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REPLY

In Live Interaction, Does Familiarity Promote Attraction or Contempt? Reply to Norton, Frost, and Ariely (2011)

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

In this reply, we address and refute each of Norton, Frost, and Ariely's (2011) specific objections to the conclusion that, *ceteris paribus*, familiarity breeds liking in live interaction. In particular, we reiterate the importance of studying live interaction rather than decontextualized processes. These rebuttals notwithstanding, we concur with Norton et al.'s call for an integrative model that encompasses both Norton, Frost, and Ariely's (2007) results and ours, and we point readers toward a description of a possible model presented in our original article.

Keywords: familiarity, attraction, relationship development, friendship formation

We were pleased to receive Norton, Frost, and Ariely's (2011) commentary, because it allows us to clarify important distinctions between our research and theirs (Norton, Frost, & Ariely, 2007). Dialogue helps make science a self-correcting enterprise. Our research was designed in part to correct misleading generalizations from their studies. This reply has a similar aim. We believe that Norton et al.'s commentary misrepresents what our article does and does not say. Herein, we set the record straight and reiterate the key rationale for our research: the importance of studying live interaction.

The Value of an Integrative Account

We agree with Norton et al. (2011) about the value of a more integrative account of familiarity effects in the acquaintance process. That is in fact what originally motivated our studies. As explained in our article, Norton et al.'s conclusions contradicted decades of research and theory on the effects of familiarity. Could their studies and the traditional literature be reconciled? We believe that they can, and in our article we offered such an account, using Kruglanski et al.'s (2000) distinction between assessment and locomotion goals. This distinction may help develop the sort of integrative account that Norton et al. called for in their commentary but neglected in our article. Indeed, Norton et al. misquoted our title by omitting the key qualifying phrase (italicized here for emphasis)—"Familiarity Does Indeed Promote Attraction *in Live Interaction*"—that represents an explicit step toward an integrative account. Despite their emphasis on theoretical integration, we see no such qualifications in Norton et al.'s conclusions.

Briefly, assessment mindsets emphasize critical, analytical reasoning, whereas locomotion mindsets emphasize the commitment of self-regulatory resources toward attaining desired goals. In all but one of their studies, Norton et al.'s (2007) participants were asked to judge another person described only by a list of traits—we think it likely that assessment would dominate in this context. In our studies, participants were asked to interact with another person—conditions that would make salient locomotion toward the goal of a smooth, pleasant interaction. Consistent with this logic, Kumashiro, Rusbult, Finkenauer, and Stocker (2007) found that locomotion facilitates supportive interactions in close relationships, whereas assessment undermines them. Of course, we did not directly evaluate this proposition by manipulating mindsets, so its viability as an integrative principle remains to be established. However, by offering this distinction as a way of reconciling our findings (as well as those of the traditional literature) and Norton et al.'s, we sought to move researchers toward precisely the kind of integrative account that Norton et al. call for but do not describe.

What Makes Live Interaction Special?

Norton et al. (2011) asserted that our paradigms are "quite different from natural social interactions" (p. 572) because they included elements unlikely to be found in natural circumstances (e.g., needing to complete interactions to receive experimental

Harry T. Reis, Michael R. Maniaci, and Peter A. Caprariello, Department of Clinical and Social Sciences in Psychology, The University of Rochester; Paul W. Eastwick, Department of Psychology, Texas A&M University; Eli J. Finkel, Department of Psychology, Northwestern University.

Correspondence concerning this article should be addressed to Harry T. Reis, Department of Clinical and Social Sciences in Psychology, The University of Rochester, Box 270266, Rochester, NY 14627. E-mail: reis@psych.rochester.edu

credit).[1] We agree that our paradigms were imperfect replicas of natural first-encounters between strangers; experimentation requires certain controls. It therefore seems fair to ask, what makes a live interaction special? Were those features present in our research? Several features stand out: participants' seeing and hearing each other, interpreting and responding in real-time to each other's behavior and verbalizations, forming trait inferences from the other's statements and behaviors, managing impressions, and pursuing interaction goals. Our Study 1 had all of these features, although the goals (i.e., discussing particular topics) were chosen by the experimenters, not the participants themselves. Our Study 2 did not permit participants to see or hear each other, but it had all the other features. Participants were given no restrictions about what to discuss.

In contrast, Norton et al.'s (2007) experiments had none of these features. Participants formed inferences about a hypothetical person they had no chance of ever encountering based solely on a few adjectives. Norton et al.'s (2011) commentary refers to a "naturalistic experiment" in their original article, but that study (Study 5, which incidentally does not qualify as a true experiment because participants were not randomly assigned to conditions) is compromised by a serious methodological shortcoming: One group of participants was assessed pre-date and an entirely separate group was assessed post-date, but because the latter group consisted of individuals returning to the website to find another partner, one can infer that their dates went poorly. Participants whose dates went well (and who might have disconfirmed Norton et al.'s, 2007, hypothesis) presumably would not have returned to seek other dates and therefore were excluded from the latter group. Selective attrition is a well-known confound that undermines internal validity (Campbell & Stanley, 1963).

To bolster their objections to our work, Norton et al. (2011) cited research on computer-mediated communication (CMC) by Walther (1996, 1997) and Turner, Grube, and Meyers (2001). These authors have asserted that CMC facilitates favorable impression management, which, to Norton et al., may exaggerate perceived similarity. Walther (1996, 1997) has posited that this facilitation should be particularly true in asynchronous communication (e.g., e-mail) rather than in synchronous communications (live interactive chatting), which is what we used. Furthermore, Norton et al. have overlooked Walther's contentions that CMC "may enable communicators to express themselves in ways more revealing of their self-perceptions, or self-ideals, than they might otherwise" (Walther, 1996, p. 23) and that CMC "is an amplifier or magnifier of social psychological and communication phenomena" (Walther, 1997, p. 360). Additionally, Walther stated that "CMC participants in dyads and groups—even those who have never met before—use cues available to them to manage relational development in normal (or perhaps supernormal)[2] fashion" (Walther, 1996, p. 13), which is consistent with Turner et al.'s finding of a nonsignificant difference in patients' ratings of support provided by listserv partners and face-to-face partners. Thus, these articles suggest that our CMC procedure did not subvert normal processes of acquaintanceship (although it may have accelerated them). Even if it had, this objection would not apply to our Study 1, which involved face-to-face communication and found the identical result: Familiarity predicts attraction.

Norton et al. (2011) also proposed that people typically do have information about others before meeting them, suggesting that their trait paradigm "is not so unlike how people often learn about others" (p. 572). We concur with the former point but not with the latter. In real life, when people learn about others before encountering them in live interaction, information rarely appears as a list of disembodied trait adjectives—rather, information is contextually embedded (even in most online dating and social networking sites). One hears anecdotes and learns about a person's activities and interests, about ways they have behaved, and about their social networks. This information is often revealed strategically to emphasize commonalities and to facilitate positive self-presentation. This seems quite different than learning only that a person is, for example, ambitious and enthusiastic or boring and idealistic. Furthermore, although Norton et al. chided us for a lack of control, we note that their adjective lists included mostly positive and a few negative traits (e.g., boring, individualistic, stubborn). Their analyses did not report controlling for the possibility that ratings became more negative with increasing amounts of information because larger lists were more likely to include one of the negative traits. This would be consistent with existing evidence that negative traits more strongly influence impressions than positive traits do (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001).

Norton et al. (2011) "take issue with the idea that everyday interaction does not involve evaluation" (p. 572). We have never suggested that it does not: Nothing in our paradigms stopped participants from evaluating their interactions partners, and we expect that they did so. Indeed, our integrative model indicates that different contexts stress evaluation to varying extents. Our studies focused on live interaction, which, we suggest, fosters locomotion and reduces evaluation. Norton et al.'s (2007) studies, in contrast, offer nothing but evaluation—a circumstance that is relatively rare. Furthermore, evaluation processes are likely to operate differently when evaluating a hypothetical person one has no chance of encountering than when evaluating a real individual one expects to meet (Berscheid, 1985). Live interaction activates interaction goals and outcome interdependencies, factors well-known in the social-psychological literature to influence social-cognitive processes.

Of course, simple, tightly controlled paradigms such as those used by Norton et al. (2007) can be useful for testing psychological theory. However, there are reasons to suspect that paradigms that closely approximate natural, live interaction differ from "on-paper" paradigms in psychologically significant ways. For example, consumers focus on the good or bad experience of using a product when they interact with it, but they focus on its features when learning about it in the abstract (Hamilton & Thompson, 2007). Similarly, relative to a paper-based description, live interactions afford people more of an opportunity to reinterpret someone's traits in a favorable or unfavorable light (Eastwick, Finkel, & Eagly, 2011). In short, the psychological processes that take place when people make judgments and evaluations can differ substantially depending on how they interact with the object of their evaluation.

These objections notwithstanding, we concur with what we understand to be Norton et al.'s (2011) general point: Evaluation is more salient in certain types of settings and interactions than in

[1] Parenthetically, in contrast to Norton et al.'s (2011) claim, our participants' payments did not vary across conditions.

[2] Supernormal refers to processes that unfold in the usual way but faster.

others. Our proposed integrative account would allow for testing this proposition. For present purposes, we suggest that readers consider Weick's (1985) astute question about social psychological research: Which set of paradigms—live, real-time interactions of the sort we created or lists of trait adjectives describing hypothetical persons—comes closer to activating the motives and concerns embodied in the human condition?

Do Our Results Contradict Prior Research?

Norton et al. (2011) asserted that we ignore results from three studies whose findings contradict ours. (This claim seems somewhat ironic in that Norton et al., 2007, as described earlier, did little to reconcile their findings with dozens of earlier studies that have led textbook authors to conclude that "the familiarity principle of attraction is perhaps the most basic of the [general principles of attraction]"; Berscheid & Regan, 2005, p. 177). Closer examination, however, reveals that (a) these studies have limited relevance to the familiarity–attraction link, and (b) they do not contradict our conclusions.

These studies, which we discuss below, examined liking trajectories between roommates over time, yielding some evidence that liking declines over time. Before discussing qualifiers of this result—and the reason why these studies do not threaten our conclusions—we first note that naturalistic roommate studies do not provide clean tests of either Norton et al.'s (2011) ideas or our own, thus rendering them largely irrelevant to the current debate. This is because these studies lack random assignment and experimental control, making it impossible to isolate familiarity as a causal variable. Other factors, including affinity and the effects of interdependence (coordinating everyday routines, cleanliness, sleep schedules, noise levels, study habits, etc.) will likely gain in influence with repeated interaction over time, relative to familiarity. Our view is that familiarity is crucial in promoting initial attraction and fostering early relationship development but that it loses impact once a relationship is established and other factors become more influential.

Furthermore, it is important to recognize that the three roommate studies mentioned by Norton et al. (2011) do not challenge our conclusions. In these studies, declines in liking emerged over time for (a) roommates who chose not to live together the subsequent year but not for those who chose to stay together (Berg, 1984), (b) roommates who were same-race but not who were interracial (Shook & Fazio, 2008), and (c) interracial (and same-race) roommates who were low in "perceived intergroup commonality" (common social identity) but not interracial roommates who were high in this construct (West, Pearson, Dovidio, Shelton, & Trail, 2009). Berg (1984) also observed that learning about each other (i.e., becoming more familiar) was not the primary basis for liking or disliking later in the year; rather, "over time the amount one rewards another and the comparison level for alternatives will become the most important factors in determining liking and satisfaction" (pp. 355–356). Additionally, Shook and Fazio (2008) found that same-race dyads, who liked each other less over time, also decreased their time spent together, whereas interracial dyads, who maintained strong liking over time, increased their time spent together (see their Table 3). These results indicate that spending less time together is associated with less liking (which Berg, 1984, also observed in his sample), consistent with our view that familiarity predicts attraction (although the possibility of reverse causality renders strong conclusions about the direction of the familiarity–attraction link tentative).

In sum, then, these roommate studies are largely irrelevant to the current debate, but, in any case, their results do not compromise our conclusions. Our studies prioritized internal validity to allow strong causal conclusions while retaining the advantages of live interaction.

Extending the Model to Marriage and Politics

Norton et al. (2011) asserted that current "divorce rates suggest that familiarity often does not lead to liking: For marriages that occurred in the 1970s, nearly half—48%—ended in divorce within 25 years" (p. 573). We are puzzled by this argument. If familiarity breeds disliking, why would anyone ever marry at all? Norton et al.'s logic implies that with every day that dating partners know each other, the positivity of their evaluation, and hence the likelihood of marriage, should decrease. Surely the length of the acquaintance process from initial meeting to marriage—in contemporary Western culture, couples date or cohabit for years before marriage—should be long enough for increasing familiarity to have the negative effects that Norton et al. anticipate. The fact that disillusionment and divorce occur after marriage would seem to implicate live-interaction processes rather than the accumulation of additional bits of information, again more nearly consistent with our position than with Norton et al.'s.

As for Norton et al.'s (2011) anecdote about U.S. presidents and the Congress, we imagine that most people surveyed in those studies did not engage in live interaction with the targets of their judgments. Consequently, this research is irrelevant to our premise that *live interaction* fosters liking. For Norton et al.'s comment to apply, it would have to be that people who work with U.S. presidents and the Congress come to like them less the more contact they have. We know of no such research, though we suspect the opposite is true.

On Human Architecture

A final critique by Norton et al. (2011) is that "it is simply unclear to us how humans could be built such that when we meet people, the more we learn about them, the more we like them" (p. 572). Fortunately, as discussed in our article, a basic principle from evolutionary psychology may provide some clarity here. Humans evolved in small group settings, where commonly encountered others were well-known. Contact with outgroups (i.e., unfamiliar others) was rare. Strangers represented a potential threat to one's safety and resources, and for that reason, fear of strangers and wariness of the unknown evolved as mechanisms to protect individuals from the risk posed by uncertain circumstances (e.g., Buss, 1991; Cosmides & Tooby, 2006). Indeed, wariness of strangers appears early in infancy, no later than 8–9 months (Sroufe, 1977), and is considered to be universal by many anthropologists (e.g., Boyer & Liénard, 2006). Thus, from an evolutionary perspective, far from assuming that newly encountered others are similar and likeable, as Norton et al.'s argument stipulates, it is more plausible that humans encounter strangers with a certain degree of wariness, which social interaction may help dissipate. Norton et al. asked whether a randomly selected 16-year-male and a 75-year-old fe-

male would seek to end the interaction as soon as possible or would come to like each other better if they were able to chat for a while. In most instances, we suspect that they would not even begin to chat (a selection effect that contradicts Norton et al.'s, 2011, premise that liking is greatest with the least information), but if they did (and assuming that they did not have to share a bathroom), we suspect that they might well like each other better.

Conclusion

In sum, we find none of Norton et al.'s (2011) assertions to be credible objections to the validity of our conclusion: that familiarity promotes attraction in live interaction. Let us conclude with some notes of agreement. We concur with the desirability of developing an integrative conceptual model of familiarity effects, such as the one offered in our original article, and we hope researchers will conduct studies using both noninteractive and live-interaction paradigms. Norton et al.'s suggestion that researchers examine the effects of communication medium, interaction goals, and the difference between perceived and actual similarity seems constructive, and to this list we would add situational context, verbal and nonverbal (e.g., synchrony, warmth) factors, and anticipated acceptance versus rejection. Development and testing of such accounts are likely to advance understanding of familiarity and the development of relationships.

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