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Erin R. Whitchurch¹, Timothy D. Wilson¹, and Daniel T. Gilbert²

¹University of Virginia and ²Harvard University

Abstract

This research qualifies a social psychological truism: that people like others who like them (the reciprocity principle). College women viewed the Facebook profiles of four male students who had previously seen their profiles. They were told that the men (a) liked them a lot, (b) liked them only an average amount, or (c) liked them either a lot or an average amount (uncertain condition). Comparison of the first two conditions yielded results consistent with the reciprocity principle. Participants were more attracted to men who liked them a lot than to men who liked them an average amount. Results for the uncertain condition, however, were consistent with research on the pleasures of uncertainty. Participants in the uncertain condition were most attracted to the men—even more attracted than were participants who were told that the men liked them a lot. Uncertain participants reported thinking about the men the most, and this increased their attraction toward the men.

Keywords

uncertainty, sense making, interpersonal attraction, reciprocity

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Substantial research shows that people like others who like them—which is known as the reciprocity principle (Aronson & Worchel, 1966; Gouldner, 1960; Kenny, 1994; Luo & Zhang, 2009). It is rewarding to be liked by others, and these social rewards generate positive feelings. Further, people assume that those who like them have benevolent intentions and will treat them well (Montoya & Insko, 2008). Thus, if we want to know how much Sarah likes Bob, a good predictor is how much she thinks Bob likes her.

But what if Sarah is not sure how much Bob likes her? He seems interested, but in the words of a popular book and movie, maybe he is “just not that into” her (Behrendt & Tuccillo, 2009). How much will Sarah like Bob under this condition of uncertainty? Research on reciprocity suggests that she should like him less than if she were certain that he liked her, because the less certain she is, the fewer social rewards she should experience and the less sure she can be that he has good intentions toward her. In other words, according to the reciprocity principle, Sarah should like Bob more when she is certain that he likes her than when she believes he might not.

Recent research on the pleasures of uncertainty, however, suggests otherwise. Under some circumstances, uncertainty about the nature of a positive event can produce more positive affect than certainty about the nature of that event (Bar-Anan,

Wilson, & Gilbert, 2009; Kurtz, Wilson, & Gilbert, 2007; Lee & Qiu, 2009; Wilson, Centerbar, Kermer, & Gilbert, 2005). When people are certain that a positive event has occurred, they begin to adapt to it, primarily by reaching an understanding of what the event means and why it occurred (Wilson & Gilbert, 2008). Thus, whereas people may be very pleased that someone likes them, once they are certain of this fact they construct explanations as to why, and as a result the news loses some of its force.

In contrast, when people are uncertain about an important outcome, they can hardly think about anything else. They think about such an event but do not yet adapt to it, because they do not know which outcome to make sense of and explain. The affective consequences of such uncertainty depend on the valence of the thoughts people have about the potential outcomes. Often these thoughts are negative, because one of the possible outcomes is undesired and people’s attention is drawn to that possibility (e.g., “the biopsy might show that I have cancer”). In such a case, uncertainty will lead to an increase in

Corresponding Author:

Timothy D. Wilson, Department of Psychology, P.O. Box 400400,
 102 Gilmer Hall, University of Virginia, Charlottesville, VA 22904-4400
 E-mail: tdw@virginia.edu

negative affect. Sometimes, however, the potential outcomes are positive or neutral, such as the possibility that a new, attractive acquaintance is very fond of us (positive) or has no special impression of us (neutral).

There may thus be an exception to the reciprocity principle: People might like someone more when they are uncertain about how much that person likes them than when they are certain, as long as they have some initial attraction toward the person. Uncertainty causes people to think more about the person, we suggest, and, further, people might interpret these thoughts as a sign of liking via a self-perception effect (e.g., “I must like him if he keeps popping into my thoughts”; Bem, 1972). In short, people’s uncertainty about how much another person likes them—such that they pick petals off a flower to try to find out whether that person loves them or loves them not—may increase their liking for that person.

Prior studies of the pleasures of uncertainty have examined the effects of uncertainty about such things as the source of a gift, and the dependent measure in prior studies was overall mood, not interpersonal attraction (e.g., Kurtz et al., 2007). We are unaware of any studies that have examined the effects of uncertainty on interpersonal attraction.¹ In the present study, female college students learned that male college students at other universities had looked at Facebook profiles of several college women, including the participants’ profiles, and had rated how much they liked each woman. Participants then looked at the profiles of four of the men. Some participants were told that they were viewing the men who had liked them the most, some were told that they were viewing the men who had given them average ratings, and some (in the uncertain condition) were told that they were viewing either the men who had liked them the most or the men who had given them average ratings. We predicted that participants in the uncertain condition would be most attracted to the men.

Method

Participants

Participants were 47 female undergraduates at the University of Virginia who participated in return for partial course credit.

Procedure

Participants signed up at least 48 hr in advance of their session, with the understanding that their Facebook profiles would be viewed by students at other universities. When participants arrived for the experimental session, the experimenter explained that the study was exploring the effectiveness of Facebook as an online dating Web site and that several male students from two collaborating universities had viewed the Facebook profiles of approximately 15 to 20 female college students, including the participant’s, and had rated the degree to which they thought they would get along with each woman if they got to know her better. Each participant was told that

she would see the Facebook profiles of four of the men. In the liked-best condition, participants learned that they had been randomly assigned to see the four men who had given them the highest ratings (e.g., “of all the people who saw your profile, these are the four who thought they would like you the best”). In the average-liking condition, participants learned that they had been randomly assigned to see the four men who had given them average ratings (e.g., “of all the people who saw your profile, these four did not rate you as the highest or the lowest; they are people who liked you about average”). In the uncertain condition, participants read:

For reasons of experimental control neither you nor the experimenter knows the condition you have been randomly assigned to. The profiles you will see might be the participants who saw your profile and liked you the most. Or, the profiles you see might be the participants who saw your profile and gave you an average rating.

Participants then examined four fictitious Facebook profiles that convincingly portrayed likeable, attractive male college students (two Caucasian, one African American, and one Asian), ostensibly from the University of Michigan and the University of California, Los Angeles. Next, participants completed several filler tasks and dependent measures.

Time 1 mood. After completing a filler task, participants rated the degree to which the adjectives *positive*, *pleased*, *disappointed*, and *sad* described how they felt at that moment. Ratings were made on 21-point dot scales (1 = *not at all*, 21 = *extremely*).

Attraction to the male students. After completing additional filler tasks, participants rated each man according to how much they liked him, how much they wanted to work with him on a class project, and how similar they were to him (1 = *not at all*, 8 = *extremely*); how much they would be interested in him as a casual acquaintance and as a friend (1 = *not at all*, 10 = *extremely*); and how much they would be interested in him as “someone I would hook up with” and as “a potential boyfriend/girlfriend” (1 = *not at all*, 10 = *extremely*). A factor analysis revealed that all of these items except interest in the man as a casual acquaintance had a loading of at least .40 on a primary liking factor. We therefore averaged the standardized ratings of all items except the casual-acquaintance item to form an attraction index ($\alpha = .86$).

Time 2 mood. After rating their attraction to the men, participants rated their mood again on the same measures that they had received earlier.

Reported thoughts. Finally, participants rated the extent to which thoughts about the men had “popped into their head” during the previous 15 min (1 = *not at all*, 9 = *extremely often*) and then were thoroughly debriefed.

Results

Attraction

An analysis of variance revealed a significant effect of condition on participants’ attraction toward the men, $F(2, 44) = 15.06$, $p < .001$, $\eta^2 = .41$. As Table 1 shows, participants in the liked-best condition were more attracted to the men than were participants in the average-liking condition, $t(44) = 3.52$, $p = .001$. This finding replicates the reciprocity effect. As predicted, participants in the uncertain condition were most attracted to the men—even more attracted than were participants in the liked-best condition, $t(44) = 2.07$, $p = .04$. In other words, women were more attracted to men whose liking for them was uncertain than to men who they knew liked them the best.

Reported thoughts

As predicted, participants in the uncertain condition reported having thought about the men the most, followed by participants in the average-liking condition and then participants in the liked-best condition (see Table 1). Although the overall effect of condition was not significant, $F(2, 43) = 2.14$, $p = .13$, $\eta^2 = .09$, participants in the uncertain condition reported thinking significantly more about the men than did participants in the liked-best condition, as predicted, $t(43) = 1.99$, $p = .05$.

Mediation

In a mediation analysis, we compared participants in the uncertain condition (dummy code = 1) with participants in the liked-best condition (dummy code = 0). Condition significantly predicted participants’ frequency of thought about the men, $b = 1.51$ ($SE = 0.70$), $p = .04$, and frequency of thought marginally predicted participants’ level of attraction (controlling for condition), $b = 0.09$ ($SE = 0.05$), $p = .10$. These results are consistent with our hypothesis that the effect of uncertainty on attraction would be mediated by frequency of thought about the men. However, because a bootstrapping analysis revealed that the 95% confidence interval for the indirect effect ($[-.03$,

.40]) did not quite exclude zero, the evidence for mediation is tentative (Shrout & Bolger, 2002).

Mood

We averaged responses to the four mood items after reverse-scoring the two negative items (Time 1 $\alpha = .86$, Time 2 $\alpha = .84$). A 3 (condition; between subjects) \times 2 (time; within subjects) analysis of variance revealed a main effect of condition, $F(2, 44) = 3.86$, $p = .03$, $\eta^2 = .15$. Participants were in a better mood in the liked-best condition than in the average-liking condition, $t(44) = 2.70$, $p = .01$ (see Table 1). Participants were in an even better mood in the uncertain condition, though the difference between the uncertain and like-best conditions was not significant, $t(44) = 0.92$, $p = .36$.

Discussion

This study replicated the effects of reciprocity on attraction: Participants liked the men more when they believed the men liked them a lot than when they believed the men liked them only an average amount. As predicted, however, participants in the uncertain condition were most attracted to the men. Put differently, women were more attracted to men when there was only a 50% chance that the men liked them the best than when there was a 100% chance that the men liked them the best. Also as predicted, women in the uncertain condition reported thinking about the men more than did women in the like-best condition.

These results help solve an enigma about whether “playing hard to get” increases one’s attractiveness to others. Numerous popular books advise people not to display their affections too openly to a potential romantic partner and to instead appear choosy and selective. Social psychological research, however, has not confirmed this advice. Walster, Walster, Piliavin, and Schmidt (1973), for example, found evidence only for a “selectively hard to get” hypothesis: Men were most attracted to a potential date who expressed interest in them but not other people, and were less attracted to a woman who was “uniformly hard to get” (she was unenthusiastic about dating anyone) or a woman who was “uniformly easy to get” (she was enthusiastic about dating several men).

A form of playing hard to get that has not been tested, however, is keeping the person guessing about how one feels about him or her without communicating anything about how interested one is in other people. Ours is the first study to manipulate uncertainty in the absence of any information about choosiness, and by so doing has confirmed a new version of the playing-hard-to-get hypothesis: People who create uncertainty about how much they like someone can increase that person’s interest in them.

We should note some limitations of the present research. First, the participants rated the men on the basis of a small amount of information, and it is unclear whether people’s uncertainty about how much someone likes them would continue to increase attraction once they meet the person and begin

Table 1. Mean Attraction to the Men, Frequency of Thought About the Men, and Mood by Condition

Measure	Condition		
	Uncertain	Liked best	Average liking
Attraction	0.57 (0.44)	0.12 (0.60)	-0.62 (0.71)
Reported thoughts	5.07 (2.17)	3.56 (1.67)	4.63 (2.34)
Mood, Time 1	16.64 (3.62)	16.09 (2.04)	13.55 (4.25)
Mood, Time 2	16.89 (2.97)	15.24 (3.11)	13.40 (4.41)

Note: Standard deviations are in parentheses. The attraction index is the average of the standard scores of six items. The mood index is the average of ratings of two positive adjectives and two (reverse-scored) negative adjectives. Higher numbers reflect greater attraction to the men in the profiles, more frequent thought about the men, and more positive moods.

a relationship. However, many people meet online these days, and this study simulated the kind of information people often get about potential dating partners. Uncertainty at the very beginning of this process appears to confer some benefits.

Second, we included only female participants. Previous research has not found gender differences in the pleasure of uncertainty (e.g., Wilson et al., 2005), but this is the first study examining the effects of uncertainty on interpersonal attraction, and it is possible that there are gender differences in this domain.

Finally, we did not replicate previous studies that found that participants who were uncertain about a positive outcome were in a significantly better mood than participants who were certain (e.g., Wilson et al., 2005). However, our results were in the same direction, and it is notable that participants in the uncertain condition were in at least as good a mood as participants in the liked-best condition, given that there was only a 50% chance that the former participants had seen the men who liked them the best. Uncertainty increased attraction and had no deleterious effect on people's mood.

Clearly, the determinants of interpersonal attraction are complex, and there is no simple formula people can use to get someone to like them. When people first meet, however, it may be that popular dating advice is correct: Keeping people in the dark about how much we like them will increase how much they think about us and will pique their interest.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

Note

1. Norton, Frost, and Ariely (2007) found that the more information people had about another person, the less they liked him or her, but this effect was mediated by participants' perception of their similarity to the person and not by uncertainty about how much the person liked them. Eastwick and Finkel (2008) found that increasing attachment anxiety toward someone increased attraction to that person. It is possible that perceived uncertainty about reciprocity contributed to the effect.

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