

# Differential Effects of Reciprocity and Attitude Similarity Across Long- Versus Short-Term Mating Contexts

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**ABSTRACT.** Participants were 24 male and 32 female undergraduate and graduate students whom the authors recruited for an examination of the effects of attitude similarity and reciprocity on the degree of attraction toward potential mates. The authors examined the effects of these 2 variables on degree of liking in long-term and short-term contexts. The authors administered a vignette about a bogus stranger to each participant, varying the stranger's attitude similarity with and liking of the participant. The authors enclosed the vignette in a folder that described the stranger as having either *very similar* or *very different* attitudes from the participant and that included a passage that notified the participant that the stranger either *likes* or *does not like* him or her. The dependent variables included 4 indexes of the extent to which participants reported liking the bogus stranger: a scale that measured short-term mating items, a scale that measured long-term mating items, a degree-of-liking scale, and a behavioral-intention item. Across these 4 attraction-relevant dependent variables, the authors found significant main effects of the reciprocity variable. Also, the authors found a significant main effect of attitude similarity on the likability measure. The authors found significant main effects of reciprocity in a long-term mating context and a short-term mating context.

**Key words:** attitude similarity, attraction, liking, long-term mating, reciprocity, short-term mating

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RELATIONSHIPS AND ATTRACTION have inspired many researchers in social psychology. One group of researchers has investigated reciprocity, whereas another group of researchers has investigated the effects of attitude similarity on relationship-relevant outcomes. *Reciprocity* is the tendency in people to become more attracted to those whom they believe are attracted to

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them. Several researchers (e.g., Backman & Secord, 1959; Condon & Crano, 1988; Kenny, Bond, Mohr, & Horn, 1996; Patterson, 1976; Perugini, Gallucci, Presaghi, & Ercolani, 2003; Sprecher, 1998; Wilson & Henzlik, 1986) have studied reciprocity by examining whether participants rate others as more attractive once the participants learn that those others are attracted to them. Also, many researchers (e.g., Aronson & Worchel, 1966; Byrne, Clore, & Smeaton, 1986; Byrne et al., 1971; Byrne, Griffitt, Hudgins, & Reeves, 1969; Byrne & Nelson, 1965; Chen & Kenrick, 2002; Clore & Baldrige, 1968; Gormly & Gormly, 1984; McGarva & Warner, 2003; Tan & Singh, 1995; Wakimoto & Fujihara, 2004) have addressed the effects of *attitude similarity* on liking. Typically, such researchers of attitude similarity have tested the hypothesis that an individual is more likely to become attracted to others who have similar attitudes, opinions, or ideals as himself or herself. Such researchers have based this concept on the idea that an individual may desire a mate among those people who are similar to himself or herself. This similarity between a person and his or her potential mate could imply compatibility, which may lead to a strong relationship.

In the present study we addressed—in addition to the aforementioned concepts—liking in the context of differential patterns of mating strategies. Perhaps both reciprocity and attitude similarity yield patterns of correlations that are different with indexes of liking that are based on long-term (LT) mating contexts than with those that of short-term (ST) mating contexts. Researchers have found factors that are associated with attraction to others to differ with whether an individual (of either sex) rates someone as a potential LT mate or a potential ST mate (Buss, 2003). Many current relationship researchers in social psychology focus on different outcomes that are associated with LT versus ST mating contexts. Thus, it is important for researchers to examine the effects of variables that potentially relate to attraction in ST and LT mating contexts separately. In the current research, we addressed that point explicitly.

### *Reciprocity Research*

In early research on reciprocity, Backman and Secord (1959) provided one of the earliest assessments of the effects of reciprocity on liking. In their first study (1959), Backman and Secord found that participants liked others who ostensibly liked them. However, later trials did not replicate this finding. However, several other studies have documented the general nature of reciprocity effects in eliciting liking (e.g., Patterson, 1976). More recently, in an assessment of reciprocity in the domain of intimate relationships, Sprecher (1998) assessed 17 potential factors that individuals rated as important in determining how attracted they are to potential mates. Of these 17 factors, reciprocity emerged as one of the most important predictors of attraction across multiple studies. Although Sprecher's work provides evidence for reciprocity as an

important factor in liking in relationships, the evidence was based on self-reported data in which participants were explicitly asked what factors they thought were important, and reciprocity was among those that the questionnaire presented as a choice. In the present experiment, we studied the effects of reciprocity by using a procedure that avoided conscious self-report: we did not explicitly ask participants how much reciprocity mattered in their judgment of attraction.

### *Attitude Similarity Research*

As we indicated earlier in the present article, a great deal of research has related similarity of attitudes to attraction. In multiple studies on this topic, researchers have used the *bogus-stranger technique* (Byrne & Nelson, 1965; Byrne et al., 1969). This technique involves researchers' deception of each participant by telling him or her that another student had made either a positive judgment or a negative judgment about the participant's attitude survey (which he or she had completed earlier). Then the researchers give the participant an opportunity to rate the extent to which he or she likes the bogus stranger. As predicted, liking scores in several of these studies have tended to be higher for bogus strangers with attitudes that were similar to participants' attitudes. In the present study, we used a similar bogus-stranger technique.

In this area, Clore and Baldridge (1968) found differences in participants' degree of liking of potential others, by manipulating attitude similarity and interest level of the attitudes. Those researchers found that participants who were assigned to conditions involving strangers who had similar and interesting attitudes rated those others as more attractive than did participants assigned to conditions involving strangers who had similar yet uninteresting attitudes. Consistent with Clore and Baldridge's notion that similarity in terms of relatively interesting attitudes leads to relatively greater liking, in the present work we used attitudes that included numerous socially relevant attitudes. We expected that, by using attitudes that interested the participants, greater liking scores would occur.

Several other researchers have addressed a variety of issues that pertain to the effects of attitude similarity on attraction. For instance, in a developmental study of attraction, Tan and Singh (1995) tested the similarity-attraction paradigm of different age groups. Those researchers used a no-attitude information control group and attitude-similar and attitude-dissimilar experimental groups. Although Tan and Singh tried to create a no-information control group as a baseline for attitude similarity, earlier Byrne et al. (1986) stated that this feat was not possible. Byrne et al. concluded that without providing attitude information to participants, participants might tend to assume that others hold similar opinions to themselves because of the false-consensus effect (Hensley & Duval, 1976; Newcomb, 1978; Ross, Greene, & House, 1977; Zuckerman, Mann, & Bernieri, 1982). False con-

sensus, in this case, causes participants to believe that the stranger holds opinions similar to their own, without any real knowledge of their degree of attitude similarity with the stranger. Because of Byrne et al.'s (1986) conclusions, in the present study we did not use an empty control condition.

More recently, McGarva and Warner (2003) told some participants that they would meet a potential partner with similar attitudes. Overall, participants reported more attraction for such partners than for those who were described as having dissimilar attitudes. McGarva and Warner measured attraction using two of the items from Byrne et al.'s (1971) six-item Interpersonal Judgment Scale. Also, after the participants met and had single conversations with these potential mates, the significant findings remained. Participants who were provided with potential mates with supposedly similar attitudes rated these mates as more attractive than participants who were provided with mates with supposedly dissimilar attitudes rated those mates. More importantly, these findings also remained after the groups or dyads met and had single brief conversations. In the present study, we tried to create a similar bogus-stranger scenario, while manipulating reciprocity and attitude similarity in a way that was unlike that of previous researchers in the field.

### *Liking in LT Versus ST Mating*

In assessing the effects of variables associated with intimate relationships, such as attitude similarity and reciprocity, many recent researchers in evolutionary psychology (e.g., Buss, 2003) have suggested that it is important for researchers to examine these effects separately in ST versus LT contexts. Buss and Schmitt (1993) suggested that multiple phenomena regarding ST versus LT contexts should be considered. In ST mating contexts, individuals want to mate but not to develop LT bonds. In LT mating contexts, individuals want to develop LT bonds.

Buss (2003) found that both men and women behave differently when seeking mates under ST versus LT contexts. For instance, men seeking LT mating partners emphasize chastity more than do males seeking ST mating (Buss, 2003). Attitude similarity and reciprocity may have different effects on liking, depending on whether the relationship context is long or short term.

Accordingly, we predicted that attitude similarity would be a stronger predictor of liking in the LT relationship context than in the ST relationship context. This prediction was rooted in the notion that shared attitudes are more important for getting along in LT relationships than in brief, sexual encounters. Further, we predicted reciprocity to be equally important in both long- and ST relationship contexts. Forming ST relationships likely requires some form of reciprocity in the first place. Thus, reciprocity may matter a lot in the formation of ST relationships. Similarly, it seems that for LT relationships to form, people must feel that the potential LT partners like them in the first place, so that initially the needs of the ST relationship apply to the LT relationship too.

### *Goals in the Present Research*

In the present study, our main goal was to examine the differential effects of reciprocity and attitude similarity in LT versus ST mating contexts. Unlike previous researchers, (e.g., Byrne & Nelson, 1965; Byrne et al., 1969; Clore & Baldrige, 1968), we used a method that enabled a more personalized way to examine the effects of perceived attitudinal similarity. We constructed attitude survey responses that were either very similar to or very different from the reported attitudes of each individual participant, instead of using one of two universal dissimilarity surveys for each participant (e.g., Byrne et al.). Additionally, we asked participants to complete a self-character evaluation and gave them a mock evaluation from a bogus stranger. This arrangement was unlike that of previous research, which did not include such an evaluation component. In the present study, we designed these evaluations to present the bogus stranger as more realistic and believable to the participants than a simple set of attitudes would be. Sears (1983) found evidence indicating the possibility that participants evaluate versions of a bogus stranger's attitudes that the experimenters designed for each participant personally more positively than they evaluated less personal versions of such attitudes. Finally, in the present study, we tried to add to the existing findings pertaining to concurrent effects of reciprocity and attitude similarity (e.g., Aronson & Worchel, 1966; Sprecher, 1998).

### *Hypotheses*

In the present study, we predicted main effects for both attitude similarity and reciprocity as follows:

*Hypothesis 1:* For two liking measures, including a likability measure and a behavioral-intention measure, participants who experience reciprocity in liking will score higher on multiple liking-relevant outcome measures than participants who do not experience such reciprocity.

We also expected an interaction as follows:

*Hypothesis 2:* Participants who experience both reciprocal liking with and attitudes similar to those of a bogus stranger will rate a bogus stranger relatively positively across measures of likability.

Further, we expected the following:

*Hypothesis 3:* Attitude similarity will be predictive of likability scores more under conditions of LT mating contexts than under those of ST mating contexts.

*Hypothesis 4:* Reciprocity will be predictive of likability equally for LT liking and for ST liking.

## Method

### *Participants*

Participants were 24 male (age range = 18–23 years,  $M = 20.50$  years,  $SD = 1.53$  years) and 32 female (age range = 18–50 years,  $M = 25.56$  years,  $SD = 9.35$  years) undergraduate and graduate students whom we recruited from a small- to moderate-sized university, the State University of New York at New Paltz. We randomly assigned each participant to one of four groups (high reciprocity and high attitude similarity; high reciprocity and low attitude similarity; low reciprocity and high attitude similarity; low reciprocity and low attitude similarity). Each group included 14 participants. We recruited participants through the pool of human participants on campus or verbally in psychology classes or outside of classes. We also sent e-mails soliciting participants out to all undergraduate and graduate students in the Psychology Department.

### *Materials and Procedure*

*Phase 1.* Before active participation in the present study, participants read and signed an informed consent sheet. Next, we gave participants a survey of social attitudes. This survey was a revised version of an extant scale that measured attitudes toward current social issues (Bauman & Geher, 2003). We presented participants with 10 items reflecting attitudes on social issues and asked them to report whether they agreed or did not agree with each item. For instance, we asked participants whether they agree with the implementation of the death penalty. We also asked each participant to complete a character evaluation of himself or herself. Specifically, we asked participants as follows:

Please describe yourself in the following space provided. You may include characteristics about yourself such as age, gender, college major, interests, etc. Please do not include physical characteristics or any identifying information (e.g., name).

However, we requested participants' gender and age.

For Phase 1, participants met at an assigned room. We asked them to read and sign an informed consent sheet. Afterward, participants completed the character evaluations. We then asked the participants to complete the survey of social attitudes. This survey included a word representing a particular kind of animal (chosen at random prior to administration of survey) that the participants would be asked to remember for Phase 2. This word was unknown to the person collecting data (for the sake of confidentiality). Upon completion, we asked participants to return for Phase 2 a week later.

*Phase 2.* We randomly assigned participants to one of four conditions. In each condition, we gave each participant a specific vignette stating the following:

Thank you for returning for the second session of this experiment. After each participant filled out a character evaluation and an attitude scale in the first session of the experiment, some of these completed forms were given to other participants in the study (anonymously) to look over. Those participants who received this information were asked to make judgments about the participant described by the evaluation and the attitude scale.

A participant who received your scale was asked to make judgments about you. This participant rated you as \_\_\_\_\_ (*very likeable or not very likeable*) on average (see actual ratings attached).

This individual also filled out a character evaluation and an attitude scale to describe him/herself. These completed scales are attached to this paper. Please read the evaluation and the items of their scale, seeing how the individual rated each, and fill out the questions that follow.

We thanked participants for returning to the second phase of the experiment. The vignettes then informed the participant that we had given another student of the opposite sex in the study the participant's attitude scale and character evaluation anonymously and asked the other student to rate how he or she felt about the participant on the basis of the participant's reported attitudes. In each condition, the vignettes then stated that the stranger rated the participant as *liked* or *not liked*. This differential wording comprised our manipulation to examine the effects of reciprocity. We then provided the participant with a bogus and typed character evaluation of him or her from the bogus stranger. One version of the evaluation involved a female stranger, and we gave this version to the male participants. The other version involved a male stranger, and we gave that version to the female participants. The following is the bogus evaluation for the female participants:

Here is Person X's character evaluation of him or herself. The response has been typed up so as to reduce the effects of identifiable handwriting.

"I am a 21-year old female who is a psychology major. I am also a student of SUNY New Paltz. I come from Rockland County but I eventually want to live in New York City. I'm taking part in this study in order to earn credits toward the class that I am taking this semester. I enjoy psychology very much and would like to go on to pursue a career in the field, once I graduate. However, I might want to take time off before graduate school. I'm not sure."

The bogus male character evaluation was identical to the bogus female character evaluation except for the gender of the bogus stranger.

After the participants finished reading the vignette, we provided them with four scales to complete. For the first dependent variable, the first scale was a modified version of an earlier scale, which addressed likability (Rubin, 1970). On a 5-point Likert-type scale ranging from 1 (*do not agree*) to 5 (*agree*), we asked the participants to rate eight items about how much they liked the stranger.

The second scale addressed the concepts of ST mating liking and LT mating liking. We adopted this ST or LT liking scale from a sexual-dimension scale created by Buss (2000). We presented participants with four traits that were related

to ST relationship characteristics (lustful, provocative, erotic, seductive). We also presented them with four traits that were related to LT relationship characteristics (devoted, loving, marriable, faithful). We then asked the participants to rate on a 7-point Likert-type scale these liking traits about the stranger on the basis of the information that we provided to them.

The items that we used to represent ST and LT liking for this scale were the result of a pilot study that we designed to identify which items would be most indicative of ST and LT mating characteristics. That pilot study entailed seven judges' assessment of each of 12 possible words from Buss' (2000) original mating scale. We asked the judges to rate each of these items in terms of the degree to which it represents in their minds ST mating and LT mating—separately. Participants then rated each of these 12 items twice on a 9-point Likert-type scale, once for ST mating and once for LT mating. We then computed means of the judges' scores of overall ST relevance and overall LT relevance for each of the 12 items. We then followed specific rules to select items for the two new scales. The first rule for the LT liking subscale was that only items with mean "long-term" ratings of 7 or above were to be considered. We used a parallel rule for the ST liking subscale: We considered only items with mean ratings of 7 or greater.

The second parameter involved the discriminate validity between ST and LT mating items. To adequately differentiate between ST and LT items, we decided that items that were to be included in the LT scale had to have ST ratings of less than a neutral score (5.0). Similarly, items that were to be included in the ST scale had to have LT ratings of less than the neutral point. After using these rules, to ensure that both subscales each had four items, we included in the LT subscale only the four items with the highest LT means. Similarly, we included in the ST subscale only the four items with the highest ST means. Thus, using the aforementioned predetermined rules, we selected four ST mating items and four LT mating items to be included in the new mating-liking scale, thereby ending the pilot study.

The fourth item, a behavioral-intention item, required the participant to rate his or her likelihood to return for another study that would involve an interaction between the participant and the bogus other participant. This item was worded as follows:

If given the opportunity to return (time permitting) and participate in another study, how likely would you want to take part in a study involving pairs of individuals, with X (the person who you are being asked to rate in this study) being the other individual from this study?

Participants responded on a 7-point Likert-type scale ranging from 1 (*very unlikely*) to 7 (*very likely*). We based this behavioral-intention item loosely on an earlier study (Lyon & Greenberg, 1991). We asked each student how likely he or she would be to return in a month to participate in a study involving pairs of students. We also told each participant that his or her (bogus) partner in the most

recent session would be the other student in that (fictitious) future session. Participants also scored this item on a 7-point Likert-type scale ranging from 1 (*very unlikely*) to 7 (*very likely*).

Also, through one item, we asked the participants to identify their sexual preference. Because we conducted the present study primarily to examine heterosexual attraction and relationships, we did not analyze data from participants who identified themselves as homosexual or bisexual.

After Phase 1, the experimenter prepared packets of information for each participant randomly as follows. For each participant, the experimenter included in the packet bogus filled-out attitude scales that were either identical to (except for responses to two items on the attitude scale) or totally different from (except for responses to two items) the participant's original filled-out attitude scales. The experimenter presented these bogus filled-out scales as if they reflected the bogus stranger's attitudes. Once the participant returned for the second session of the study, the experimenter asked him or her to find the packet that displayed the special word that their first session's packet had displayed, so that these surveys matched.

Each participant received one of two vignettes, one of two character evaluations, and four scales measuring the four dependent variables. These scales included the likability item, the ST mating item, the LT mating item, and the behavioral-intention item. After the participants completed the surveys, the experimenter collected the data for later analysis. The experimenter then thanked each participant and gave him or her a debriefing form, which included the specific characteristics of the present study and its research area and contact information in case of any questions or concerns.

## Results

We performed four  $2 \times 2$  analyses of variance (ANOVAs), one for each of the four dependent variables. We computed means and standard deviations for each of the dependent variables on the basis of composite variables (using the multiple items of the scales). It is important to note that we used multiple ANOVAs as opposed to a MANOVA. We rejected using a MANOVA for the present research because of the relatively low sample sizes in the four groups, which could have reduced the utility of this multivariate analysis.

### *Effects on General Liking*

One ANOVA included attitude similarity and reciprocity as the independent variables and general likability as the dependent variable. Although we found no interaction between attitude similarity and reciprocity for the dependent variable, we found a trend that was consistent with predictions. Participants in the high-reciprocity, high-attitude similarity condition scored highest on the liking measure (i.e., they rated the bogus stranger as most likable compared with partici-

pants in the three other cells). See Table 1. However, this finding was not significant. It is important to note that this scale, which was based on eight items, demonstrated high internal reliability (Cronbach's  $\alpha = .93$ ).

Across levels of attitudinal similarity, participants in the high-reciprocity conditions rated the bogus strangers as more likable ( $M = 3.57$ ,  $SD = 0.82$ ) than did participants in the low-reciprocity conditions,  $F(1, 52) = 22.99$ ,  $p < .05$  ( $M = 2.67$ ,  $SD = 0.75$ ). Similarly, we obtained a significant main effect for attitude similarity. Specifically, high-similarity participants rated bogus strangers as more likable ( $M = 3.38$ ,  $SD = 0.85$ ) than did low-similarity participants,  $F(1, 52) = 8.04$ ,  $p < .05$  ( $M = 2.92$ ,  $SD = 0.90$ ). We found no significant interaction. For all descriptive statistics, see Table 1.

In addition to statistical significance, the current analyses covered effect sizes for each independent variable. We estimated effect sizes by *eta squared* ( $\eta^2$ ), which represents the percentage of variability in a dependent variable that is accounted for by an independent variable. Reciprocity was associated with a larger eta squared (partial  $\eta^2 = 31\%$ ) than was attitude similarity (partial  $\eta^2 = 13\%$ ). See Table 1 for all partial etas squared that were relevant to this ANOVA.

### *Effects on Behavioral Intention*

Another ANOVA included attitude similarity and reciprocity as independent variables and the behavioral-intention item (likelihood to return for another study involving the bogus stranger) as the dependent variable. The participants in the high-reciprocity, high-attitude similarity condition scored the highest on the behavioral-intention measure of the four groups. See Table 2. Although this

**TABLE 1. Effects of Attitude Similarity and Reciprocity on Overall Liking**

Variable	Reciprocity				Main effect	
	High		Low		M	SD
	M	SD	M	SD		
Attitude similarity						
High	3.90	0.50	2.94	0.84	3.38 <sub>b</sub>	0.85
Low	3.33	0.92	2.38	0.75	2.92 <sub>b</sub>	0.90
Main effect	3.57 <sub>a</sub>	0.90	2.67 <sub>a</sub>	0.75		

*Note.* We based Overall Liking on an eight-item (1–5) Likert-type scale. We computed means by forming a composite variable that included those items. Cronbach's  $\alpha = .93$ . Means with different subscripts are significantly different from each other at an alpha level of .05. Effect sizes follow: reciprocity's partial  $\eta^2 = .31$ ; attitude similarity's partial  $\eta^2 = .13$ ; interaction's partial  $\eta^2 = .00$ .

**TABLE 2. Effects of Attitude Similarity and Reciprocity on Likelihood of Return Measure**

Variable	Reciprocity				Main effect	
	High		Low		<i>M</i>	<i>SD</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Attitude similarity						
High	4.08	0.79	3.57	1.34	3.81	1.13
Low	3.47	1.33	2.85	1.72	3.48	1.37
Main effect	3.72	1.16	3.22	1.55		

*Note.* We based Likelihood of Return on a one-item (1–5) Likert-type scale. We computed means by forming a composite variable that included the item. We did not compute Cronbach's alpha for this variable. Effect sizes follow: reciprocity's partial  $\eta^2 = .05$ ; attitude similarity's partial  $\eta^2 = .06$ ; interaction's partial  $\eta^2 = .00$ .

finding was consistent with predicted results, the differences for this measure were not significant. It is important to note that the behavioral-intention measure was based on one item.

We found no significant main effects for attitude similarity,  $F(1, 52) = 3.40$ , *ns*, or reciprocity,  $F(1, 52) = 2.45$ , *ns*, with the behavioral-intention item as the dependent variable. Also, we found no significant interaction. For all descriptive statistics, see Table 2.

### *Effects on LT Liking*

We performed a third ANOVA including reciprocity and attitude similarity as independent variables and degree of liking in a LT mating context as the dependent variable. It is important to note that the LT mating measurement was based on four items and demonstrated acceptable internal reliability ( $\alpha = .75$ ).

Despite our predictions, we found no significant main effect for attitude similarity,  $F(1, 52) = 0.49$ , *ns*. Scores for those participants in groups with high-attitude similarity were not significantly different from scores of participants in groups with low-attitude similarity. Contrary to our predictions, attitude similarity did not seem to be important in a LT mating context for liking. Reciprocity seemed to be more of a factor in the level of liking in a LT mating context. We found a significant main effect for reciprocity, with LT liking as the dependent variable,  $F(1, 52) = 21.86$ ,  $p < .05$ . Participants in the high-reciprocity group ( $M = 3.73$ ,  $SD = 0.63$ ) rated the stranger as more likable in the LT mating context than did participants in the low-reciprocity group ( $M = 2.90$ ,  $SD = 0.69$ ). We found no significant interactions. For all descriptive statistics, see Table 3.

**TABLE 3. Effects of Attitude Similarity and Reciprocity on Long-Term (LT) Liking**

Variable	Reciprocity				Main effect	
	High		Low		<i>M</i>	<i>SD</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Attitude similarity						
High	3.69	0.45	3.05	0.70	3.35	0.67
Low	3.76	0.74	2.73	0.67	3.32	0.87
Main effect	3.73 <sub>a</sub>	0.63	2.90 <sub>b</sub>	0.69		

*Note.* We based LT Liking on an eight-item (1–5) Likert-type scale. We computed means by forming a composite variable that included those items. Cronbach's  $\alpha = .75$ . Means with different subscripts are significantly different from each other at an alpha level of .05. Effect sizes follow: reciprocity's partial  $\eta^2 = .30$ ; attitude similarity's partial  $\eta^2 = .01$ ; interaction's partial  $\eta^2 = .02$ .

We also computed effect size for each independent variable. Reciprocity accounted for 30% of the variability associated with liking in a LT mating context (partial  $\eta^2 = .30$ ), whereas attitude similarity accounted for only 1% of the variability associated with liking in a LT mating context (partial  $\eta^2 = .01$ ).

### *Effects on ST Liking*

We performed a fourth ANOVA including attitude similarity and reciprocity as the independent variables and degree of liking in a ST mating context as the dependent variable. Consistent with the predictions, participants in the high-reciprocity and high-attitude similarity condition scored higher on the measure of liking in the ST mating context than did all three other groups. It is important to note that this scale, which was based on four items, demonstrated good internal reliability ( $\alpha = .84$ ).

Consistent with our predictions, reciprocity had a significant main effect on liking not only in the LT mating context but also in the ST mating context. In a ST mating context, participants in the high-reciprocity group ( $M = 2.97$ ,  $SD = 0.93$ ) rated the bogus strangers as more likable than did participants in the low-reciprocity group ( $M = 2.47$ ,  $SD = 0.67$ ),  $F(1, 52) = 5.24$ ,  $p < .05$ . We found no significant main effect of attitude similarity on liking scores in a ST mating context. Also, we found no significant interactions. For all descriptive statistics, see Table 4.

We also computed effect sizes for each independent variable. Again, reciprocity had a stronger effect size (partial  $\eta^2 = .09$ ) than did attitude similarity (partial  $\eta^2 = .02$ ).

**TABLE 4. Effects of Attitude Similarity and Reciprocity on Short-Term (ST) Liking**

Variable	Reciprocity				Main effect	
	High		Low		<i>M</i>	<i>SD</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Attitude similarity						
High	3.04	0.83	2.61	0.67	2.81	0.77
Low	2.91	1.02	2.33	0.67	2.66	0.92
Main effect	2.97 <sub>a</sub>	0.93	2.47 <sub>b</sub>	0.67		

*Note.* We based ST Liking on an eight-item (1–5) Likert-type scale. We computed means by forming a composite variable that included those items. Cronbach's  $\alpha = .84$ . Means with different subscripts are significantly different from each other at an alpha level of .05. Effect sizes follow: reciprocity's partial  $\eta^2 = .09$ ; attitude similarity's partial  $\eta^2 = .02$ ; interaction's partial  $\eta^2 = .00$ .

## Discussion

We designed the present research to test the hypotheses that high levels of attitude similarity between an individual and a potential partner will lead to increased liking and that high levels of reciprocity between them will lead to increased liking. Specifically, we predicted that participants in high-attitude similarity and high-reciprocity conditions would rate a bogus stranger as more likable, across four measures, than would participants in any other combination of conditions of attitude similarity and reciprocity. Also, we studied the effects of reciprocity and attitude similarity on degree of liking in ST and LT mating contexts. We expected that attitude similarity and reciprocity would affect liking differently among these contexts. Specifically, we predicted that attitude similarity would matter more than reciprocity in LT mating contexts, whereas reciprocity would matter more than attitude similarity in ST mating contexts.

### *Effects of Reciprocity on General Liking and Behavioral Intentions*

We found a significant main effect for reciprocity across the likability measures. This finding supported much of the previous research regarding reciprocity and liking (Backman & Secord, 1959; Patterson, 1976; Wilson & Henzlik, 1986). Participants seemed to react to the statements that were presented to them in ways that we had predicted. Participants whom we presented negative feedback from the bogus stranger were more likely to rate that stranger as low on the likability scale than were participants whom we presented positive feedback from the bogus stranger. The bogus judgments about the participants seemed to affect how they

viewed the other potential mates, in that the variable of reciprocity had such a strong effect on liking. We found no main effect for reciprocity across the behavioral-intention measure. However, it is possible that outside factors affected the participants' ratings of their likelihood to return for another study. Because this item was written in a realistic manner, participants may have scored low on this measure because of fear of being held to their decision to take part in another research project. Also, we measured the behavioral intention of the participants by using only one item. It is possible that with multiple behavioral-intention items, leading to a more reliable index, researchers could show reciprocity to have an effect on participant's level of behavioral intention (likelihood of returning to take part in another study involving a potential other). Future researchers might address this potential problem by including multiple items on behavioral intention and items that better capture the participant's likelihood to work with the bogus stranger. Previous researchers used a similar liking measure and behavioral-intention measure as an index of attraction (Aronson & Worchel, 1966; Byrne et al., 1969; Byrne & Nelson, 1965). Although reciprocity did not affect the behavioral dimension of attraction, it did affect overall liking of the potential other. With a more effective measure of the participant's likelihood to return for another study to help the bogus stranger and with an overall liking measure, future researchers may be better able to find the participant's overall attraction to potential mates.

#### *Effects of Attitude Similarity on General Liking and Behavioral Intentions*

Consistent with previous research, we found a significant main effect of attitude similarity on liking (Byrne et al., 1969; Byrne & Nelson, 1965; Clore & Baldridge, 1968; McGarva & Warner, 2003; Tan & Singh, 1995). Participants whom we presented with potential mates with similar attitudes judged them as more likeable than participants whom we presented with dissimilar potential mates judged these. In the case of liking, attitude similarity seemed to have a strong effect on how people judged others. Although we included in the measure a list of only 10 attitudes, differences in how the attitudes were presented to the participants had a significant effect on their judgments of the potential others. We found no significant main effect of attitude similarity in the behavioral-intention measure. In other words, we found no differences between those participants provided with similar attitudes and those participants provided with dissimilar attitudes in their likelihood to return for another study. As suggested earlier in the present article, a more complete measure of behavioral intention might improve researchers' understanding of the effects of attraction on future behavior.

#### *Effects of Reciprocity Versus Effects of Attitude Similarity*

We computed effect sizes to study the differential impacts of attitude similarity and reciprocity as indicated by the four liking measures. Consistently, the

effect sizes were greater for reciprocity than for attitude similarity. This finding supports the idea that reciprocity was more of a factor in how participants rated the bogus stranger than was attitude similarity. The bogus stranger's feedback seemed to affect the four liking scores more than did the degree of similarity between the participants' attitudes and those of the bogus stranger.

### *Differential Predictors of ST Versus LT Liking*

We predicted that attitude similarity would have a stronger effect on likability scores in a LT context than in a ST context. However, attitude similarity did not have a significant main effect on either ST liking or LT liking. In contrast, reciprocity predicted both ST liking and LT liking. It is interesting that, although we predicted that reciprocity would have an equal effect on liking scores in a LT mating context and an ST mating context, we found a stronger main effect for liking within a LT mating context than in an ST mating context. Participants seemed to value a reciprocal relationship in a LT mating context more than they did one in a ST mating context.

Despite our predictions, reciprocity mattered more for the participant's liking scores in the LT context than in the ST context. Because previous researchers have not examined differential effects of liking in LT versus ST mating contexts, it remains unclear whether this finding is true in other settings. It is possible that the degree to which someone's attitudes are similar to another's attitudes (attitude similarity) is just not as important in a LT relationship as the degree to which that other likes him or her (reciprocity). Research on attitudes could benefit from further studies of this possibility.

### *Limitations*

As indicated earlier in the present article, the behavioral-intention scale in the present study only included one item. This circumstance may have affected the reliability of the scale. With multiple items, this scale may better measure the likelihood of a participant's returning for the opportunity of working with the bogus stranger again. Because the attitude survey that we presented to participants included 10 items only, a manipulation of attitude similarity may not have been strong enough to affect the participant's scores on the dependent-variable measures. With a lengthier and more diverse attitude measure, researchers might be able to measure attitude similarity more accurately and thereby understand and manipulate it better.

Because some of the participants who took part in the present study were continuing education students or mature-adult students, differential scores may have arisen for these participants as a function of age and marital status. Although all participants were assigned to the four conditions randomly, older participants may have scored differently on all of the measures (because they were more likely to be currently involved in a LT relationship or marriage), possibly affecting the present results. Although previous researchers have studied younger groups

and the effects of attitude similarity on their attraction, future researchers might benefit from studying older groups (Tan & Singh, 1995).

One important limitation that we noted during the experimental stage of the present study was that a few of the participants (graduate-level psychology students) mentioned during debriefing that they believed that the experimenter had manipulated the surveys and that they did not believe a stranger had actually rated their initial surveys. Future researchers might better use the bogus-stranger procedure with students outside of a psychology department, because psychology students may be better able to decipher experimental hypotheses.

Additionally, we assigned only 14 participants to each of the four groups in the present study, possibly limiting the findings. Future researchers might benefit from a larger sample.

### *Summary*

The most robust finding in the present study was that the degree of reciprocity strongly affected (a) general liking scores and (b) liking in both LT and ST mating contexts. Attitude similarity did not exert as strong an effect in any of the four liking measures. Although attitude similarity and reciprocity were expected to yield different outcomes of liking in LT and ST contexts, we found no such differences. Finally, reciprocity seemed to matter more for liking scores in the LT context than in the ST context. The experimental nature of the present data advances the understanding of the effects of reciprocity on liking beyond the reach of other research (e.g., Sprecher, 1998). Taken together, the present findings suggest the possibility that attitude similarity is subordinate to reciprocity in the development of intimate relationships.

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