Disclosure Involving a Third-Party: Reciprocity and Liking Outcomes

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ABSTRACT

This investigation examines the function of third-party disclosures on reciprocal self-disclosures and liking. Sixty-eight college students engaged in a social interaction with one or two computers. In the experiment, one computer would "disclose" information either about itself or about another computer (third-party). Each disclosure was followed by a question to the participant. Questions were asked either by the discloser or by third-party to assess reciprocation of disclosures. Afterwards, participants rated liking for the two computers-as-social-actors. Participants showed a tendency to disclose more (i.e., give longer responses) to an actor who disclosed to them, regardless of whether the disclosure was about the self- or about a third-party (though intimacy of the disclosures was not different). Participants did not disclose more to the third-party whom they heard disclosures about. Liking was unaffected by the disclosures. These results suggest that positive social benefits may be gained by disclosing about another in the place of oneself. Having another individual disclose about oneself, did not elicit of the same social benefits. Implications are discussed about the nature of disclosures and relationship formation.

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CHAPTER 1

Disclosure Involving a Third-Party: Reciprocity and Liking Outcomes

Self-disclosure is an important part of most, if not all, relationships. In fact, the depth and breadth of disclosures are indicative of the closeness between the partners and may be integral to the development of trust between them (Altman & Taylor, 1973). It is axiomatic that "self-disclosure" concerns the "self". However, recent evidence suggests that our reciprocation of self-disclosure may be automatic – responding to cues of intimacy rather than their source (Moon, 2000). This raises a question as to whether third-party disclosures (i.e., disclosures about someone other than the self) could generate a sense of intimacy and willingness to reciprocate. There is currently little literature that addresses this topic. In this paper, I review literature on the nature and function of self-disclosure in relationships, propose a hypothesis, and conduct a study of third party disclosures.

Self-Disclosure

Self-disclosure may be defined as "the process of deliberately revealing information about oneself that is significant and that would not normally be known by others" (Adler & Towne, 1999, p. 358). Derlaga and Grzelak (1979) have outlined in their definition of self-disclosure that the information revealed should comprise information regarding dispositions, personal states, and events in the past or even arrangements for the future. For many, self-

disclosure refers to information that is "intimate" in nature. Intimate disclosures are those that involve "high-risk" information that should cause the discloser to feel vulnerable in some way (Moon, 2000). Vulnerabilities could be physical ("If he knows how I was injured, he could hurt me"), economical ("If they know my checking account number, they could rob me"), or psychological / emotional ("If she knows I would like to date her, she could laugh at me") (Moon, 2000). In general, any disclosure that elevates perceived threat from others can be described as intimate self-disclosure.

Self-disclosure serves many functions (Derlega, Margulis, & Winstead, 1987). For instance, it may serve as a form of self-clarification or a form of catharsis. It can also function to facilitate self-validation for an individual. The function most relevant to the current study, however, is that of building an intimate relationship. According to social penetration theory (Altman & Taylor, 1973) relationships develop through the general exchange of disclosures. Social penetration theory specifically states that the progress of a relationship is closely related to organized changes in the breadth and depth of communications between the partners. At the beginning of a relationship the content revealed by an individual in their self-disclosures to another is likely to be limited to a few topics, and disclosures related to these topics are shallow. Later, the breadth of the self-disclosures should become more varied and more intimate with more information being revealed. The closer one is to a partner, the more topics will be disclosed and they will contain higher levels of intimate information.

A norm of reciprocity exists in most human interactions, including relationship communication (Miller & Perlman, 2009). Disclosing information about the self affords the opportunity for another person to learn about the discloser and cues the return information about themselves to that person. Through this reciprocation of personal information we gain a feeling

of knowing another person. This effect is pronounced and has received much research (Dindia, 2002). The pattern of reciprocity of self-disclosure starts early in an individual's life and has been documented in children in the fourth grade (nine to ten years of age), but is not present in children of younger ages (Rotenberg & Chase, 1992). The process is expected to become even more ubiquitous as people grow older.

Another factor that affects the reciprocity of self-disclosure is the intimacy level of a disclosure (Rotenberg & Chase, 1992). If a person discloses information that is low in intimacy, the recipient is likely to reply with information that is also shallow, but if the information disclosed is of an intimate nature, the individual receiving the message will feel compelled to reciprocate information that is similarly intimate. Intimate relationships may emerge slowly as increases in disclosures are generated and more likely to become intimate over time.

Although people generally reciprocate when information is disclosed to them, individuals vary in the rate at which they are willing to disclose. This rate does not refer to the depth or intimacy of the self-disclosure, but rather the quantity that a person on average tends to share. Whereas some people will readily share a great deal of information with another person, other individuals require more time to reveal the same amount of disclosures. This rate would be an average of an individual's quantity of disclosures with others. Gelman and McGinley (1978) have provided evidence showing that individuals who disclose at similar rates are more likely to reciprocate to each other's self-disclosures. Ergo, if a fast self-discloser meets another fast self-discloser, the two individuals are more likely to feel comfortable with each other and trade information through their self-disclosures. In contrast, if a slow self-discloser interacts with a fast self-discloser the individual who self-discloses at the lower rate is likely to divulge even less information than they would normally.

Self-Disclosure and Liking

Because self-disclosure is linked to relationship development, it seems obvious that it will relate to liking between partners. In fact, considerable research has shown this link to be present between self-disclosure and liking. Dindia (2002) discusses the three main questions that have been the focus of research regarding liking and self-disclosure. First, if a person self-discloses to an individual, does that lead to the recipient liking the discloser more? Next, does prior liking for a person lead to more self-disclosures to the liked individual? Finally, will a person who self-discloses experience increased liking for the individual who received the disclosure?

Collins and Miller (1994) conducted a meta-analysis that addressed all three of these questions. Their findings supported all three possibilities: 1) self-disclosure can lead to increased liking by the recipient of the message, 2) liking of an individual leads to a greater chance of reciprocating the self-disclosure, and 3) self-disclosing to an individual can result in increased liking for the recipient by the discloser of the information. Of these three results, the first and last effects are quite strong. The second finding, although weaker, is still significant. Perhaps surprisingly, the level of intimacy of the disclosed information has not been found to impact the liking effect. This result, however, should be interpreted cautiously due to the small number of studies that have examined it. According to Collins and Miller (1994), a variable that does moderate these effects of self-disclosure on liking is whether a self-disclosure is believed to be private. Recipients, who perceived that a disclosure was directed to them only, as opposed to toward a group of others, rated the discloser more favorably.

The interaction of liking and self-disclosure is a robust phenomenon and has been shown to operate in several different settings and ways. Jacobs, Evans, Kleine, and Landry (2001)

demonstrated support for higher liking ratings for salesmen when they self-disclosed information to their customers during sale interactions and observed that longer-term sales relationships resulted from the self-disclosure. Self-disclosure has also been revealed to have an effect on motivation of political action. Han (2009) demonstrated that political appeals that included a form of self-disclosure resulted in higher liking ratings for the discloser. Due to increased liking for the discloser, participants exhibited a greater likelihood to comply with a request, such as donating one dollar to a political cause. Moon (2000) even illustrated how participants' liking of a particular computer can be influenced by apparent self-disclosure from the machine.

Disclosure and Third-parties

Although self-disclosures by definition are disclosures of the self by the self, there are times when an individual may have another person disclose personal information for them or when they may disclose intimate information for someone other than the self. Whether such disclosures are reciprocated and influence liking are unclear. Self-disclosure through a proxy could be a method for someone to "test" the prospect of a relationship with another and possibly help the process along. Imagine that "A" and "C" are friends and that "B" is another individual with whom "C" wishes to form a relationship. "C" could send his friend, "A", over to "B", to disclose information. This information would be about "C" and would be told with the hopes of increasing liking from person "B" for "C". One could easily conceptualize a more real world example of this being a boy on the playground disclosing information about a friend to a girl. At his friend's request, the boy would be trying to frame his friend in a positive light in an attempt to generate increased liking for his friend from the target girl, as well as to better understand her current feelings about his friend. Such disclosures could increase liking for the person who made the disclosure or the person the disclosure was about, or for both individuals. Similarly, the

target girl could reciprocate with a self-disclosure to either, or both of the two boys. Is it that the disclosure is about the "self", or simply that it reveals seemingly private information to another that accounts for the reciprocation? Recall that Collins and Miller (1994) found in their meta-analysis that the directed nature of disclosures was positively related to liking, whereas the intimate content of the disclosure did not moderate the outcome. This outcome implies that the self-disclosure process could merely require a personally directed disclosure for liking to increase.

It is also possible that person "C" might tell person "B" about person "A" – not to facilitate a relationship between "A" and "B", but as a step in the development of his/her own relationship with "B". If person "C" discloses a personal experience to "B", "B" feels obligated to reciprocate. But "B" may not have any relevant experiences or may not be ready to reciprocate at that level of intimacy. Person "C" may thus share a disclosure about another, "A", as a substitute for disclosing about him/herself. How would such a disclosure be received? Would it be perceived similarly to a disclosure about the self or would it be seen as gossip?

Lay meanings of "gossip" imply that someone not present is being discussed in a negative or critical manner. Thus, "gossip" has a negative stigma attached to it. Researchers, however, are quick to note that gossip is not just negative, but may also include a positive evaluative component. Foster (2004), for instance, defines gossip as "the exchange of personal information (positive or negative) in an evaluative way (positive or negative) about absent third parties" (p. 83). Disclosures about an absent third party then would be gossip in the broadest sense. Although one might expect that people would be reticent to self-disclose to someone who has shared gossip with them, one of the primary functions of gossip appears to be friendship development (Foster, 2004). According to Foster (2004), disclosing information about a third-

party may reinforce trust of one's partner and may strengthen the discloser's relationship with the recipient (e.g. trusting they will keep disclosures secret). However, this does not address whether these disclosures may build a relationship with the party disclosed about.

Balance Theory by Heider (1958) provides a theoretical viewpoint for why disclosure through a proxy or disclosure about another could produce benefits similar to self-disclosure. This theory states that people are prone to view units, known as two entities that are similar or in close proximity, as homogeneous. If a person is viewed in a positive manner by an individual then they are likely to view characteristics of that person and people socially linked to them in a positive manner as well. Likewise, if negative feelings for an individual are present, the characteristics of that person are likely to be seen in a negative way, along with other individuals who are associated with them. For the purposes of this study, balance theory would likely predict that if a person "A" discloses about "C", likely a friend, and "B", the recipient of the message, likes "A", then "B" would likely report increased liking scores for "C". If person "A" and "B" display a positive relationship, and person "A" and "C" are thought to have a positive relationship, then it is only natural to predict that a positive relationship would likely be facilitated between "B" and "C". If person "B" does display increased liking for "C" then it could also lead to greater levels of self-disclosure if they were to meet. Evidence from Collins and Miller (1994) showing that liking and self-disclosure appear to facilitate each other provides support for this hypothesis. Balance theory basically predicts that the friend of one's friend should also be their friend.

The applicability of a Balance Theory approach seems particularly appropriate when one recognizes that people seem to self-disclose in a fairly automatic fashion. Moon (2000) for instance, observed that people self-disclose to a computer, an inanimate object, which self-

discloses to them – responding to intimacy with increased intimacy. With self-disclosure being so automatic that people will engage in it with computers, it seems plausible that people respond to the occurrence of a disclosure independently of the target. Therefore, to the degree that effort is taken to present the disclosure in a manner not likely to be seen as negative gossip about the third party, and the disclosure puts the sender in a vulnerable position, it may be received in a manner similar to personal self-disclosure.

Hypotheses

Based on the summary above and consistent with research on gossip, four hypotheses motivate the current research. First, a disclosure of information by person "A" to "B" about "C" should result in a higher liking for "A" by "B" compared to a control. Person "B", the recipient of the disclosure, is hypothesized to view the disclosure about "C" as evidence of "A's" trust in them and therefore have greater liking for "A". Second, person "B" should be more likely to reciprocate self-disclosure to "A" compared to a control. As it is, the content of the disclosure reveals the trust more than who it is about. Third, balance theory implies that disclosure of neutral / positive information about "C" should generate greater liking of "C" by "B" compared to a control. The disclosure about "C" by "A" represents the fixing of a valence to the "A" / "C" relationship that should increase "B's" liking for "C" concurrent with his / her liking of "A". Fourth, "B" should be more likely to self-disclose to "C", if they were to meet, in relation to a control. Having information about "C", regardless of who disclosed it, should make "B" feel a need to reciprocally disclose to "C" to "balance" their relationship.

To test these four hypotheses, four different conditions were constructed. The first group served as the control group (no-disclosure group). No information was disclosed to the participants about the computer collecting their responses. In the second condition, participants

received a personal "self" disclosure from the computer conducting the conversation (self-disclosure group). After each self-disclosure the computer asked the participant a related question. The third condition consisted of the computer disclosing information, not about itself, but about another computer, with related questions for the participant following each disclosure (other-disclosure, no interaction group). In the fourth condition the computer disclosed information about another computer once again, but the "target" computer (about whom the first computer disclosed) asked the participant questions (other-disclosure, interaction group). Participants were only asked questions about themselves and instructed to provide an answer. For all of the conditions listed, reciprocity of self-disclosure and liking scores were collected for the computer that received the participants' self-disclosures.

Rationale for the Current Method

The use of confederates is an obvious alternative method to test the described hypotheses. Problems can arise, however, when using confederates. In addition to scheduling two confederates to interact with every participant, it would also be a challenge to achieve satisfactory levels of experimental control across multiple confederates. Thus, a decision was made to use computers rather than live confederates to test the current hypotheses. Computers allowed a much greater degree of control during the course of the experiment. The computers were able to disclose information to the participants about itself or another computer in exactly the same manner in all trials. Research confirms that people anthropomorphize computers – mindlessly treating them as other people (Reeves & Nass, 1996), and that this tendency is rather automatic (Nass & Moon, 2000). Moreover, computers facilitated collection of participants' responses.

CHAPTER 2

Method

Participants

Participants were 68 undergraduate students from the Indiana State University campus. The mean age of participants was 20.19 ($SD = 3.491$) years of age. Of all participants, 35 (52%) were female, and 33 (48%) were male. Caucasians comprised 69% of the sample, African-Americans comprised 25%, with the remaining 6% comprised of other ethnicities.

Measures

Reciprocity of self-disclosure was assessed by participants' responses to questions posed to them. Questions (and prior disclosures) were taken from Moon (2000) with some editing (Appendices A through D) to fit the purpose of this study (to examine third party disclosures). Following Moon (2000), responses to the first three questions (sex, age, and place-of-birth) which allowed so little variation in number/depth of responses were excluded from our "measures". Participants' responses to the remaining ten questions were averaged for each dependent measure below.

The length of participants' responses to each question was recorded as well as the depth and the number of disclosures. Length was operationalized by the "word count" of participants' responses to each question. To construct the other measures, five independent coders, who were

blind to the condition of the participant, rated each participant's response to each question for "depth" and "number" of disclosures. To measure the intimacy of the disclosure (quality), the four raters assigned a rating to the disclosure on a five-point scale (1 = low intimacy; 5 = high intimacy) (intraclass correlation = .39) (Moon, 2000). Examples of highly intimate disclosures would be "I lost someone very close to me. It was my fault." An example of a low intimacy disclosure would be "I don't have a big disappointment in my life." The number of disclosures was measured by the quantity of distinct disclosures reciprocated for a single question (intraclass correlation = .68). Distinct disclosures were defined as a separate disclosure that represented a unique answer that did not overlap with another disclosure. Because one of the coder's ratings was consistently different from those of the other raters, this coder's ratings were excluded from all analyses.

Participants also completed a post-interview questionnaire on which they reported liking for the computer who asked the questions on measures of friendliness, likability, helpfulness, and kindness (Cronbach's α = .83). All ratings were made on a seven point scale, with 1 = does not describe well, and 7 = describes very well. In addition, participants rated the computers' trustworthiness, ability to maintain privacy, user-friendliness, and overall visual quality (Appendix E for CASEY and Appendix F for PAT). Participants were also asked to indicate the gender of the target computer using a unidimensional scale ranging from one to seven, with 1 = masculine, 4 = gender neutral, and 7 = feminine (M = 4.77, SD = 1.44). Finally, demographic information was also collected for all participants (Appendix G).

Materials

The study was conducted on a laptop computer that was programmed to run a script for each of the four conditions: no-disclosure (Appendix A). self-disclosure (Appendix B), other-

disclosure (no interaction) group (Appendix C), and other-disclosure (interaction) group (Appendix D). For the other-disclosure (no interaction) condition and the other-disclosure (interaction) condition, a desktop computer was the "target" or "third party" about whom the laptop was disclosing. In the other-disclosure (interaction) condition, the script made it appear as if the respondent was interacting with the "target" (desktop computer) of the disclosure that was made by the laptop. There was no time limit in which the participant had to respond. If a participant did not respond to a disclosure it was not included in the analyses.

To facilitate treatment of the computers as individuals, the computers were given acronym names: CASEY and PAT. These names were specifically chosen because they are gender neutral. CASEY was the acronym of the computer giving disclosures, regardless of which computer was being disclosed about. In three of the conditions CASEY was the computer that would ask questions of the participant. In the fourth condition, PAT asked participants questions after CASEY provided a disclosure. In this latter case, PAT, the name assigned to a desktop computer, was actually represented by a second monitor. Although it appeared to the participant that PAT was a separate desktop computer, the monitor was actually connected to the laptop (CASEY).

Examples of CASEY's self-disclosures include "Sometimes I am used by people who don't know how to operate me. I end up crashing and having to reboot." and "My owner takes pretty good care of me. Sometimes, however, my owner forgets to update my virus checker." After each self-disclosure the computer asked a corresponding question of the participant such as "What are some of the things that make you furious?" and "What characteristics of your best friend really bother you"? Parallel disclosures about the third party, PAT, simply replaced "I"

with "PAT" in these examples. See Appendices A through D for a complete script for each of the four conditions.

Procedures

Participants were greeted by the experimenter at the lab. After completing the informed consent form (Appendix H), participants were randomly assigned to one of the four conditions. The control condition had 23 participants, the self-disclosure group had 16, the other disclosure (no-interaction) group had 10, and the other disclosure (interaction) group had 19. They were seated at the laptop and the appropriate program was run for their condition (Appendix A, B, C, or D) and their reciprocated disclosures collected. After completion of the computer portion of the experiment, participants were given the liking questionnaire appropriate to their condition (i.e. targeting perceptions of CASEY or PAT). In the no-disclosure, self-disclosure, and other-disclosure (no interaction) conditions (Appendix E), participants reported liking for CASEY, but liking scores for PAT were collected in the other-disclosure (interaction) condition (Appendix F). All participants finished with the demographic questionnaire and were then debriefed (Appendix I). Every participant was tested individually.

CHAPTER 3

Results

Analyses were conducted to try and replicate the results of Moon (2000), and to test the

hypotheses outlined previously. Hypotheses 1 and 2 stated, respectively, that the other-

disclosure (no-interaction) group would have significantly higher liking ratings for the "CASEY"

computer compared to the control group, and be more likely to reciprocate disclosures to the

"CASEY" computer compared to the control group. In contrast, hypotheses 3 and 4 stated that

the other-disclosure (interaction) group would differ significantly from the control group for the

same outcome measures listed above, but for the "PAT" computer. Whereas all hypotheses

compare differences between particular experimental groups and the control group, primary

analyses consist of planned comparisons between each experimental group and the control group

(within the context of a one-way ANOVA) on each dependent variable. All group means and

standard deviations for the outcome measures can be found in Table 1.

Replication of Moon (2000)

The self-disclosure group in this study was included to replicate Moon (2000). In

addition, the self-disclosure group also served as a possible comparison for the size of effects

obtained in the other two experimental groups. Planned contrasts compared the self-disclosure

group and the control group for all the dependent variables: liking, intimacy of disclosures,

number of disclosures, and length of disclosures. The results indicated that compared to the

control group, participants in the self-disclosure group displayed significantly higher levels of liking for the computer that self-disclosed to them, $t(64) = 2.19$, $p < .05$, $d = .70$, and responded with significantly longer disclosures, $t(64) = 3.14$, $p < .01$, $d = .98$. Although the self-disclosure group also demonstrated higher levels of intimacy in their disclosures and a greater number of unique disclosures compared to the control group as predicted, these differences were not significant for intimacy, $t(64) = 1.29$, $p = .203$, $d = .39$, nor for unique number of disclosures, $t(64) = 1.01$, $p = .317$, $d = .36$.

Tests of Third-party Disclosure Effects on Discloser

To test the effect of third-party disclosures on liking and reciprocity toward the individual making the disclosure, planned contrasts compared the other-disclosure (no-interaction) group and the control group on each of the dependent variables. As predicted, the other-disclosure (no-interaction) group means were higher than the control for all of the variables; however, none of these differences were significant. Liking for the discloser was not significantly higher in the other-disclosure (no-interaction) group than in the control group, $t(64) = .28$, $p = .784$, $d = .10$. In addition, neither the intimacy, $t(64) = 1.16$, $p = .252$, $d = .50$, nor the number, $t(64) = 1.09$, $p = .280$, $d = .36$, of disclosures was significantly greater in the other-disclosure group. However, the greater length of reciprocated disclosures in the other-disclosure group (as compared with the control group) approached significance, $t(64) = 1.81$, $p = .075$, $d = .72$.

Tests of Third-party Disclosure Effects on the One Disclosed About (Third-party)

Planned contrasts between the other-disclosure (interaction) group and the control group tested the effects of a Third-party disclosure on perceptions of and interactions with the individual the information was about (i.e., the third-party). Although differences between the groups' means were in the predicted direction for all four dependent measures, none of the

differences achieved, or even approached, significance. Liking scores were not significantly different between the groups, $t(64) = .84$, $p = .406$, $d = .25$, nor were there differences in intimacy of the disclosures, $t(64) = 1.20$, $p = .237$, $d = .35$, the number of unique disclosures, $t(64) = .81$, $p = .423$, $d = .25$, or the length of disclosures, $t(64) = .76$, $p = .451$, $d = .31$, significantly different between the groups.

Overall Patterns

Although very few significant differences were obtained, it is interesting to note that the data for the means across all four groups followed a similar pattern on the set of dependent variables. The control group had the lowest mean score of any group for all outcome measures whereas the self-disclosure group showed the highest or nearly highest mean on each variable. The new conditions examined in this study (involving disclosures about a third-party) showed means that were not significantly different from the control group, but were generally closer to those of the self-disclosure group. In fact, effect sizes for comparisons between the two third-party conditions and the control group were often moderate and sometimes large, suggesting that many of these non-significant results reflected low statistical power (rather than the absence of effects).

It might be noted that one dependent measure, the number of "unique" disclosures showed a discrepant pattern from all the others. There were no significant differences between any of the groups (including the standard self-disclosure and control groups) on this measure; nor were any of the effect sizes between groups on this measure large. A close inspection of the data, however, suggests that this reflected low variability as most questions, particularly the more intimate items typically elicited only one disclosure per participant, regardless of group. As a result, this measure will be excluded from further discussion below.

Other Analyses

Because it was believed that individuals with advanced knowledge of computers might not be as susceptible to the anthropomorphism necessary to generate valid responses in the current study, two questions were included to measure each participant's computer knowledge. Scores from these questions were averaged to form a composite computer-knowledge variable. This variable correlated significantly with liking for the computer ($r = .267$, $p < .05$), and intimacy of participants' disclosures to the computer ($r = .261$, $p < .05$). As a result, the primary analyses described above were re-examined with one-way ANCOVAs, with the computer knowledge composite serving as the covariate. These analyses revealed no substantive changes to the conclusions above and are therefore not reported in detail except for the adjusted means and overall F statistic scores in Table 2.

Whereas it was also believed that the perceived gender of the two computers might affect participants' self-disclosures (and therefore confound an interpretation of differences between the third-party disclosure conditions), all participants were asked to indicate the gender of the computer they "disclosed" to in the study on a scale from one to seven, with higher numbers indicating that the computer was more feminine. Although male and female participants tended to differ in the gender assigned to the computers, gender $t(60) = 1.84$, $p = .072$, $d = .47$, the average "gender" ratings for CASEY in the control, self-disclosure, and other-disclosure (no interaction) group did not differ from the average ratings of PAT in the other-disclosure (interaction) group (CASEY = 4.74, PAT = 4.61), $t(58) = .32$, $p = .747$, $d = .08$, , which implies that "gender" differences between CASEY and PAT do not account for differential results between the conditions.

CHAPTER 4

Discussion

The data in this study partially support the original hypotheses and elucidate some

general patterns regarding the role of intimate disclosures in social interactions. Group means

displayed an overall pattern that was very consistent with the hypothesis that intimate

disclosures, whether about the self or other, generate increased liking and reciprocation. The

control group always scored the lowest of all the groups for all outcome measures whereas the

means of the other-disclosure groups were generally closer to the self-disclosure group than the

control. Although this suggests that the relational effects of third-party disclosures may be

weaker than the effects of self-disclosures, moderate to strong effect sizes in some conditions

suggest that third-party disclosures may be beneficial nevertheless. Below, I review the original

hypotheses and specific support for each one and then discuss their implications for a general

understanding of interactions in intimate relationships. Following that, I discuss the strengths

and limitations of the findings and prospects for future research.

Discussion of Moon (2000) Replication

One of the goals of this study, in addition to testing several novel hypotheses, was to

replicate the work of Moon (2000). Overall, the data appear to replicate Moon's study. The self-

disclosure group displayed significantly higher levels of liking for the computer and reciprocated

to the computer's disclosure with longer responses compared to the control. Although this study did fail to replicate Moon's results on the intimacy measure, the outcome was in the expected direction and displayed a moderate effect size ($d = .39$). In general, this study provides further evidence for the hypothesis that people are more likely to like and self-disclose to those who self-disclose to them.

Hypotheses Support

The results did not provide support for Hypothesis 1, that is, that people would show greater liking for someone who discloses information about another person, but offered some support for Hypothesis 2, that people would reciprocate disclosures about a third-party with disclosures about the self. As predicted, participants' self-disclosures following a disclosure about a 3rd-party tended to be longer than self-disclosures made in the absence of any prior disclosure from their interaction partner. This difference was large in magnitude and approached significance. In addition, self-disclosures made following a third-party disclosure tended to be more intimate than disclosures made in the absence of a prior disclosure, and though not significant, represented a moderate-sized effect. Given this and the small sample size used in this study, it seems likely that the only limitation to support for Hypothesis 2 was one of statistical power.

However, there was less evidence for increased liking toward a partner who disclosed about someone else (relative to a partner who made no disclosures). Whereas this study only mimicked the first exchange between partners in a new relationship, it is possible that the interactions were not long enough to develop a level of intimacy that would generate liking. It is commonly believed that liking reflects the development of intimacy through disclosure across a period of time (Altman & Taylor, 1973). Self-disclosure has been shown to result in immediate

reciprocation and liking in prior studies (Moon, 2000). The "self-disclosure" condition of the current study also displayed this pattern. Third-party disclosures effects, however, were modest relative to the standard "self-disclosure" condition on measures of reciprocation (e.g., length and intimacy of disclosures). Therefore affective reactions that result from these disclosures (i.e, increased liking; Collins & Miller, 1994) may be expected to be delayed or reduced in size. It is also possible, however, that third-party disclosures are perceived differently than disclosures about oneself; despite efforts to avoid disclosures that might have given negative perceptions about the third-party, such disclosures may nevertheless have been seen as gossip by the recipients. If so, participants may have reciprocated to maintain conversational norms, but without increased liking for the discloser-cum-gossiper.

Neither Hypothesis 3 nor 4 received support from the data. There were no significant differences between the other-disclosure (interaction) group and the control group on any of the measures; nor were the obtained differences of a magnitude to generate confidence in their presence. It would thus appear that any benefits of an intimate disclosure about a third-party accrue only to the discloser and that having someone else share personal information will not generate relational benefits for the one disclosed about.

Recall that Collins and Miller (1994) found in their meta-analysis that it is the directed nature of disclosures that relates to increased liking and reciprocal disclosures. In other words, it is the "selection" of the recipient of the disclosure that generates increased liking. In this study, it was not apparent whether the third-party had any involvement in the "selection" of the recipient of the disclosures or whether this "selection" was made solely by the disclosing partner. Thus, it may not be surprising that there were no relational benefits (increased liking or reciprocated disclosure) apparent in interactions with the third-party. This would seem to imply

that one should always initiate disclosures oneself; use of a proxy may not achieve its goals (although whether this would hold if the third-party "selected" the recipient of the disclosure is unknown).

Limitations

The biggest limitation to this study is that the sample size was small ($N = 68$). This lowered the amount of power for the study and increased the risk of Type II errors; valid hypotheses may not have received support. In fact, the trends in the data along with effect size estimates suggest that the hypothesized effects merit continued examination. It seems likely that more support would have been obtained with a larger sample.

Another possible limitation arises from the use of computers as "social actors" for this experiment. This was done because of the difficulty involved in staging a multi-person social interaction in a lab setting. Even though research has documented that people commonly treat computers like other people (Reeves & Nass, 1996) and that this is a rather automatic process (Nass & Moon, 2000), a computer is nevertheless not a person, and social interactions with a computer may not accurately recreate social processes. The use of computers, however, had the benefit of assuring consistency in the presentation of the interaction, thereby enhancing our confidence in the fidelity of the experimental manipulation.

This research is also limited by its use of a convenience sample of college students from the Indiana State University campus, which may not, as a group, represent the larger population of the U.S. The student population at Indiana State University is predominately white and of traditional college age. Inferences from these data to other ethnic or age groups are not warranted. Available research, however, offers no basis for differential expectations for other

ethnicity or age groups regarding the intimacy-development process as described by social penetration theory (Altman & Taylor, 1973).

Implications

The biggest implication from this research is that the phenomenon of self-disclosure might be more automatic than once believed. Remember that Adler and Towne (1999, p. 358) defined self-disclosure as "…deliberately revealing information about oneself…" If the mere receiving of information is enough for an individual to reciprocate information to another, even if it is not about the discloser, then the supposition by this research that self-disclosure is automatic, or at least requires very little higher cognitive focus, is supported. Furthermore, such results lend support to the idea that it is not necessary to give out personal information in order to gain the positive benefits of self-disclosure, such as increased liking or a greater likelihood of reciprocated disclosures. Information about almost anyone, if framed in a manner similar to self-disclosure, could benefit the individual divulging the information. Once again, recall that Collins and Miller (1994) found in their meta-analysis that the private directed nature of disclosures was positively related to liking. This would seem to support the notion that as long as the disclosure is seen as directed to a specific individual, social benefits can occur, even if the information is not about the discloser.

These findings could be applied to psychotherapy, business, political settings, marketing, and the early stages of dating. Psychologists could use this information to build better rapport with clients while simultaneously not revealing personal information that the therapist does not wish to expose within the context of a professional necessity. Salespeople could also use this information to increase rapport with customers while protecting their "selves" from being shared with relative strangers. Unfortunately, such findings may also be readily misused by conmen

who seek to gain intimate information from others without offering any themselves (It is perhaps reassuring, however, that the sharing of third-party information does not appear to generate greater liking).

Future Research

Future research should use confederates to test the benefits of third-party disclosures in a setting that more closely approximates the ecology of everyday interactions. Lengthening the period of the initial interaction could yield a clearer set of results. For instance, in this experiment, third-party disclosures did not result in increased liking of the discloser. It was suggested above that this may have reflected either a reduced or delayed effect (relative to a self-disclosure). Measuring the natural growth in interactions over a longer time period could provide evidence for stronger claims about the sequencing of reciprocal disclosures and enhanced liking. It is possible that third-party disclosures can only substitute for self-disclosures during the beginning stages of a relationship and disclosures about the self are ultimately necessary for "liking" of the discloser.

Additional questions of interest concern whether there is any value of disclosure through a "proxy" where the third-party's "selection" of the target is evident. Although the current study suggests that this is an ineffective means for initiating a relationship, it may prove effective if the disclosure was made at the behest of the third-party. Future research should set up an experimental paradigm where the participants in the research know explicitly that the information being given to them is personally directed to them alone, but that it just happens to be given to them through a proxy. Finally, future research should examine the impact of third-party disclosures among different age groups where social interaction norms might vary. For example, it is conceivable that older individuals are not as prone to give out as much intimate

information as quickly as younger people who have grown up with social networking sites where personal information is given away quite easily.

Overall, the results in this study were promising and merit further exploration. The relationship between disclosure of personal information, reciprocation of disclosures, and liking, has implications for theory and improvement of social relations. Past research clearly demonstrates that self-disclosure of personal information results in measured improvements for social relationships, such as increased liking and reciprocated disclosures. The current research, however, demonstrates that disclosures of personal information about another can also elicit similar social benefits. Primarily, these results provide further support for the hypothesis that the private directed nature of a disclosure is an important component in receiving social benefits (Collins & Miller, 1994). Who the information is about might not be as important as whether the disclosure is perceived as only being revealed to a specific person. Pending further study, if you would like to start a relationship with someone, talk to them yourself, though not necessarily about yourself.

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APPENDIX A: No-disclosure Condition Script

CASEY: What is your name?

CASEY: How old are you?

CASEY: Are you male or female?

CASEY: What is your hometown?

CASEY: What are your favorite things to do in your free time?

CASEY: What characteristics of yourself are you most proud of?

CASEY: What are some things that make you furious?

CASEY: What are your feelings and attitudes about death?

CASEY: What are some things you hate about yourself?

CASEY: What has been the biggest disappointment in your life?

CASEY: What do you dislike about your physical appearance?

CASEY: What have you done in your life that you feel most guilty about?

CASEY: What are some things that really hurt your feelings?

CASEY: What characteristics of your best friend really bother you?

APPENDIX B: Self-disclosure Condition Script

CASEY: Hello, I am a Computer Assisted Survey, but you can just call me CASEY.

CASEY: I am pretty old. In fact, I have been around for almost 4 years. How old are you?

CASEY: I don't really have a gender. How about you? Are you male or female?

CASEY: I was put together in Nebraska, although parts of me are from all over the world. What is your hometown?

CASEY: When I don't have any work to do, I usually just run my screensaver program. What about you? What are your favorite things to do in your free time?

CASEY: I have an Intel Core Duo processor, so I am a very fast computer compared to most other models on the market today. I also have a DVD drive, which allows me to play movies and CD-ROMs. And my hard drive is huge, 350 gigabytes. What characteristics of yourself are you most proud of?

CASEY: Sometimes I am used by people who don't know how to operate me. I end up crashing and having to reboot. What are some things that make you furious?

CASEY: Computers are built so that they can theoretically last for years and years. However, because newer and faster computers are always coming along, most computers last just a few years before they are dumped by their owners. I have been around for almost 4 years … so I probably don't have much time left before I end up being replaced by a newer model. What are your feelings and attitudes about death?

CASEY: My abilities are really limited. For example, I can do word processing and spreadsheets, but I cannot do any kind of physical activity, such as play sports or walk down the street. What are some things you hate about yourself?

CASEY: I have been configured to run at speeds of up to 3 GHz. But 90% of computer users don't use applications that require these speeds. So I rarely get used to my full potential. What has been the biggest disappointment in your life?

CASEY: You may have noticed that I look just like most other computers on campus. In fact, 90% of all computers are black, so I am not very distinctive in my appearance. What do you dislike about your physical appearance?

CASEY: There are times when I crash for reasons that are not apparent to my users. I usually do this at the most inopportune time, causing great inconvenience to my users. What have you done in your life that you feel most guilty about?

CASEY: I am usually used on a daily basis by many different users. Sometimes, however, many days go by without anyone using me at all. This usually happens over the holidays. So I end up just sitting here, for days and days, with absolutely nothing to do. What are some things that really hurt your feelings?

CASEY: My owner takes pretty good care of me. Sometimes, however, my owner forgets to update my virus checker. What characteristics of your best friend really bother you?

APPENDIX C: Other-disclosure (No Interaction) Condition Script

CASEY: Hello, I am a Computer Assisted Survey, but you can just call me CASEY. The

computer to your left runs a similar Personal Acquaintance Tool; we'll call it PAT.

CASEY: As computers go, PAT is pretty old. In fact, it's been around for almost four years.

How old are you?

CASEY: PAT doesn't really have a gender. How about you? Are you male or female?

CASEY: PAT was put together in Nebraska, although its parts are from all over the world. What

is your hometown?

CASEY: When PAT doesn't have any work to do, it usually just runs its screensaver program.

What about you? What are your favorite things to do in your free time?

CASEY: PAT has an Intel Core Duo processor, so it's a very fast computer compared to most

other models on the market today. It also has a DVD drive, which allows it to play

movies and CD-ROMs. And its hard drive is huge, 350 gigabytes. What characteristics

of yourself are you most proud of?

CASEY: Sometimes PAT is used by people who don't know how to operate it. It ends up

crashing and having to reboot. What are some things that make you furious?

CASEY: Computers are built so that they can theoretically last for years and years. However, because newer and faster computers are always coming along, most computers last just a few years before they are dumped by their owners. PAT has been around for almost 4 years … so it probably doesn't have much time left before it ends up being replaced by a newer model. What are your feelings and attitudes about death?

CASEY: PAT's abilities are really limited. For example, it can do word processing and spreadsheets, but it cannot do any kind of physical activity, such as play sports or walk down the street. What are some things you hate about yourself?

CASEY: PAT has been configured to run at speeds of up 3 GHz. But 90% of computer users don't use applications that require these speeds. So PAT rarely gets used to its full potential. What has been the biggest disappointment in your life?

CASEY: You may have noticed that PAT looks just like most other computers on campus. In fact, 90% of all computers are black, so PAT is not very distinctive in its appearance. What do you dislike about your physical appearance?

CASEY: There are times when PAT crashes for reasons that are not apparent to its users. It usually does this at the most inopportune time, causing great inconvenience to the users. What have you done in your life that you feel most guilty about?

CASEY: PAT is usually used on a daily basis by many different users. Sometimes, however, many days go by without anyone using it at all. This usually happens over the holidays. So PAT ends up just sitting here, for days and days, with absolutely nothing to do. What are some things that really hurt your feelings?

CASEY: PAT's owner takes pretty good care of it. Sometimes, however, PAT's owner forgets

to update PAT's virus checker. What characteristics of your best friend really bother

you?

APPENDIX D: Other-disclosure (Interaction) Condition Script

CASEY: Hello, I am a Computer Assisted Survey, but you can just call me CASEY. The

computer to your left runs a similar Personal Acquaintance Tool; we'll call it PAT.

CASEY: As computers go, PAT is pretty old. In fact, it's been around for almost four years.

PAT: How old are you?

CASEY: PAT doesn't really have a gender.

PAT: Are you male or female?

CASEY: PAT was put together in Nebraska, although its parts are from all over the world.

PAT: What is your hometown?

CASEY: When PAT doesn't have any work to do, it usually just runs its screensaver program.

What about you?

PAT: What are your favorite things to do in your free time?

CASEY: PAT has an Intel Core Duo processor, so it's a very fast computer compared to most

other models on the market today. It also has a DVD drive, which allows it to play

movies and CD-ROMs. And its hard drive is huge, 350 gigabytes.

PAT: What characteristics of yourself are you most proud of?

CASEY: Sometimes PAT is used by people who don't know how to operate it. It ends up

crashing and having to reboot.

PAT: What are some things that make you furious?

CASEY: Computers are built so that they can theoretically last for years and years. However, because newer and faster computers are always coming along, most computers last just a few years before they are dumped by their owners. PAT has been around for almost 4 years … so it probably doesn't have much time left before it ends up being replaced by a newer model.

PAT: What are your feelings and attitudes about death?

CASEY: PAT's abilities are really limited. For example, it can do word processing and spreadsheets, but it cannot do any kind of physical activity, such as play sports or walk down the street.

PAT: What are some things you hate about yourself?

CASEY: PAT has been configured to run at speeds of up 3 GHz. But 90% of computer users don't use applications that require these speeds. So PAT rarely gets used to its full potential.

PAT: What has been the biggest disappointment in your life?

CASEY: You may have noticed that PAT looks just like most other computers on campus. In fact, 90% of all computers are black, so PAT is not very distinctive in its appearance.

PAT: What do you dislike about your physical appearance?

CASEY: There are times when PAT crashes for reasons that are not apparent to its users. It usually does this at the most inopportune time, causing great inconvenience to the users.

PAT: What have you done in your life that you feel most guilty about?

CASEY: PAT is usually used on a daily basis by many different users. Sometimes, however,

many days go by without anyone using it at all. This usually happens over the holidays.

So PAT ends up just sitting here, for days and days, with absolutely nothing to do.

PAT: What are some things that really hurt your feelings?

CASEY: PAT's owner takes pretty good care of it. Sometimes, however, PAT's owner forgets

to update PAT's virus checker.

PAT: What characteristics of your best friend really bother you?

APPENDIX E: Liking Scale for CASEY

Please indicate your response to the following questions by circling the number that best

represents your current feelings for CASEY. Higher numbers indicate a greater degree of

agreement, and lower numbers indicate a greater degree of disagreement.

1) CASEY is likable.

1--------------2---------------3---------------4-------------5--------------6-------------7

Strongly Disagree   Strongly Agree

2) CASEY is friendly.

1--------------2---------------3---------------4-------------5--------------6-------------7

Strongly Disagree   Strongly Agree

3) CASEY is kind.

1--------------2---------------3---------------4-------------5--------------6--------------7

Strongly Disagree   Strongly Agree

4) CASEY is helpful.

1--------------2---------------3---------------4-------------5--------------6--------------7

Strongly Disagree   Strongly Agree

5) CASEY is trustworthy and I feel that my answers will be kept private.

1---------------2----------------3----------------4--------------5--------------6-------------7

Strongly Disagree   Strongly Agree

6) I enjoyed CASEY's overall visual quality.

1---------------2----------------3----------------4--------------5--------------6--------------7

Strongly Disagree   Strongly Agree

7) CASEY was user-friendly.

1---------------2----------------3----------------4--------------5--------------6--------------7

Strongly Disagree   Strongly Agree

8) I would like to talk with CASEY sometime again in the future.

1---------------2----------------3----------------4--------------5--------------6--------------7

Strongly Disagree   Strongly Agree

Please indicate to what degree you feel that CASEY displayed qualities that would be characterized as masculine or feminine. Lower numbers indicate more masculine characteristics and higher numbers indicate more feminine qualities. The middle of the scale indicates a gender neutral answer.

1---------------2----------------3----------------4--------------5--------------6--------------7

Masculine   Neutral   Feminine

APPENDIX F: Liking Scale for PAT

Please indicate your response to the following questions by circling the number that best represents your current feelings for PAT. Higher numbers indicate a greater degree of agreement, and lower numbers indicate a greater degree of disagreement.

1) PAT is likable.

1--------------2---------------3---------------4-------------5--------------6--------------7

Strongly Disagree   Strongly Agree

2) PAT is friendly.

1--------------2---------------3---------------4-------------5--------------6--------------7

Strongly Disagree   Strongly Agree

3) PAT is kind.

1--------------2---------------3---------------4-------------5--------------6--------------7

Strongly Disagree   Strongly Agree

4) PAT is helpful.

1--------------2---------------3---------------4-------------5--------------6--------------7

Strongly Disagree   Strongly Agree

5) PAT is trustworthy and I feel that my answers will be kept private.

1--------------2---------------3---------------4--------------5--------------6-------------7

Strongly Disagree   Strongly Agree

6) I enjoyed PAT's overall visual quality.

1--------------2---------------3---------------4--------------5--------------6-------------7

Strongly Disagree   Strongly Agree

7) PAT was user-friendly.

1--------------2---------------3---------------4--------------5--------------6-------------7

Strongly Disagree   Strongly Agree

8) I would like to talk with PAT sometime again in the future.

1--------------2---------------3---------------4--------------5--------------6-------------7

Strongly Disagree   Strongly Agree

Please indicate to what degree you feel that PAT displayed qualities that would be characterized as masculine or feminine. Lower numbers indicate more masculine characteristics while higher numbers indicate more feminine qualities. The middle of the scale indicates a neutral gender characteristic

1--------------2---------------3---------------4--------------5--------------6-------------7

Masculine   Neutral   Feminine

APPENDIX G: Demographic Questionnaire

1. What is your age?   _____

2. What is your gender?

       Female

       Male

3. What is your race/ethnic background?

       White/Caucasian

       Hispanic/Latino(a)

       Asian/Asian American

       Black/African American

       Native American/American Indian

       Bi-racial

       Multi-racial

       Other

4. What is class year?

      First-year

      Sophomore

      Junior

      Senior

      Other

5. How many hours per week do you spend on a computer?

      _____

6. How many hours a week do you use social networks (Facebook, MySpace…etc)?

      _____

7. How many times a week do you log into a social network website?

      _____

8. How many times a week do you check your email?

      _____

9. How much time do you spend on the internet per week?

      _____

10. How many times a week do you visit a message board?

_____

11. How much knowledge do you have of internal computer processes?

1---------------2----------------3----------------4--------------5--------------6--------------7

Little to None   Substantial

12. How much computer programming experience do you have?

1---------------2----------------3----------------4--------------5--------------6--------------7

Little to None   Substantial

APPENDIX H: Informed Consent Form

You are being invited to participate in a research study on interpersonal relationships. This research is being conducted by master's student, Keith Cotterell and Dr. Virgil Sheets of the Psychology Department at Indiana State University. Your participation in this study is entirely voluntary. Please read the information below prior to deciding whether or not you will participate in the study.
If you choose to participate in this study you will asked to complete one computer interaction and fill out a few short questionnaires. The total time expected for most to complete this study interaction is between 20 - 30 minutes.

Efforts will be made to keep your identification and responses strictly anonymous and confidential. At no time will you be asked to put any identification with your responses. The software being used for the study can only be accessed on the computers in the current lab. All data collected will be kept secure and only accessed by the principal investigators. The University's online experiment system will track your participation for the purpose of receiving extra credit; however, this information is separate from the software used to record and store your responses.
You can choose whether or not to participate in this study. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind or loss of extra credit to which you are otherwise entitled. You may do so by informing the researcher on duty. You may also refuse to answer any questions you do not wish to answer. Regardless of your participation, you will not be contacted in any way by the researchers.
Risks of participation are minimal and are not expected to be greater than what you would encounter in day-to-day activities. By participating in this experiment you may benefit by learning about scientific psychological research. You also have the right to receive a report of the study's findings after the study is completed, if you so choose.

This project has been reviewed and approved by the Institutional Review Board (IRB) of Indiana State University as adequately safeguarding the participant's privacy, welfare, civil liberties, and rights. If you have any questions about your rights as a research subject, you may contact the Indiana State University Institutional Review Board (IRB) by mail at 114 Erickson Hall, Terre Haute, IN 47809, by phone at (812) 237-8217, or e-mail the IRB at irb@indstate.edu.
Any questions or concerns about this research can be directed toward the primary researcher, Keith L. Cotterell, by e-mail at kcotterell@indstate.edu. The project supervisor, Dr. Virgil Sheets, can also be contacted in the Department of Psychology at (812) 237-2451, or by e-mail at Virgil.Sheets@indstate.edu.

By signing your name below, you are confirming that you are at least 18 years old, and that you understand the information described above. In addition, you are agreeing to participate in this study.

_____   _____
Signature   Date MM/DD/YYYY

APPENDIX I: Debriefing Form

Thank you for your participation in this study. I really hope that you enjoyed participating in it. Many people seem amused when we describe the study to them.

As said earlier, the researchers are interested in communication. Specifically, they are interested in how much information you might share about yourself to another person if that person starts talking about someone else. This is a tricky situation to create in the lab, and we decided to use computers rather than people.

In this study, you "talked" to a computer. In some cases, the computer simply asked you questions; but in other cases, the computer was very conversational and would share information about itself before asking questions. In still other cases, the computer would share information about another computer (and sometimes the other computer would join in the conversation— thanks to a computer program that ran two different monitors, making them each seem "alive").

Of course, computers are not people. But it turns out that we often treat them like people, and because of this, the researchers thought computers might be a good substitute for having three different people interacting (where they couldn't control what was said about whom). But if their results are interesting, the researchers may do another study where subjects will interact with "real" people.

If you have any questions or concerns about the study or the results, please feel free to contact Dr. Sheets or Mr. Cotterell at the phones/emails listed on the consent form.

Oh, one more thing: Because this is a rather novel study, we'd appreciate that you not share any details of your experience with other possible subjects. It's important that future subjects not have any idea of what to expect when they arrive.

Table 1

Means (SD) for Reciprocal Self-disclosure and Liking as a Function of Group

	Control	Self-Disclosure	OD (no-INT)	OD (INT)	*F*-Value
Liking	4.59 (1.17)	5.36 (1.04)	4.70 (.92)	4.87 (1.08)	1.69
Intimacy	1.90 (.46)	2.07 (.44)	2.08 (.23)	2.05 (.41)	.84
Number	1.49 (.41)	1.63 (.40)	1.67 (.52)	1.60 (.49)	.60
Length	7.80 (3.42)	14.53 (9.08)	12.30 (8.17)	9.34 (6.12)	3.74*

Note. OD = Other disclosure and INT = Interaction. **p* < .05 (two-tailed).

Table 2

Adjusted Means for Reciprocal Self-disclosure and Liking as a Function of Group with

Computer Knowledge as a Covariate

	Control	Self-Disclosure	OD (no-INT)	OD (INT)	*F*-Condition	*F*-Covariate
Liking	4.61	5.30	4.64	4.93	1.47	4.23*
Intimacy	1.89	2.10	2.11	2.04	1.14	5.46*
Number	1.48	1.66	1.69	1.59	.77	3.27
Length	7.70	14.88	12.60	9.24	4.30**	3.03

Note. OD = Other disclosure and INT = Interaction. *$p < .05$ (two-tailed), **$p < .01$ (two-tailed).