Ratios, and Degrees of Freedom for Analyses of the Relationship Between Affect and Session Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \gamma ) coefficient</td>
<td>SE</td>
</tr>
<tr>
<td><strong>Session depth</strong></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>5.39</td>
</tr>
<tr>
<td>Positive affect</td>
<td>.07</td>
</tr>
<tr>
<td>Negative affect</td>
<td>-.01</td>
</tr>
<tr>
<td><strong>Session smoothness</strong></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>5.05</td>
</tr>
<tr>
<td>Positive affect</td>
<td>.04</td>
</tr>
<tr>
<td>Negative affect</td>
<td>-.10</td>
</tr>
</tbody>
</table>
with, fluctuations in positive and negative emotions and in session depth and smoothness).

We also found that session smoothness was positively related to positive affect, and negatively related to negative affect. Thus, when group members were feeling greater levels of positive emotions such as excitement or enthusiasm, they also found sessions to feel more comfortable and smooth, and when they were feeling more negative emotions like distress or fear, they felt that sessions were less comfortable and rougher. Some previous research in other types of interventions (e.g., counseling) has suggested that session smoothness is associated with improved symptoms (Pesale, 2011; Pesale, Hilsenroth, & Owen, 2012). At the same time, however, conflict is an expected and necessary part of many small group interventions (e.g., Yalom & Leszcz, 2005), including IGD. Therefore, additional research is needed to understand whether session smoothness is related to conflict, and to overall outcomes of IGD. As we can see from the analyses of session impact over time, there are quadratic changes in positive and negative affect, and in perceptions of session smoothness. These quadratic trends appear to be consistent with the four-stage model of IGD (and, thus, may be related to positive overall outcomes of IGD participation), but additional research is needed to examine whether these patterns in group development are related to overall pre-to postdialogue changes.

An interesting find was that in the current study only positive affect predicted session depth. We hypothesize that positive affect might be necessary to allow group members to feel safe and engaged enough to deeply explore difficult issues like privilege and oppression. In addition, the specific emotions assessed by the PANAS (Watson, Clark, & Tellegen, 1988) include words like “excited,” “enthusiastic,” “attentive,” and “alert,” which may be necessary emotions for engaging in deep, genuine dialogue; whereas the specific negative emotions assessed include words like “distressed,” “hostile,” and “afraid,” which may inhibit group members from dialoguing on a deeper level with one another. Thus, it seems that fostering positive emotions like excitement and enthusiasm may be especially important tasks for IGD cofacilitators to help group members engage in deeper dialogue with one another. Similarly, research has found that IGD participation is related to the development of intergroup empathy (Muller & Miles, 2015), a positive emotion. It may be that empathy helps IGD participants deepen their interest in one another, and their ability to engage in sustained dialogue, resulting in higher ratings of session depth.

These findings about the importance of positive affect are similar to the findings of Gurin, Nagda, and Zuñiga (2013), who found that positive affectivity was related to positive outcomes (i.e., pre- to postdialogue changes in intergroup empathy and intergroup action). Additional research is needed to examine whether positive emotions, as assessed by the PANAS (Watson, Clark, & Tellegen, 1988) are related to overall outcomes of dialogue (e.g., intergroup empathy). This is the first study of IGD process to use the PANAS to assess session-level experiences of group member affect. The positive emotions tapped by the PANAS (e.g., interest, enthusiasm, alertness, attentiveness, and activeness) may reflect group members’ engagement with the group. Engagement is an aspect of group climate that includes the importance of the group to the members, as well as cohesion among them (MacKenzie, 1983). Previous research has found that engagement in IGD groups is related to positive group member outcomes (e.g., increases in empathic perspective taking and decreases in color-blind racism; Muller & Miles, 2015), but additional research should examine the relationship between group member affect, and the group climate in IGD.

A benefit of the PANAS is that it is a relatively short, easy to administer, and widely used measure of positive and negative affect that allows for the simultaneous assessment of both positive and negative affect. A limitation, however, is that it presents a somewhat limited conceptualization of positive and negative affect, and it was not designed for specific use in examining intergroup emotions. Additional research should use other tools to assess emotions in IGD, including new instruments designed specifically to assess intergroup emotions in this type of intervention.

Strengths and Limitations

A strength of the current study is that it represents an attempt to bridge the largely
experimental research on affect in intergroup contact situations, and the applied research on IGD. Another strength is that both affect and session impact were assessed at the session-level, which helps cofacilitators and trainers have a better sense of what to expect as the four-stage model of IGD unfolds over time. Even given these strengths, however, there are some limitations that should be noted. First, our IGD groups may not have met for enough weeks to see returns in positive affect and smoothness. Future research should examine session-level positive and negative and session impact affect in IGD groups that have a longer duration. This is especially important because heightening group members’ awareness of oppression and group conflict (as is likely to happen in the middle sessions of IGD using the four-stage model), without leaving them with the emotional, behavioral, and cognitive resources to address them can be considered both problematic and unethical (e.g., Vasques-Scalera, 2011). It may also be useful for IGD cofacilitators to assess levels of positive and negative emotion (either formally or informally) after each session. In addition, we did not examine our session-level process and outcome variables in relation to pre- and postdialogue outcomes. Therefore, future research should examine session impact (i.e., depth and smoothness) in relation to overall changes that may occur as the result of participation in IGD (i.e., pre- to postdialogue change over 8 weeks). Research on other group interventions (e.g., group counseling) suggests that both session depth (e.g., Antunes-Alves et al., 2014; Cummings et al., 1995; Duan, & Kivlighan, 2002; Lingiardi et al., 2011; Romano et al., 2008; and Thompson, & Hill, 1993) and session smoothness (Pesale, 2011; Pesale et al., 2012) relate to positive member outcome, and that session impact mediates the relationship between session level processes and overall outcomes of an intervention (Stiles et al., 1994). Therefore, research examining session depth and smoothness in IGD in relation to both session-level variables like the experiences of positive and negative emotion, and overall outcomes (e.g., changes in attitudes toward outgroup members).

Another limitation is that, of those participants who identified their gender \((n = 112)\), 81.25% identified as women. At our university, men tend to be underrepresented in the enrollment in our multicultural psychology course. Given that women and men are socialized differently around emotional experiences and expression (e.g., children learn that “boys don’t cry,” Harro, 2010), there may be important differences in if and how women and men experience and express positive and negative emotions. Research also suggests that women and men may report differential levels of positive and negative emotions (Simon & Nath, 2004). Therefore, future research should examine the impact of gender on the emotional experiences in IGD. Future research might also examine emotional experiences of members of privileged and oppressed groups separately. Nagda, Yeakley, Gurin, and Sorensen (2012) noted that there are “affective asymmetries,” or “mismatches in how members of dominant and subordinated groups, or high-power and low-power groups, think about group identities and group inequalities” (p. 212). Finally, the current study only examined group member experiences of emotions, and perceptions of session depth and smoothness. The impact of cofacilitators and specific forms of facilitation on group members’ emotional experiences were not examined. Khuri (2004) noted the importance of IGD cofacilitators in shaping the emotional climate of the group, and she provided guidelines for cofacilitators in working with emotion in IGD. However, additional research is needed to fully understand the impact of cofacilitators on group members’ emotional experiences and perceptions of session depth and smoothness.

**Implications for Practice**

In terms of implications for practice, cofacilitators should expect increases in negative affect and decreases in positive affect over time, and IGD trainers should prepare them to work with group members to continue to engage with one another as these changes in affect occur. This should involve helping cofacilitators do their own processing of their own emotional reactions in a supervisory setting outside of their IGD group (Khuri, 2004). Cofacilitators should be especially aware that positive affect is related to both session
smoothness and session depth, so some level of positive emotion should be fostered throughout the dialogue. Positive emotions, as assessed in this study with the PANAS (Watson, Clark, & Tellegen, 1988) include interest, excitement, strength, enthusiasm, pride, alertness, inspiration, determination, attentiveness, and activeness. In addition, co-facilitators should ensure that they leave enough time in the semester to address and begin to work through negative emotions that have arisen over the semester so as to not leave students with a negative intergroup contact experience. Gurin et al. (2013) found that participants in 2-hr long dialogues that occurred over an entire semester felt positively at the end of their dialogue experience. Therefore, administrators and cofacilitators need to ensure that there are enough sessions to really work on developing alliances with one another, and building capacities to promote social justice, which can help provide hope to students as their dialogue experience comes to an end.

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Received April 11, 2015
Revision received July 16, 2015
Accepted July 17, 2015