Familiarity Does Indeed Promote Attraction in Live Interaction

Harry T. Reis, Michael R. Maniaci,
and Peter A. Caprariello
The University of Rochester

Paul W. Eastwick
Texas A&M University

Eli J. Finkel
Northwestern University

Does familiarity promote attraction? Prior research has generally suggested that it does, but a recent set of studies by Norton, Frost, and Ariely (2007) challenged that assumption. Instead, they found that more information about another person, when that information was randomly selected from lists of trait adjectives, using a *trait evaluation paradigm*, promoted perceptions of dissimilarity and, hence, disliking. The present research began with the assumption that natural social interaction involves contexts and processes not present in Norton et al.'s research or in the typical familiarity experiment. We theorized that these processes imply a favorable impact of familiarity on attraction. Two experiments are reported using a *live interaction paradigm* in which two previously unacquainted same-sex persons interacted with each other for varying amounts of time. Findings strongly supported the "familiarity leads to attraction" hypothesis: The more participants interacted, the more attracted they were to each other. Mediation analyses identified three processes that contribute to this effect: perceived responsiveness, increased comfort and satisfaction during interaction, and perceived knowledge.

Keywords: familiarity, attraction, relationship development, friendship formation

Among the core concepts of interpersonal attraction is the principle of familiarity. According to Berscheid and Regan (2005), for example, "the familiarity principle of attraction is perhaps the most basic of the [general principles of attraction]" (p. 177). Similarly, Ebbesen, Kjos, and Konecni (1976) concluded that "most positive interpersonal relationships result from frequent face-to-face contacts" (p. 505). These conclusions follow from the many studies, both correlational and experimental, that have supported a link between familiarity—defined as the degree of exposure that one person has to another person—and attraction to other persons. Consistent with this definition, the familiarity effect on attraction is typically explained in terms of the mere exposure effect (Zajonc, 1968, 2001)—that repeated exposure to a stimulus

Norton et al.'s (2007) research used paradigms that are relatively similar to previous experiments on familiarity, in the sense that information was presented to participants in a very decontextualized manner. To our knowledge, no experiments have examined the "familiarity-leads-to-attraction" effect in contexts involving actual interaction; most experiments have followed the example of mere exposure studies, presenting stimuli such as names, faces, or trait information at varying frequencies. (Familiarity effects have been examined in natural settings [e.g., Berg, 1984; Shook & Fazio, 2008], as described below, but because none of these studies were true experiments, their interpretations are potentially ambiguous.) There is an important distinction, we believe, between *trait evaluation paradigms*, in which participants evaluate static information about a person they will never meet, and *live interaction paradigms*, in which people interact in real time, acquire information contextually, and both evaluate and are evaluated by the partner. In other words, natural interaction differs in several important respects from thinking critically about lists of information. In fact, existing evidence suggests that information may be processed differently—that is, more holistically—when it is embedded in the ebb and flow of natural interaction. For example, in two laboratory experiments reported by Eastwick, Finkel, and Eagly (2010), participants, on the basis of written profiles, preferred ideal to nonideal romantic partners. After a live interaction, however, this preference disappeared, because interaction facilitated more holistic, contextual interpretation of trait information, as traditional models of person perception have long assumed (Asch, 1946). Thus, we believe that the present experiments represent a more ecologically valid test of the familiarity–attraction hypothesis than prior experiments. Building on traditional familiarity–attraction research and notwithstanding Norton et al.'s novel contribution to that literature, we propose that in the context of actual social interactions, familiarity is associated with increasing attraction. This article reports two experiments supporting this position.

Exposure, Familiarity, and Liking

Familiarity effects are often couched in terms of the mere exposure effect, so we begin with a brief review of that literature. Researchers have studied diverse phenomena relevant to the mere exposure effect since it was first postulated (Zajonc, 1968). Born-

aversive, familiarity should have negative impact. This is consistent with response facilitation models of social experience: that repeated contact increases the likelihood of the dominant (i.e., most predisposed) response (Zajonc, 1965). This explanation is also consistent with research on the contact hypothesis. Although it was first assumed that intergroup contact of any sort would reduce prejudice and outgroup stereotyping, years of research have shown such contacts can make matters worse if the conditions of such contact exacerbate preexisting dislike and suspicion (Amir, 1976). On the other hand, intergroup contact under circumstances that foster cooperative interaction tends to lessen prejudice, consistent with our reasoning. In fact, conditions amenable to fostering intimate friendship appear to be especially effective in lessening prejudice and discrimination (Pettigrew, 1998).

Must Familiarity Inevitably Lead to Liking? Norton et al.'s (2007) Research

As mentioned above, Norton et al. (2007) argued that "less is more"—that is, that as more information about another person is acquired, the likelihood of finding evidence of dissimilarity increases, which will engender decreased liking. As they concluded in their article, "knowing more means liking less" (Norton et al., 2007, p. 103). This account follows from their finding that people anticipate initial interactions with relatively favorable expectations, because ambiguity allows for self-serving inferences about the other's opinions and traits. Three experiments (one conducted in an online dating website, the other two conducted around the Massachusetts Institute of Technology campus, omitting mention of dating or the target's sex) reported in their article relied on a similar method. Participants were presented varying amounts of trait information about a potential interaction partner; for example, in one study, participants received a list of four, six, eight, or 10 positive and negative traits randomly selected from Asch's (1946) seminal study of central and peripheral traits in impression formation. As predicted by Norton et al.'s theorizing, the more traits participants received, the less they anticipated liking the target person. In one additional study, one group of participants in an online dating service described their expectations about a forthcoming date as well as how much they knew in advance about the date. A second group was asked the same questions after a first date (with appropriate changes in tense). As expected, knowledge ratings were higher in the post-date condition, but ratings of liking and perceived similarity were lower.

animosity (e.g., Curtis & Miller, 1986). Moreover, extensive research shows that responsiveness encourages mutual self-disclosure (see Reis & Patrick, 1996, for a review), creating interactions that let partners know and feel known by each other (Reis, Clark, & Holmes, 2004). This point is consistent with research on processes such as self-verification (Swann, 1990), intimacy (Reis & Shaver, 1988), and responsiveness goals (Canevello & Crocker, 2010). These and many other studies suggest that perceived understanding by others contributes to feeling accepted, valued, and liked—factors that contribute to reciprocity of liking (Kenny, 1994; Newcomb, 1961). Thus, social interaction (at least when it goes reasonably well) allows for the interchange of self-disclosure and responsiveness that fosters both knowledge of the other and the feeling of being known by the other.

Finally, and more generally, familiarity fosters feeling comfortable and safe with others, which also contributes to liking (Baumeister & Leary, 1995; Floyd, 2006; Winkielman et al., 2003). Attachment figures, for example, are almost without exception familiar, well-liked others (Mikulincer & Shaver, 2007).

Combining these various considerations points to an important conceptual distinction. Kruglanski et al. (2000) have distinguished *assessment mindsets*, which emphasize analytical reasoning in which the target is evaluated relative to alternatives, from *locomotion mindsets*, which emphasize the commitment of self-regulatory resources to the initiation and maintenance of desired actions. Under locomotion, individuals are more likely to respond to the other spontaneously, in a manner that facilitates smooth, rewarding social interaction. Consistent with this reasoning, Kumashiro, Rusbult, Finkenauer, and Stocker (2007) demonstrated that locomotion orientations were associated with greater support, affirmation, and relationship well-being, whereas assessment orientations undermined these qualities. Extensive research based on a closely related conceptual distinction, differentiating *deliberative* and *implemental mindsets* (for reviews, see Bargh, Gollwitzer, & Oettingen, 2010; Gollwitzer & Bayer, 1999), similarly suggests that the former may stress purely diagnostic reasoning about the other, whereas the latter may energize efforts to achieve more harmonious, enjoyable interactions.

We reasoned that Norton et al.'s (2007) trait evaluation paradigm seems likely to have induced an assessment mindset, in which the individual asks, "Am I interested in this person?" Because they received only a list of trait adjectives, participants could only answer the researchers' question by considering the relative merits of those traits. Locomotion goals would be irrelevant, because no interaction (and hence no relationship) was possible between the evaluator and the target of the evaluation. On the other hand, actual social interactions are more likely to induce a locomotion mindset, in which the individual aims to interact in as comfortable and rewarding a manner as possible. Engaging in social interaction requires committing attention and other psychological resources to the pursuit of a smooth, non-awkward, and pleasant social experience. At the same time, this orientation would downplay critical assessments, which would interfere with spontaneity and social engagement.

This reasoning is supported by the results of an experiment by Snyder and Haugen (1995), who compared the *knowledge functions* (acquiring stable impressions of the other) and *adjustive functions* (engaging in a smooth, pleasant interaction) of getting-acquainted conversations. Importantly, they found that when no instructions were provided in such conversations, adjustive functions predominated over knowledge functions. Our reasoning is also consistent with a recent report by Frost, Chance, Norton, and Ariely (2008), who demonstrated that an online dating service that allowed potential daters "to acquire experiential information by exploring a virtual environment in interactions analogous to real first dates (such as going to a museum)" (p. 51) produced greater liking than online dating sites that emphasized what they called *searchable attributes* (commodities and attributes that can be described succinctly). Thus, both sets of findings support the conceptual implications of the distinction between trait evaluation and live interaction paradigms that we are proposing.

For these reasons, we expected that in the context of actual social interactions, familiarity would lead to increased liking, as earlier studies have suggested. Additionally, we expected that familiarity would increase participants' knowledge about each other (as shown by Norton et al., 2007) as well as the perception of being known by the other, and that these knowledge increases would be associated with greater liking, as the theories reviewed above suggest, rather than with decreased liking, as Norton et al. (2007) found.

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This article reports two experiments using the live interaction paradigm testing the hypothesis that greater familiarity would predict greater attraction. In the first experiment, in face-to-face conversations, pairs of previously unacquainted participants discussed either two or six items taken from validated experimental tasks for generating closeness between strangers. These items have been demonstrated to allow conversations to unfold in a way that encourages mutual self-disclosure and supportive responses. In the second experiment, same-sex strangers were paired and randomly assigned to engage in online chats with each other one, two, four, six, or eight times. Taken as a set, these two experiments control for factors that may be associated with familiarity in real-world interactions—Study 1 controls for the topic of conversation, whereas Study 2 controls for various cues that are visible when people interact face-to-face. In addition to examining the effect of familiarity on attraction, we also examined the mediating role of

Study 1

Method

Participants. We recruited 56 participants for the current study. Because we were primarily interested in studying initial interactions, only participants who reported (on a questionnaire at the end of the study) that they had not previously met their interaction partner were retained for analyses. Two participants who reported not knowing their partner were retained for analyses even though their interaction partners did not indicate likewise; thus, the final *N* was 48 participants (25 women) comprising 25 different same-sex dyads. Four participants completed the study for course credit, whereas the remaining participants were recruited using flyers posted around campus and were paid $6. Participants' mean age was 19.31 years ($SD = 1.09$), ranging from 18 to 22 years.

Materials. Attraction toward the partner was the average of four items ($\alpha = .79$): perceived similarity (assessed on a 7-point scale, anchored by *not at all* and *extremely*), liking for the partner and desire to have the partner as a friend (assessed on 7-point scales, anchored by *neutral* and *an exceptional amount*), and the Inclusion of Other in the Self (IOS; Aron, Aron, & Smollan, 1992) measure. The IOS measure was translated to a 7-point scale, with higher numbers denoting greater inclusion in the self.

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textual factors may have on spontaneous social interaction. Therefore, in Study 2, we sought to create a more natural and engaging context for testing our hypothesis. We did this by randomly assigning strangers to chat online for a varying number of instances. There were no restrictions on the content of their chats or timing of their chats (save that we asked that the chats last about 15 min each and occur within the same numbers of days in their assigned number-of-chats condition). Additionally, participants could access the instant messaging program from any location. Once again, we hypothesized that greater numbers of chats would be associated with greater attraction. We also hypothesized that this association would be mediated by perceived knowledge, responsiveness, and

not know, and who was same sex. To minimize the chance that participants knew their partner, we recorded their dormitory and, where applicable, sports teams, Greek organization, and other extracurricular activities that occupied at least 5 hr per week. Individuals were randomly assigned to conditions, using a random numbers table, and then were matched with the last unpaired person, with the constraint that individuals who matched on any of the aforementioned criteria were not partnered. We then provided full instructions for the study.

Participants were given an anonymous screen name and password with which to log into the instant messaging client (e.g., urpsych1). They were asked to chat for approximately 10–15 min with their partner for a pre-specified number of times, depending on condition (one, two, four, six, or eight times), once a day if possible but spanning no more than the number of days in the assigned condition (e.g., 8 days for the eight-chat condition). We requested that participants not interact more than twice a day, but if they did so, to space their interactions by at least 2 hr. We provided no guidelines on how to structure interactions, except to request that each participant contribute to each conversation at least six times (to keep it from becoming one-sided). Participants

Table 1
Levels of Perceived Knowledge and Responsiveness as a Function of the Number of Chats

Measure	Condition (number of chats)					Linear F	F-noncontrast
	1	2	4	6	8		
Perceived knowledge of other	1.99 (0.56)	2.92 (0.56)	3.11 (0.64)	3.16 (0.62)	3.52 (0.86)	43.85****	3.42**
Perceived knowledge by other	1.92 (0.54)	2.79 (0.51)	2.97 (0.78)	3.08 (0.69)	3.30 (0.75)	36.19****	2.76*
Perceived responsiveness	2.40 (0.72)	3.09 (0.76)	3.12 (0.80)	3.44 (1.08)	3.29 (0.91)	11.30****	1.42
Satisfaction/comfort	3.11 (0.78)	3.62 (0.40)	3.58 (0.63)	3.66 (0.70)	3.77 (0.71)	7.32***	1.05

Note. Mean levels are presented; standard deviations are reported in parentheses.
* $p < .05$. ** $p < .02$. *** $p < .01$. **** $p < .001$.

noncontrast test, $F(3, 99) = 3.42$, $p < .03$. Post hoc analyses indicated that this result stemmed from the larger increase from one-chat to two-chat relative to the other condition differences. Perceived knowledge of the self also produced a significant linear trend across conditions, $F(1, 99) = 36.19$, $p < .001$, and a significant effect for the remaining variance, F-noncontrast(3, 99) = 2.76, $p < .05$. Post hoc tests again revealed that this was due to a larger increase from one-chat to two-chat relative to the other condition.

Perceived responsiveness yielded similar results: a significant linear trend across conditions, $F(1, 101) = 11.30$, $p < .001$, and a nonsignificant effect for the remaining variance, F-noncontrast(3, 101) = 1.42, *ns*. As Table 1 shows, all three variables showed increases as the number of chats increased. We also analyzed how satisfied and comfortable participants felt during their chats. As shown in Table 1, the linear trend was significant, $F(1, 101) = 7.32$, $p < .01$, whereas the residual between-groups variance was not, F-noncontrast(3, 101) = 1.05, *ns*.

After the chats had been completed, we gave participants the opportunity to learn each other's identity, so that they might continue their interactions. This was done in part to provide a more externally valid measure of attraction. Two measures were obtained. The first examined the percentage of dyads in which at least one participant expressed the desire to learn the other's identity to get in contact. This was done with a one-tailed linear chi-square test, using Fisher's exact probability, and was significant, $\chi^2(1) = 6.18$, $p < .01$. The percentages of dyads in which at least one person expressed a desire for further contact were 17.6%, 41.2%, 52.4%, 51.6%, and 62.5%, in the one-, two-, four-, six-, and eight-chat conditions, respectively. The second test, based on a question asked 2 weeks after the final

chat, looked at the percentage of dyads in which at least one participant reported actually trying to contact the other. Because some participants exchanged names or other identifying information during their conversations, we included all participants in this analysis rather than restricting it to those for whom we had facilitated an exchange of contact information. A similar one-tailed linear chi-square test, using Fisher's exact probability, was significant, $\chi^2(1) = 2.83$, $p = .05$. The percentages of dyads in which at least one person actually attempted contacting the other were 11.1%, 15.0%, 25.0%, 26.7%, and 31.3%, in the one-, two-, four-, six-, and eight-chat conditions, respectively.

Thus, participants in the eight-chat condition were almost four times more likely than participants in the single-chat condition to desire further contact after their scheduled chats, and they were almost three times more likely to actually try to contact their partner within 2 weeks.

Coded chat properties. To determine whether participants' perceptions of their interactions would be reflected in objective characteristics of those conversations, we analyzed independent coder ratings of the last conversation that each dyad had. Here, we examined only the final transcript for each dyad, because we wanted to determine whether the follow-up ratings (which were obtained after the final chat had occurred) reflected the state to which participants' relationships had evolved over their various chats. Results of these analyses are displayed in Table 2. For each variable, the rated value generally increased as the assigned number of chats increased. There was a strong linear trend for expressions of knowledge about each other to increase as a function of the number of chats, $F(1, 104) = 25.29$, $p < .001$. The noncontrast effect was also significant, $F(3, 104) = 3.56$, $p < .005$, reflecting

Table 2
Levels of Coded Knowledge, Liking, and Self-Revelation in Dyads' Final Chat as a Function of the Number of Chats

Measure	Condition (number of chats)					Linear F	F-noncontrast
	1	2	4	6	8		
Knowledge about each other	−0.61 (0.11)	−0.09 (0.59)	0.42 (0.69)	0.50 (0.82)	0.31 (0.83)	25.29****	3.56**
Rated liking	−0.14 (0.51)	0.09 (0.65)	0.23 (0.81)	0.40 (0.98)	0.31 (1.06)	4.17*	0.30
Self-revelation	−0.10 (0.34)	−0.04 (0.39)	0.12 (0.71)	0.18 (0.55)	0.33 (0.88)	5.83**	0.06
Word count	530.7 (159.1)	527.2 (246.6)	490.5 (142.5)	528.9 (233.0)	523.8 (239.2)	0.00	0.21

Note. Mean levels are listed; standard deviations are reported in parentheses.
* $p < .05$. ** $p < .02$. **** $p < .001$.

an apparent drop-off in the eight-chat condition.[5] Ratings of perceived liking also yielded a significant linear trend, $F(1, 104) = 4.17$, $p < .05$, and a nonsignificant noncontrast effect, $F(3, 104) = 0.30$, *ns*. Likewise, self-revelation yielded a significant linear trend, $F(1, 104) = 5.83$, $p < .02$, and a nonsignificant noncontrast effect, $F(3, 104) = 0.06$, *ns*.

1999). Chats in Study 2 were more spontaneous and uncon-
strained—conditions that allow individual differences and per-
sonal preferences to emerge (Ickes, 2009). In this case, randomly

reconciliation of our results with Norton et al.'s is correct. Further research is needed.

This study adds to the existing literature on familiarity in another way. Prior studies generally used one of two formats: experimental studies in which pictures or names were shown to participants for varying frequencies, or correlational studies in which the frequency of social exposure or contact was measured and then linked to attraction. (Moreland & Beach, 1992, is an exception, but note that that experiment involved no actual interaction between participants and confederates.) As mentioned above, the present experiments are to our knowledge the first that directly manipulated the amount of social contact in a naturalistic context. Furthermore, note that our studies controlled several other important processes that, in natural acquaintanceships, may be confounded with increasing familiarity. For example, Study 1 controlled the topic of conversations. In Study 2, participants did not meet face-to-face (and thus had no information about physical attractiveness) or learn each other's name until after the study had been completed. Thus, they had no information about appearance or popularity or what others in their social network thought about the partner. All they knew was what they had learned and experienced through interacting. In sum, our studies add empirical strength to the principle that familiarity fosters attraction.

It bears noting that although the three mediators that we examined are conceptually distinguishable, we cannot determine whether each one is necessary or sufficient to produce the effects (although the analyses conducted with individual mediators sug sug

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Appendix

Two-Item Paired Ratings Sample