

# Emotion regulation and intimacy quality: The consequences of emotional integration, emotional distancing, and suppression

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## Abstract

The study explored the quality of conflictual discussion between intimate partners and their emotional experience subsequent to emotion regulation (ER) manipulation. It differentiated between integrative ER (IER), which involves an interested stance to emotional experience, and two types of regulation aimed at minimizing emotions: emotional distancing (minimization of emotional experience) and suppression of expressive behavior (minimization of emotional expression). The sample included 140 intimate couples randomly assigned to one of four conditions (IER, distancing, suppression, and control). Following the selection of a specific relational conflict to discuss, one of the partners received manipulation instruction; the other (naïve) partner was oblivious to the instruction. During a 10-min discussion, the naïve partner's skin conductance level was continuously assessed. The partners' self-reported perceptions of quality of experience and discussion were measured after the discussion. In general, the results provide preliminary support for the hypothesis that taking an interest in one's emotional experience during a conflictual discussion results in better communication and higher perceptions of discussion productivity. Furthermore, in contrast to the IER condition, in the emotional distancing condition, the naïve partners' physiological arousal

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increased as the discussion progressed. Hence, the results support the hypothesis that taking an interest in and accepting one's negative emotions promote adaptive communication in conflictual discussions between intimate partners.

### **Keywords**

Distancing, emotion-regulation, integration, intimacy, self-determination theory, suppression

Well-being and the regulation of emotions are interconnected (Gross, 2013). Effective emotion regulation (ER) allows a person to cope adaptively with a wide range of environmental contingencies, but ineffective regulation has negative emotional and cognitive consequences, with the potential for mental or physical illness (e.g., Berenbaum, Raghavan, Le, Vernon, & Gomez, 2003; Dunn, Billotti, Murphy, & Dalglish, 2009; Pennebaker, Mayne, & Francis, 1997; Ryan, Deci, Grolnick, & La Guardia, 2006). The current clinical convention is to argue that chronic attempts to change or reduce emotions (as may be suggested in cognitive therapy) do not engender wellbeing; adopting an accepting, non-judgmental stance toward emotions is more helpful because it is more adaptive (Chambers, Gullone, & Allen, 2009). Thus, scholars and therapists advocate the use of mindfulness (Segal, Williams, & Teasdale, 2001) and/or acceptance techniques (Hayes, Strosahl, & Wilson, 1999) to encourage the adoption of an accepting, observing, nonjudgmental relationship with emotions and other internal phenomena. Simply stated, in standard cognitive therapy, the focus is on changing the content of thoughts, feelings, and beliefs that individuals attach to specific events; in the new "third wave" of therapy, the focus is on changing their relationship with this content (Dunn et al., 2009).

Given this approach, empirical research in the last decade has emphasized the adaptive role of integrative ER (IER) and anchored in self-determination theory (SDT; Ryan & Deci, 2017). IER involves taking an interest in one's negative emotions and integrating them with other aspects of one's self (Roth et al., 2014; Ryan et al., 2006). Recent research has found IER useful when the same emotion-eliciting situation is encountered twice (i.e., reduced emotional arousal, better recall, less defensive emotional processing; Roth et al., 2014). In addition, a longitudinal study by Brenning, Soenens, Van Petegem, and Vansteenkiste (2015) revealed that, across time, IER predicted an increase in self-worth and suppression predicted an increase in depressive symptoms.

Studies exploring the role of IER in social relations have revealed associations between IER, empathy, and pro-social behavior in the school context (Benita, Levkovitz, & Roth, 2017), and between IER, empathy, and support for out-group members in intractable conflicts (Roth, Shane, & Kanat-Maymon, 2017). IER also predicts better intimacy capacity (Roth & Assor, 2012).

In our research, we expanded these recent studies and examined the effect of IER during conflictual discussions between romantic couples in a laboratory setting, comparing its effectiveness to two other approaches focused on minimizing emotional experience: emotional distancing (the attempt to minimize or avoid the emotional experience) and expressive suppression (the attempt to minimize emotional expressive

behavior; Gross, 2013). The effects of ER were examined in relation to both partners' experiences: the partner who received regulation instructions and the naïve partner who was oblivious to these instructions.

### *SDT-based conceptualization of adaptive ER*

In the SDT perspective, healthy ER requires a eudemonic view of wellness (Ryan & Deci, 2001), wherein emotions are neither good nor bad (Deci & Ryan, 2000) but simply a series of informational inputs guiding action and growth (Ryan et al., 2006; Vansteenkiste, Niemiec, & Soenens, 2010). Put otherwise, emotions provide physiological, cognitive, and motivational signals informing behaviors and goals to meet basic psychological needs (Ryan et al., 2006). Healthy ER implies access to both positive and negative feelings and an ability to express them, fostering self-acceptance, personal growth, and interpersonal intimacy. This eudemonically oriented regulation of affect is labeled "emotional integration" (Roth, Assor, Niemiec, Ryan, & Deci, 2009; Ryan et al., 2006).

Those accessing IER take a tolerant, accepting, and interested stance to their negative emotions, seeing them as providing important information, attempting to understand their sources and using the resulting knowledge to guide the adaptive, intentional regulation of their actions. IER of negative emotions is considered applicable to many domains, for instance, in close relationships, where intense negative feelings may be activated fairly frequently (Roth & Assor, 2012). Specifically, IER may allow people to talk about personal difficulties, ask for help, listen empathically when others talk about their own problems, and negotiate interpersonal conflicts openly but nonaggressively (Benita et al., 2017; Roth & Assor, 2012).

As mentioned, IER is strongly linked to mindfulness (Brown & Ryan, 2003; Chambers et al., 2009) and acceptance (Hayes et al., 1999), defined as nonjudgmental awareness of the present moment's experience. Given the general manner in which mindfulness is defined, the measures focus on attention to momentary general experiences (i.e., attention to activities, eating, etc.), and these are not necessarily emotional experiences. For example, a frequently used self-report measure by Brown and Ryan (2003) includes 15 items, only one of which taps directly into emotional experience. Therefore, we prefer to specifically focus on the SDT notion of emotional integration (Roth et al., 2009). In addition, unlike mindfulness, IER involves a more active tendency and capacity to learn from emotions and to use the resulting understanding to regulate future behavior.

### *IER in social relationships*

Roth et al. (2017) studied the effect of IER on empathy and support for conciliatory policies in the context of the Israeli–Palestinian intractable conflict. Their results support the hypothesis that a tolerant, accepting, and interested stance toward one's own negative emotion (i.e., IER) allows one to have empathy with the adversity of innocent out-group members (i.e., identification with the other's negative emotional experiences); this, in turn, predicts support for conciliatory policies. A consistent attempt to avoid one's own emotional experiences, as in suppressive regulation (Roth & Assor, 2012), does not predict empathic concern toward out-group members. Thus, the low empathic tendency predicted by suppressive regulation may be explained by an unwillingness to risk experiencing the

particular negative emotions one otherwise tries to avoid (Chambers et al., 2009). Similarly, when Benita, Levkovitz, and Roth (2017) explored ER in the school context, they found that IER predicted empathic ability that, in turn, predicted pro-social behavior toward classmates. Finally, Roth and Assor (2012) examined IER as a possible predictor of intimacy capacity and found that contrary to an emotional avoidance style, an IER style allows an individual to disclose personal difficulties with an intimate partner and to listen empathetically when the partner expresses negative emotions.

Research on other types of ER has provided indirect support for the studies reported earlier. For example, Butler et al. (2003) studied the social consequences of instructions given to one member of an unacquainted pair of women to suppress her emotional expressive behavior while discussing an upsetting topic. Suppression instructions resulted in disrupted communication and meaningful blood pressure responses in both the regulators and their partners. Suppression also reduced rapport and inhibited relationship formation. Using the same approach, Ben-Naim, Hirschberger, Ein-Dor, and Mikulincer (2013) studied the engagement of romantic couples in a relationship conflict interaction. Their results corroborated those of Butler et al.; in their subjects, suppression increased cardiovascular arousal and negative affect.

Given these findings, we used an experimental design to comparatively test the effects of several ER types on romantic couples' discussion of a conflictual subject, using IER, emotional distancing, expressive suppression, and a control group. In other words, we compared IER to two types of regulation aimed at minimizing emotions. We chose to include both emotional distancing and expressive suppression, because past research suggests that their effects are quite different in terms of adaptive functioning. Expressive suppression is found to be demanding (experiencing the negative emotion but trying to hide it) and results in maladaptive functioning; emotional avoidance (minimizing the negative emotional experience) is found to be more adaptive, especially when coping with stress during emergencies (Gross, 2015).

### *The present study*

To expand the research on the role of ER in close relationships, we compared the effects of three types of ER on the quality of a conflictual discussion between intimate partners. After completing the couples' problem inventory (CPI; Gottman, 1979) and choosing a relevant conflict to discuss, one of the partners received ER instructions. The effects of each regulation condition were tested on both partners' emotional experience during the discussion and on their perceptions of the quality of the discussion. We hypothesized that the instructions to take an interest in the emotional experience (IER instructions) would result in higher commitment to the discussion and better processing of their emotional experience that, in turn, would result in an experience of productive communication (perceptions of attentiveness and seriousness) and a sense of progress in conflict resolution for both partners: the instructed and the naïve (non-instructed) partner alike.

*Specific hypotheses for the experience of the instructed partner.* Roth and Assor (2012) found that unlike emotion suppression and emotion dysregulation, trait-like IER (measured by self-reports) allows people to disclose personal difficulties with an intimate partner, to

listen empathetically when the partner discloses negative emotions, and to negotiate interpersonal conflicts. In addition, Roth et al. (2014) found that experimental manipulation of IER results in an *immunization effect* over time. That is, in comparison with suppression and control conditions, taking an interest in one's negative emotional experience (IER instructions) resulted in lower emotional arousal and better recall when subjects were exposed to the same fear-eliciting stimulus (a short film) a second time (72 hr apart). Thus, in the short term, taking an interest in a negative emotional experience may be demanding, but over time, it may be beneficial, presumably because of better regulatory efforts during the first exposure.

Therefore, we hypothesized that taking an interest in one's emotional experience (i.e., IER condition) during a conflictual discussion on a personally relevant issue would promote better processing of the emotional experience and fuller engagement in the discussion than avoidance or suppression. The fuller engagement would be revealed in instructed participants' reports of higher emotional awareness during the discussion, greater interest in the discussion, and increased guilt in relation to the conflict. Given the possibility that taking an interest in one's emotions during a conflictual discussion may result in more tension, we also measured self-reported stress during the discussion. Thus, we hypothesized for higher stress in the IER condition in comparison with emotional avoidance. Given that past findings show expressive suppression results in lower behavioral expression but higher emotional experience (Gross, 2013; Ben Naim et al., 2013), we did not hypothesize differences between IER and suppression conditions on the level of stress.

Additionally, we hypothesized that the fuller engagement of the instructed partner in the IER condition would result in reports of higher productivity (progress in conflict resolution) than in past discussions on the same topic. To summarize, the hypotheses for the instructed partners are as follows.

1. In comparison with the other conditions, IER instructions would result in fuller engagement in the discussion.
2. Taking interest in one's emotions during the conflictual discussion and integrating them with other aspects of one's self (IER) would result in a higher sense of stress than in the emotional avoidance and control conditions but not the expressive suppression condition.
3. In comparison with the other conditions, instructed participants in the IER condition would report higher productivity of the discussion compared to past discussions on the same conflictual issue.

*Specific hypotheses for the experience of the naïve (uninstructed) partner.* The naïve partner was oblivious to the other partner's instructions, but following others (Ben-Naim, Hirschberger, Ein-Dor, & Mikulincer, 2013; Butler et al., 2003), we hypothesized that his or her perceptions of the instructed partner's behavior would vary across conditions, and these variations would affect his or her experience. As the subject for discussion was chosen by the two partners based on its importance and frequency, we assumed that the naïve partner's perception of the instructed partner as fully engaged in the discussion of important issue would influence his or her engagement. Thus, we hypothesized that the perception of their partners' engagement would promote the naïve partners' own level of

engagement and this would be reflected in their reports of higher emotional awareness, interest, and guilt. In addition, we hypothesized that the fuller engagement would involve perception of progress in the conflict's resolution. Finally, following Ben-Naim et al. (2013) and Butler et al. (2003), we hypothesized that suppression instructions would result in the naïve partners' reports of higher negative emotions (anger, hostility) reflected in higher physiological arousal over the time of discussion (as the conflictual discussion progressed). Although Ben-Naim et al. (2013) and Butler et al. (2003) did not manipulate emotional distancing, we expected that with respect to the naïve partner's perceptions, the instructions for emotional detachment would lead to the same pattern of results as we expected for expressive suppression; thus, the naïve partner higher arousal would be attributed to the disengagement of the emotionally detached or/and suppressed partner. In contrast, we hypothesized that in the IER condition, the naïve partners' perception of the instructed partners' higher engagement, together with their sense of progress in the conflict resolution, would result in their lower physiological arousal over time. To summarize, the hypotheses for the naïve partners are as follows.

4. In comparison with the other conditions, the naïve partners of IER-instructed participants would report fuller engagement in the discussion.
5. Naïve partners of IER-instructed partners would report higher productivity of the discussion.
6. Over time, the naïve partners of IER-instructed partners would report lower anger and hostility and show lower physiological arousal than those in the suppression and emotion avoidance conditions. Thus, we hypothesized an interaction between condition and time.

## **Method**

### *Participants and procedure*

The study sample consisted of 140 romantic couples (mean age 21.6,  $SD = 8.74$ ) recruited by advertisement at Ben-Gurion University and paid US\$25 for their participation. Three couples dropped out of the sample (one couple asked to stop the experiment; in two cases, there was a failure in data recording). The duration of the romantic relationship was from 6 months to 3 years. Power analysis revealed that significant effects, assuming a medium effect size ( $\eta^2 \geq .06$ ) and power of .80, required a sample size of 144 (Cohen, Cohen, West, & Aiken, 2003). The participants signed a consent form, were assured of confidentiality, and were told that they could stop the experimental procedure at any time. They were assigned randomly to one of four conditions: integrative emotional regulation ( $n = 35$ ), emotional distancing ( $n = 35$ ), expressive suppression ( $n = 34$ ), and control ( $n = 33$ ). No significant age-related differences emerged among the three groups using a  $\chi^2$  test.

### *Experimental procedure*

When they arrived at the laboratory, participants were informed by the experimenter: "We are interested in learning more about close relationships." They were told the

experiment would be videotaped. The partners were escorted to separate rooms, where they completed self-report measures: demographic details, relationship quality (Hendrick, 1988), and ratings of specific conflictual areas in terms of severity and duration (CPI; Gottman, 1979). Based on the CPI reports, a trained research assistant chose the conflict for discussion. The chosen conflict was the one that received the highest ratings in terms of severity and duration by both partners. Each couple was randomly assigned to one of the four groups, and one of the partners was randomly assigned to receive ER instructions (the instructed partner).

IER instructions were taken from Roth et al. (2014), with minor modifications for the specific context: "During the discussion with your partner, try to take an interest in your emotions; thus, try to understand what you are feeling. In other words, during the dialogue, try to be attentive to your emotions as much as possible and try to see how your emotions are related to your goals and wishes regarding the discussion." Emotional distancing instructions were adapted from Gross and Levenson (1997): "During the conversation with your partner, try to not feel anything. In other words, try to relate to what is happening between the two of you as objectively and rationally as possible. We know it can be difficult, but please, during the conversation concentrate matter-of-factly on the disagreements between you and try to be emotionally detached as much as possible." Expressive suppression instructions were adapted from Gross and Levenson (1997) and Ben-Naim et al. (2013): "If you have any feelings during the conversation, please try your best not to let those feelings show. Please, along the whole conversation try to act so that your partner will not know whether you are feeling anything at all." Finally, the participants in the control group received the following instructions: "During the discussion with your partner try to behave naturally as possible, as you usually behave when you discuss this issue."

Following the instructions, still in separate rooms, the partners were given 5 min to write down their thoughts about the conflict. The instructed partners were reminded of the regulation instructions, and the experimenter assured them that the naïve partners did not receive similar instructions. The partners were moved to a larger room for the discussion and were seated on comfortable chairs facing each other. Physiological sensors measuring skin conductance were attached to both, giving them the impression that they were both being monitored. In fact, only the naïve partner was connected, because the system could only measure one participant at a time. Both partners were connected to earphones, allowing the research assistants to talk to them privately from the control room. The participants watched a short nature film (*Alaska's Wild Denali*; Rottenberg, Ray, & Gross, 2007) to relax and adjust to the lab setting. This also served as the baseline for the physiological measurement. At the end of the film, the experimenter entered the room and reminded them of the conflict for discussion. The experimenter left the room and, via the earphone, asked them to start the discussion and briefly reminded the instructed partner of the regulation instructions. The discussion lasted 10 min. At this point, the partners were led to separate rooms where they privately completed three sets of measures that assessed (1) the level of engagement based on their emotional awareness, interest, sense of guilt, sense of commitment, and closeness; (2) the amount of stress they felt during the discussion; and (3) the extent to which the discussion was

productive and got them closer to a solution. A final discussion was moderated by the experimenter who debriefed and thanked the participants.

## Measures

*Demographic questionnaire.* Participants provided information on age, sex, parents' education level, major of study, year of study, and duration of relationship.

*Relationship satisfaction.* In order to test the random assignment to conditions, we used Hendrick's (1988) measure. The test has 7 items (e.g., "How well does your partner meet your needs?"; "In general, how satisfied are you with your relationship?"). Participants were asked to rate each item on a 7-point Likert-type scale ranging from *not at all* (1) to *extremely* (7). The reliability of the measure was satisfactory, with Cronbach's  $\alpha$  of .72 for the instructed partners and .71 for the naïve partners.

*Couples' problem inventory.* The CPI (Gottman, 1979) asks respondents to rate the severity of possible conflicts on 12 relationship issues (e.g., sex, communication, family/friends, jealousy, and other) on an 11-point scale, ranging from *not a problem* (0) to *serious problem* (10). Because this rating was made before the laboratory session, the topic selection could not have been influenced by condition assignments.

## The couples' experience during the discussion

Both partners were asked about their level of engagement in the discussion, their level of stress, and their evaluation of the productivity of the discussion.

*Level of engagement.* The participants were asked about their level of (1) emotional awareness during the discussion, (2) interest in the discussion, and (3) sense of guilt in relation to the conflict. Cronbach's  $\alpha$  of the 3 items was quite low, but when the item of guilt was removed, the reliability was acceptable, with  $a = .68$  for instructed partners and  $a = .66$  for naïve partners. Thus, the measure of engagement was based on two items (emotional awareness and interest). Guilt was analyzed separately as a single item.

*Level of stress during the discussion.* Following Simpson, Rholes, and Philips (1996), three questions assessed the level of distress the partners felt during the discussion: "How stressful was the discussion you just had with your partner?"; "How upset did you feel during the discussion?"; "How anxious did you feel during the discussion?" Each item was answered on a 9-point Likert-type scale, from *not at all* (1) to *extremely* (9). The reliability was tested using Cronbach's  $\alpha$  coefficient and found to be acceptable for both the instructed partner,  $a = .8$ , and the naïve partner,  $a = .81$ .

To ensure that the differences among groups were unique to the level of stress and did not reflect differences in general negativity, we also measured on the same Likert-type scale the extent of participants' anger, resentment, and hostility during the discussion.



*Level of anger during the discussion.* Three items assessed the level of anger: anger, hostility, and resentment. Each item was answered on the same 9-point Likert-type scale, from *not at all* (1) to *extremely* (9). The reliability was tested using Cronbach's  $\alpha$  coefficient and found to be acceptable for both the instructed partner,  $a = .84$ , and the naïve partner,  $a = .74$ .

*Productivity of discussion and quality of communication.* The measure for productivity of discussion was based on three items. Following Simpson et al. (1996), we used two items to measure the quality of communication: "What is the extent to which you feel that your partner was really attentive to your opinion/feelings?" (two separate items). We added a third item to measure the participant's evaluation of progress in the conflict resolution: "To what extent do you believe that the discussion got you closer to conflict resolution in comparison to previous discussions you had on this topic?" Cronbach's  $\alpha$  of the three items was acceptable for both the instructed partner,  $a = .86$ , and the naïve partner,  $a = 0.73$ .

*Naïve partner's physiological arousal.* Emotional arousal is characterized by a sympathetic activation that, among other physiological responses, involves an increase in skin conductance level (SCL; Kreibitz, Wilhelm, Roth, & Gross, 2007). SCL was continuously recorded using Mindware Technologies' (Gahanna, OH, USA) BioLab acquisition software and hardware, in accordance with the Society for Psychophysiological Research Guidelines (Boucsein et al., 2012), with two Ag/AgCl electrodes placed on the palm surface of the middle phalanx of the first and third fingers of the nondominant hand. The 10-min discussions were divided into three epochs, and the second-by-second SCL values were averaged for each epoch. A difference score was calculated by subtracting the baseline mean SCL from the value obtained in each epoch. Following Schmidt and Walach (2000), we eliminated cases in which the mean SCL exceeded 27  $\mu$ Siemens or was under 1  $\mu$ Siemens; overall, we removed 14 couples from the SCL analyses; 3 were eliminated from the control and IER conditions and 4 from suppression and distancing.

*Conditions' manipulation check.* To verify that they had adhered to the differing instructions in the four groups, at the end of the first session, the participants completed three questions. Using a 9-point Likert-type scale ranging from *very often* (9) to *never* (1), they rated the extent to which they tried to understand what they really felt during the discussion, the extent to which they tried to hide their emotions during the discussion, and the extent to which they tried to distance themselves from their emotional experience during the discussion.

## Results

### *Manipulation checks*

We examined the four sets of instructions' efficacy in eliciting integrative regulation, emotional distancing, expressive suppression, and neutral processing of the emotions aroused by the discussion. To test the efficacy of the IER condition, we asked the IER group to rate the extent to which they tried to understand what they really felt during the discussion. Replies verified that participants in the integrative group adhered to

instructions and reported a greater attempt to explore their emotional experience ( $M = 7.23$ ,  $SD = 1.78$ ) than did those in the other three groups, distancing, suppression, and control ( $M = 4.91$ ,  $SD = 2.45$ ;  $M = 5.21$ ,  $SD = 2.25$ ;  $M = 5.27$ ,  $SD = 2.36$ , respectively). The differences were significant,  $F(3, 133) = 7.90$ ,  $p = .000072$ ;  $p\eta^2 = .15$ . Planned contrasts revealed significant differences between the IER condition and the control condition,  $t(133) = 3.61$ ,  $p = .00043$ , and the other two experimental conditions,  $t(133) = 4.68$ ,  $p = .000007$ .

To test the efficacy of the suppression condition, we asked participants to rate the extent to which they tried to hide their emotional experience during the discussion. As expected, the highest mean level was in the suppression condition group ( $M = 7.18$ ,  $SD = 2.05$ ) with lower levels for the other three groups (distancing:  $M = 4.77$ ,  $SD = 2.46$ ; IER:  $M = 2.43$ ,  $SD = 1.75$ ; control:  $M = 1.82$ ,  $SD = 1.02$ ). The differences were significant,  $F(3, 133) = 53.75$ ,  $p = 8.02E-23$ ;  $p\eta^2 = .55$ . Planned contrasts revealed significant differences between the suppression regulation condition and the control condition,  $t(133) = 11.30$ ,  $p = 3.54E-21$ , and between the suppression regulation condition and the other two experimental conditions,  $t(133) = 8.82$ ,  $p = 5.66E-15$ . Interestingly, the difference between the emotional distancing group and the IER group was also significant,  $t(133) = 5.05$ ,  $p = .000001$ , suggesting participants in the former group tended to hide their emotions during the discussion more than those in the latter.

To test the efficacy of the emotional distancing condition, we asked participants to rate the extent to which they tried to be detached emotionally during the discussion. Replies verified that these participants followed the instructions and reported a greater attempt to avoid their emotional experience ( $M = 7.21$ ,  $SD = 2.16$ ) than those in the suppression condition ( $M = 4.57$ ,  $SD = 2.18$ ), the IER condition ( $M = 1.93$ ,  $SD = 1.15$ ), or the control condition ( $M = 1.72$ ,  $SD = 1.18$ ). The differences were significant,  $F(3, 133) = 7.96$ ,  $p < .00006$ ;  $p\eta^2 = .16$ .

Finally, to test the quality of the randomized assignment to experimental conditions, we compared the relationship satisfaction reports across groups. There were no differences between the instructed partners' reports,  $F(3, 133) = .57$ ,  $p = .64$ , and the naïve partners' reports,  $F(3, 133) = .81$ ,  $p = .49$ .

## **Main analyses: Partners' experience during discussion**

### **Instructed partners: Hypotheses 1 to 3**

#### **H1:** Instructed partners' level of engagement.

We hypothesized that the IER instruction would result in higher levels of engagement measured by the level of interest the partners found in the discussion, their emotional awareness, and their commitment and closeness to their partners. The means comparison for instructed partners showed significant differences,  $F(3, 133) = 2.76$ ,  $p = .04$ ;  $p\eta^2 = .06$ . As expected, the highest level of engagement emerged in the IER condition, with lower means for the distancing, suppression, and control conditions (see Table 1 for descriptive statistics). A planned contrast between the IER condition and the control group was significant,  $t(133) = 2.32$ ,  $p = .02$ , as was the difference between the IER and the

**Table 1.** Means and standard deviations of self-reported engagement and guilt.

	Instructed partner				Naïve partner			
	Integration	Distancing	Suppression	Control	Integration	Distancing	Suppression	Control
Engagement	7.66 (1.53)	6.60 (1.88)	6.23 (2.07)	6.20 (1.81)	7.13 (1.44)	6.80 (2.02)	6.53 (1.70)	6.30 (2.00)
Guilt	3.71 (1.95)	3.23 (1.12)	3.24 (1.24)	2.45 (1.03)	3.69 (2.02)	2.54 (1.75)	3.18 (2.18)	2.70 (1.82)
Stress	2.81 (1.53)	2.55 (1.25)	3.20 (1.90)	2.08 (.95)	2.80 (1.41)	2.83 (1.37)	2.97 (1.63)	2.67 (1.54)
Productivity	5.31 (2.25)	4.46 (2.05)	4.26 (2.23)	3.94 (2.16)	5.31 (2.07)	4.49 (2.11)	4.09 (2.53)	4.21 (2.18)
Anger	2.53 (1.64)	2.44 (1.58)	2.57 (2.01)	2.12 (1.27)	2.42 (1.70)	2.67 (1.58)	2.48 (1.48)	2.24 (1.24)

other two experimental groups  $t(133) = 2.67, p = .01$ . Thus, the results supported hypothesis 1.

Recall that sense of guilt was hypothesized to be an indicator of level of engagement, but we removed it due to its low correlation with the other indicators (i.e., lower reliability) and conducted a separate analysis to compare guilt across groups. We found a marginally significant difference,  $F(3, 133) = 2.43, p = .068; p\eta^2 = .05$ . The highest mean was in the IER condition (see Table 1). A planned contrast revealed only one significant difference—between the IER condition and the control group condition,  $t(133) = 2.24, p = .027$ . The other contrasts were not significant, with similar means for distancing and suppression.

## **H2:** Instructed partners' level of stress during the discussion.

Hypothesis 2 suggests that IER instruction during a conflictual discussion with an intimate partner may be demanding and result in a higher sense of stress. We further hypothesized that the IER group would differ from the control group and the emotional distancing group, but not from the expressive suppression group. A significant difference was found among groups,  $F(3, 133) = 5.51, p = .001; p\eta^2 = .11$ . As expected, the highest levels of stress were in the expressive suppression and IER groups, with lower means for the emotional distancing and control groups (descriptive statistics are presented in Table 1). As expected, a planned contrast analysis found significant differences between the IER group and the control group,  $t(133) = 2.07, p = .04$ , between the expressive suppression group and the control group,  $t(133) = 3.18, p = .00016$ , and between the expressive suppression and the emotional distancing groups  $t(133) = 2.30, p = .023$ . All other differences were not significant.

To ensure that the differences among groups were unique to the level of stress and did not reflect differences in general negativity, we also measured the extent of participants' anger and hostility during the discussion. As expected, the differences were not significant,  $F(3, 133) = .51, p = .68; p\eta^2 = .01$ .

## **H3:** Instructed partners' estimation of productivity of discussion.

Productivity of discussion was measured by perception of the partner's attentiveness and the perception of progress toward conflict resolution in comparison with past discussions. A significant difference was found between groups,  $F(3, 133) = 2.74, p = .04; p\eta^2 = .06$ . As expected, the mean for the discussion's productivity was highest in the IER condition (see Table 1 for descriptive statistics). A planned comparison revealed that it was significantly stronger than in the control condition,  $t(133) = 2.6, p = 0.01$ , or the suppression and distancing conditions,  $t(133) = 2.11, p = 0.03$ .

### *Naive partners: Hypotheses 4 to 6*

## **H4:** Naïve partners' level of engagement.

Although the trend for engagement was similar to the trend for the instructed partners, with highest engagement in the IER condition (see Table 1), the differences were not

**Table 2.** Means and standard deviations of SCL by condition and time.

	SCL			
	IER	Distancing	Suppression	Control
Epoch 1	3.19 (1.63)	2.84 (1.78)	3.34 (1.81)	3.77 (2.71)
Epoch 2	3.32 (2.08)	3.33 (2.70)	3.30 (2.01)	3.99 (3.20)
Epoch 3	3.01 (2.02)	3.88 (2.30)	3.52 (3.37)	4.35 (3.37)

Note. IER—integrative emotion regulation; SCL: skin conductance level.

significant,  $F(3, 133) = .98, p = .39; p\eta^2 = .02$ . As before, we calculated the mean differences for guilt separately. Although the omnibus  $F$  value of guilt differences was not significant,  $F(3, 133) = 1.92, p = .12; p\eta^2 = .04$ , we found significant differences between the IER condition (with the highest mean) and the control group condition,  $t(133) = 2.01, p = .04$ , and between the IER condition and the distancing condition,  $t(133) = 2.18, p = .03$  (no more significant differences were found between groups).

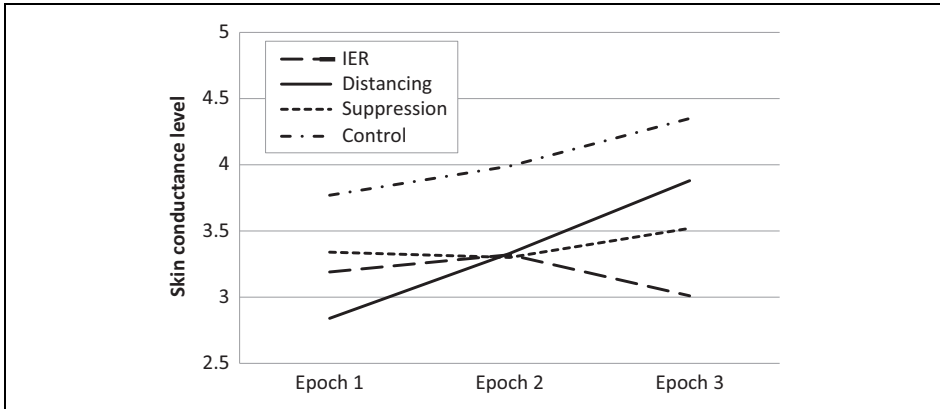
#### H5: Naïve partners' estimation of productivity of discussion.

We found a marginally significant difference in perceptions of the discussion's productivity,  $F(3, 133) = 2.25, p = .09; p\eta^2 = .05$ . As expected, the highest means emerged in the IER group (see Table 1). A planned contrast revealed a significant difference between the IER group and the control group,  $t(133) = 2.04, p = .04$ ; the naïve partners in the former group reported higher discussion productivity than in the latter. A comparison of the IER group and the other two experimental groups revealed significant differences,  $t(133) = 2.23, p = .02$ , with the naïve partners in the IER group reporting higher productivity than those in the distancing and suppression groups. No other comparisons were significant.

#### H6: Naïve partners' level of anger and physiological arousal.

Following Ben-Naim et al. (2013) and Butler et al. (2003), we hypothesized that naïve partners in the expressive suppression condition would report a greater sense of anger and hostility and show more physiological arousal. Given the manipulation checks' results in which participants in the emotional distancing condition reported greater attempts to hide their emotions than did those in IER condition, we tested the same hypothesis for distancing. Contrary to our hypothesis, self-reported anger did not significantly vary across conditions,  $F(3, 133) = .51, p = .68; p\eta^2 = .01$ .

However, the physiological results partially supported our hypothesis. As mentioned, for the measurement of SCL, the 10-min discussion was divided into three epochs, and the second-by-second SCL values were averaged for each epoch. Then, a difference score was calculated by subtracting the baseline mean SCL (neutral film) from the value obtained in each of the three epochs. We conducted a two-way analysis of variance for mean SCL change scores, with condition as the between-subject factor and time as the



**Figure 1.** Changes in skin conductance level over time.

within-subject factor. We found a significant time effect,  $F(2, 214) = 10.39, p = .00, p\eta^2 = .09$  (epoch 1:  $M = 3.28, SD = 2.03$ ; epoch 2:  $M = 3.50, SD = 2.54$ ; epoch 3:  $M = 3.77, SD = 2.48$ ), and a nonsignificant condition effect,  $F(3, 107) = .68, p = .68; p\eta^2 = .02$  (see descriptive statistics in Table 2 and Figure 1). In line with our hypothesis, the interaction between condition and time was significant,  $F(6, 214) = 2.13, p = .04, p\eta^2 = .06$ , suggesting that changes of SCL over time varied across conditions. The analysis of simple interactions revealed that over time, differences between the suppression and IER conditions were not significant,  $F(2, 104) = .36, p = .70, p\eta^2 = .01$ , but a significant simple interaction emerged for the IER and distancing conditions,  $F(2, 210) = 4.18, p = .017, p\eta^2 = .07$ . Inspection of Figure 1 reveals that this difference reflects higher arousal over time for the distancing participants than for the IER participants. Although the difference between suppression and IER was not significant, Figure 1 shows that the pattern of results for suppression was quite similar to distancing; that is, the naïve partners in the suppression condition showed higher arousal over time. No differences were found between the control group conditions and the other conditions.

## Discussion

The study explored the quality of conflictual discussion between intimate partners and their emotional experience subsequent to three types of ER manipulation. We differentiated between IER, which involves an interested stance toward emotional experience, and two types of regulation aimed at minimizing emotions: emotional distancing (minimization of emotional experience) and suppression of expressive behavior (minimization of emotional expression). In general, the results provide preliminary support for the hypothesis that taking an interest in one's emotional experience during a conflictual discussion with one's intimate partner results in better communication and higher perceptions of discussion productivity.

More specifically, participants in the IER group (both instructed and naïve) perceived the discussion as getting them closer to conflict resolution in comparison with other

discussions they already had on this particular conflictual issue (the results were significant for the instructed partners and marginally significant for the naïve partners). This finding may be related to the higher engagement reported by the instructed partners. Thus, the partners' perceptions of discussion productivity may be a result of the greater interest and emotional awareness reported by the instructed partner in the IER condition. The current study cannot directly support this assumption, however, and future research should directly test relations between level of engagement and productivity of discussion.

In addition, the partners in the IER condition reported a higher sense of guilt than the partners in the control group. We tested the differences in guilt in the four groups separately because, contrary to our assumption, the sense of guilt in relation to the conflict was not reliably related to the other measures of engagement. We initially assumed that a sense of guilt might involve a sense of responsibility, and this could reflect higher engagement or accountability. Given the low relations between guilt and the indicators of engagement, our explanation should be accepted cautiously.

Following Ben-Naim et al. (2013), we hypothesized that suppression instructions would result in higher negative affect and greater physiological arousal in the naïve partner. Although we found no differences in the self-reported negative emotions (anger, resentment, and hostility), the physiological results revealed that naïve participants in the distancing and suppression conditions showed higher arousal as the discussion progressed. Interestingly, the opposite was true for the naïve IER participants for whom physiological arousal declined as the discussion progressed. Moreover, the difference between IER and emotional distancing over time was significant. When Ben-Naim et al. (2013) studied the differences between suppression, positive mindset, and a control group in a similar setting, they found similar physiological results for suppression. They attributed the higher arousal to the naïve partner's perception of an uninvolved partner in an important discussion. In our study, the emotional distancing instructions and suppression instructions led to a greater attempt to hide emotions than the IER instructions. Therefore, Ben-Naim et al.'s explanation of the uninvolved partner seems relevant to our findings on emotional distancing. Ours replicate Butler et al.'s (2003) and Ben-Naim et al.'s (2013) *second-hand smoke effect* of ER and indicate that regulation instructions may influence not only the manipulated person but also his or her uninstructed partner.

The results support the hypothesis that taking an interest in one's emotional experience during a conflictual discussion has advantages, despite the higher experience of stress reported by the instructed partners in the IER condition. More specifically, like the participants instructed to suppress their emotions, the IER participants had a higher sense of stress than the control group. Our results for suppression agree with those of Butler et al. (2003), but our findings for IER are not fully supported by past research. The immunization effect documented by Roth et al. (2014) suggests that IER instructions in relation to fear experience result in lower emotional arousal and better cognitive functioning over time. Although taking an interest in one's negative emotional experience may be beneficial over time, it may be painful and elicit distress in the short term. Roth et al. (2014) found no arousal differences between groups (IER, suppression, and control) in the first exposure to a fear-eliciting film clip, but they did find differences in the second exposure when IER participants were less aroused. However, our use of a

conflictual discussion seems to be more meaningful to the participants than Roth et al.'s use of a film to elicit emotion. We suggest that mindful attention to a meaningful negative emotional experience may be more demanding in the short term, in this case, during a discussion immediately following the regulation instructions. Interestingly, suppression and IER groups shared the experience of stress but completely differed in other outcomes important to close relationships, such as perceptions of quality of communication and discussion.

That being said, the stress reported by the instructed partners in the IER condition may qualitatively differ from the stress reported by those in the suppression condition. Gross (2001) has reasonably attributed the general finding of higher negative emotional arousal resulting from expressive suppression to the effort expended in inhibiting ongoing emotion-expressive behavior. As Gross puts it, "pitting attempts to inhibit expression against strong impulses to express [it]" (p. 217) can result in negative emotional arousal. According to Gross's explanation, the stress elicited by efforts to suppress is not directly connected to the processes generating the affective experience but to the experience of inner struggle between the external instructions to suppress and the actual negative experience that, in other circumstances, might be expressed. Unlike suppression, IER may involve stress that is directly linked to the emotional stimulus. In our experimental context, the stress could have been generated by the direct engagement in a personally meaningful negative emotion-eliciting discussion. In this case, it is not surprising that stress was accompanied by interest, emotional awareness, a sense of guilt about the conflict, and a perception of fruitful discussion, presumably because of the higher engagement. Future research would do well to explore these speculations on a larger scale.

Complementary to this finding is the lower stress in the emotional distancing condition. Distancing did not reduce stress in comparison with the control condition but unlike the IER and suppression conditions, it did not increase it either. We found no advantage for distancing (and its lower sense of stress) in the quality of communication or the perception of productive discussion. Thus, unlike previous research advocating low levels of negative emotions as adaptive in terms of social relations (Butler et al., 2003; Halperin, 2016) and behavioral functioning (Gross, 2013), our research suggests that in the specific context of conflictual discussions in intimate relationships, higher stress does not necessarily involve maladaptive functioning. In other words, when increased stress is accompanied by higher engagement (reflected in greater interest and emotional awareness), it may also involve fruitful discussion.

Admittedly, the research has some limitations. First, the initial results should be replicated on a larger scale to provide direct support for the finding of higher engagement of the instructed partner after the IER instructions. Future studies should also use a methodology able to test the causal link between the instructed partner's engagement and the naïve partner's engagement. Second, in the distancing and suppression conditions, we found asymmetry between the naïve partners' gradual physiological arousal during the discussion and their self-reported negative emotions toward the instructed partner (anger, hostility, and resentment). It is important to note that the skin conductance was measured continuously during the discussion; it showed an arousal pattern that, in these experimental conditions, gradually increased as the discussion progressed. That is, the



interaction over time was significant, but the difference in the general mean level of arousal between the groups over the 10-min discussion was not significant. Unlike the continuous physiological measurement, the self-reported emotional experience was measured only once subsequent to the partners' discussion. This global measurement may be usefully compared to the overall nonsignificant physiological arousal differences among groups, but it may not capture the gradual differences over time during the discussion. Future research should explore continuous reports of emotional experience.

In sum, the study suggests that emotional integration in intimate relationships can be advantageous. We found that practicing IER during a conflictual discussion resulted in partners' perceptions of better communication and discussion productivity. We do not claim that emotional distancing and suppression are necessarily problematic because their use is context-related, but we do claim that in the specific context of a couple's conflict resolution, the ability to take an interest in one's own emotional experience seems adaptive. Future research should seek to provide further support for this claim.

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### **Open research statement**

As part of IARR's encouragement of open research practices, the author(s) have provided the following information: This research was not pre-registered. The data used in the research are available. The data can be obtained by emailing: roth@bgu.ac.il.

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